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Our Reference: T8952 Baltimore Farm Your Reference: 17/2/3/GS-51

16 March 2012

South African Heritage Resources Agency PO Box 4637 Cape Town 8000

Attention: Mr P Hine

E-mail: phine@sahra.org.za

Tel: 021 462 4509



Reg. No. 2001/080535/23

PO Box 32017, Totiusdal, 0134

414 Rustic Road Silvertondale, 0184 Pretoria

Tel: (012) 804 1504/ 6

Fax: (012) 804 7072

e-mail: admin@torbiousesolutions.co.za

Dear Sir,

SUBMISSION OF THE DRAFT BASIC ASSESSMENT REPORT IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT 1998 ("NEMA") AS AMENDED TO THE COMPETENT AUTHORITY FOR LISTED ACTIVITY 3 IN REGULATION 546: ESTABLISHMENT OF A 54M TELECOMMUNICATION MAST FOR MTN (PTY) LTD ON Portion 8 of the Farm Witkranz 53 IT

Please find attached one copy of the Draft Basic Assessment Report for the above mentioned application for your perusal and comment.

**Kind Regards** 

WA VAN'T FOORT

For: Torbiouse Solutions cc

SA HERITAGE RESOURCES AGENCY
RECEIVED

2 8 MAR 2012

Members: KW Anholts; GA Anholts

S 2 MYB 5055 KVECKIA KID ZVIJERILVEE SPOSIK FYVOFKA



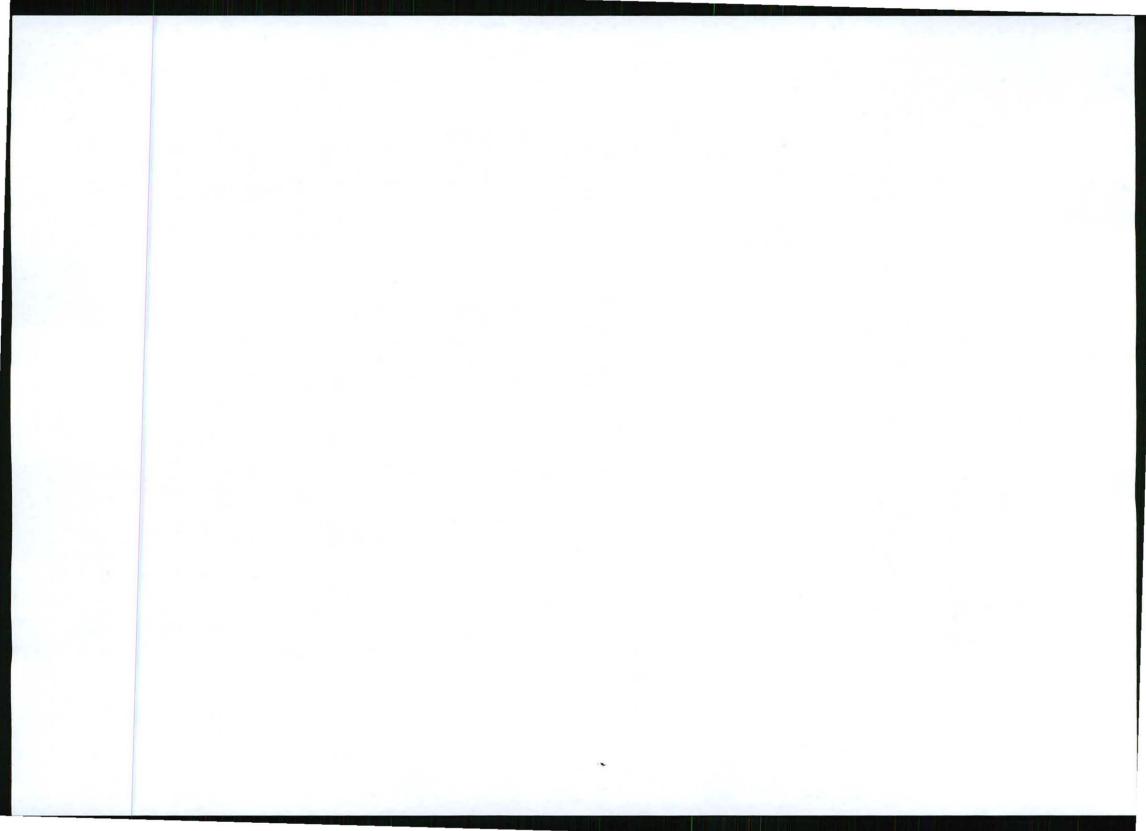
Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998(Act No. 107 of 1998), as amended.

	(For applicant / EAP to complete)
File Reference Number:	17/2/3/GS-51
Project Title:	The establishment of a 54m high lattice mast – T8952 Baltimore Farm
Name of Responsible Official:	Mr. Surgeon Marebane
	(For official use only)
NEAS Reference Number:	
Date Received:	

#### Kindly note that:

- Required information must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. Tables can be extended as each space is filled with typing.
- Where applicable black out the boxes that are not applicable in the form.
- An incomplete report may be returned to the applicant for revision.
- 4. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
- All reports (draft and final) must be submitted to the Department at the address of the relevant DISTRICT OFFICE given below or by delivery thereof to the relevant DISTRICT OFFICE. Should the reports not be submitted at the relevant district office, they will not be considered.
- No faxed or e-mailed reports will be accepted.
- One copy of the draft version of this report must be submitted to the relevant district office. The case officer may request more than one copy in certain circumstances.
- 8. Copies of the draft report must be submitted to the relevant State Departments / Organs of State for comment. In order to give effect to Regulation 56(7), proof of submission/delivery of the draft documents to the State Departments / Organs of State must be attached to the draft version of this report.
- Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
- 10. All specialist reports must be appended to this document, and all specialists must complete a declaration of independence, which is obtainable from the Department.





#### SECTION A: BACKGROUND INFORMATION

Project applicant:	MTN (Pty) Ltd			
Trading name (if any):	MTN (Pty) Ltd			
Contact person:	Maria van Tonder			
Physical address:	Building 1 Commerce S	Square, 3	9 Rivonia Road , Sandton	
Postal address:	Building 1 Commerce S	Square, 3	9 Rivonia Road , Sandton	
Postal code:	0046	Cell:	083 209 1169	
Telephone:	-	Fax:	011 911 5460	
E-mail:	Vanton m@mtn.co.za			

Environmental Assessment Practitioner:	Torbiouse Solutions		
Contact person:	Wilbert van't Foort		
Postal address:	P.O. Box 32017, Totiusda	al	
Postal code:	0134	Cell:	083 560 8410
Telephone:	(012) 804 1504	Fax:	012 804 7072 / 086 690 0468
E-mail:	admin@torbiousesoluti ons.co.za		
Qualifications:	9 Years Environmental Ir	npact As	ssessment evaluations
Professional affiliations (if any):	-		

#### SECTION B: DETAILED DESCRIPTION OF THE PROPOSED ACTIVITY

Describe the activity, which is being applied for, in detail. The description must include the size of the proposed activity (or in the case of linear activities, the length) and the size of the area that will be transformed by the activity.

Regulation 546 Activity 3: The Establishment of a new 54m high MTN (Pty) Ltd telecommunication lattice mast painted red & white (T8952 Baltimore Farm) including a new 81m² telecommunication base station, equipment containers and associated equipment.

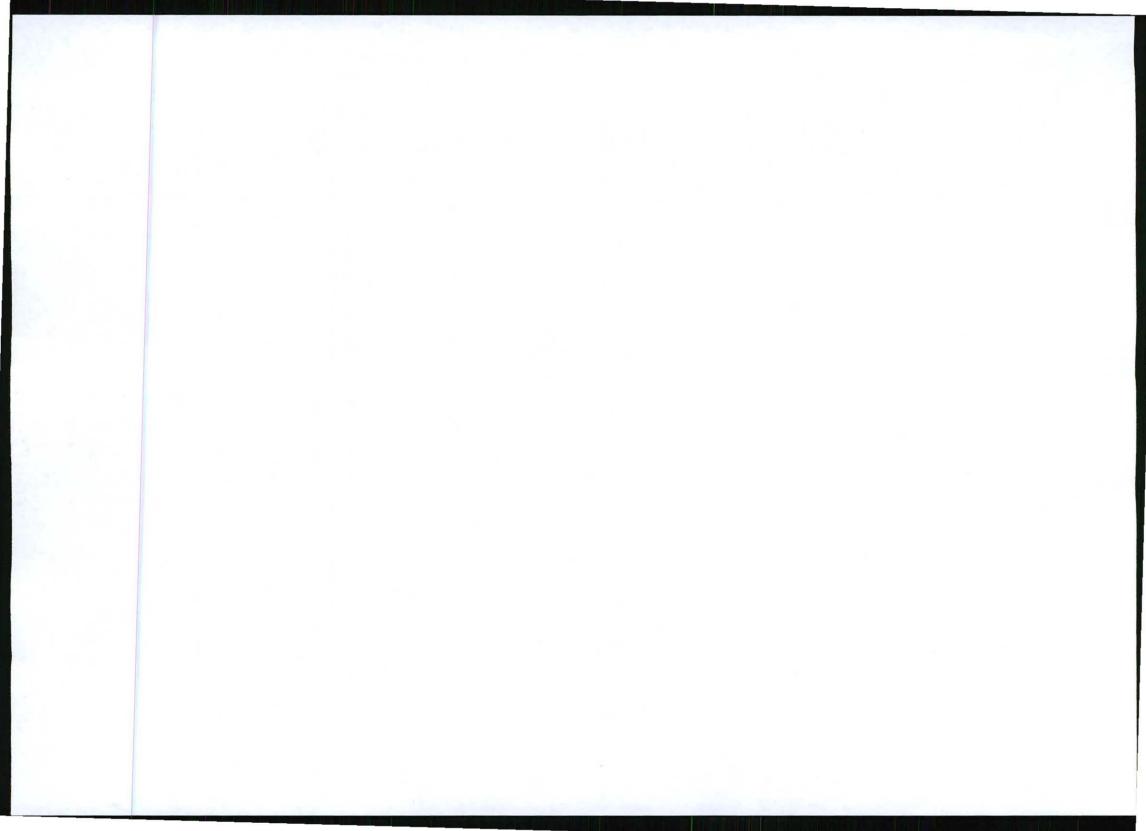
#### SECTION C: PROPERTY/SITE DESCRIPTION

Provide a full description of the preferred site alternative (farm name and number, portion number, registration division, erf number etc.):

#### Portion 8 of the Farm Witkranz 53 IT

Indicate the position of the activity using the latitude and longitude of the centre point of the preferred site alternative. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a





national or local projection. The position of alternative sites must be indicated in Section B of this document.

Latitude	(S):	Longitude	(E):
26°	10.05167'	30°	6.66600'

#### In the case of linear activities:

- · Starting point of the activity
- Middle point of the activity
- · End point of the activity

Latitude	(S):	Long	itude (E):
0	1	0	•
0		0	· ·
0	1	0	i i

#### SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as an appendix to this document.

The site or route plans must be at least A3 and must include the following:

- 6.1 a reference no / layout plan no., date, and a legend / land use table
- 6.2 the scale of the plan which must be at least a scale of 1:2000;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site:
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all indigenous trees taller than 1.8 metres and all vegetation of conservation concern (protected, endemic and/or red data species);
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
  - watercourses and wetlands;
  - the 1:100 year flood line;
  - ridaes:
  - cultural and historical features;
- 6.9 10 metre contour intervals

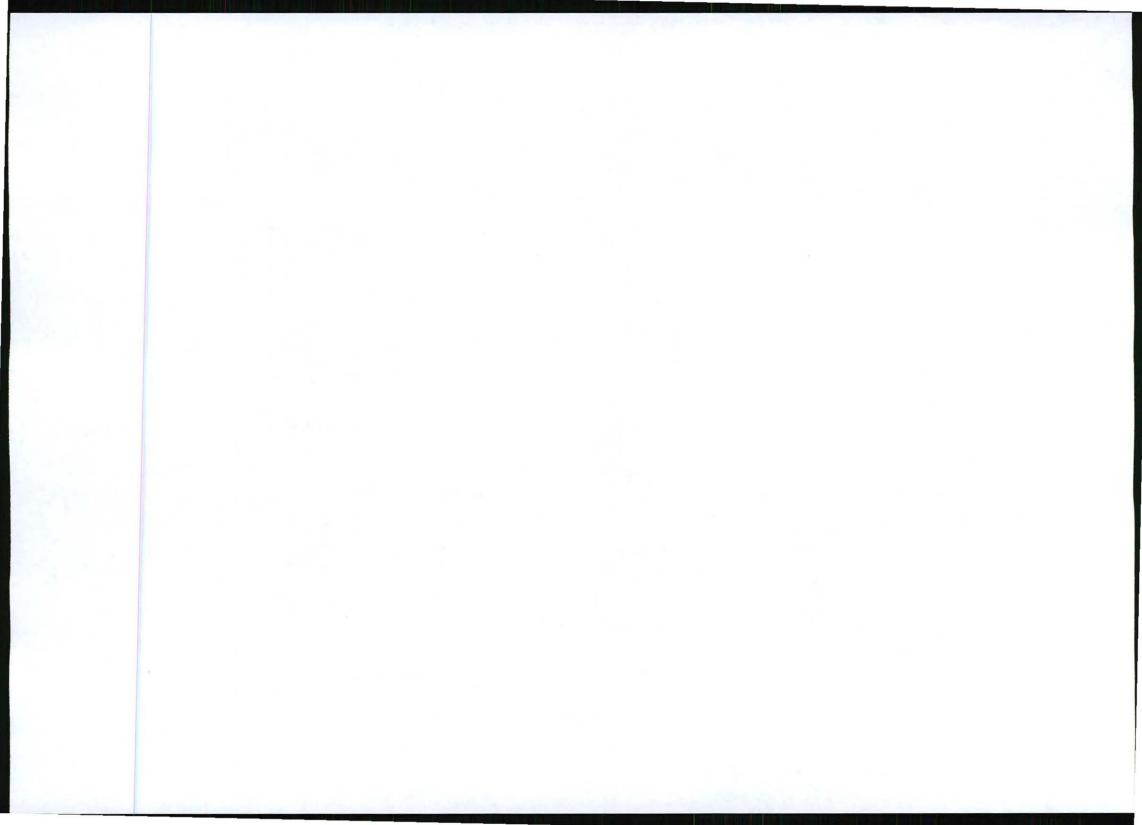
#### SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached as an appendix to this form.

#### **FACILITY ILLUSTRATION**

A detailed illustration of the activity must be provided at a scale of 1:200 as an appendix for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.





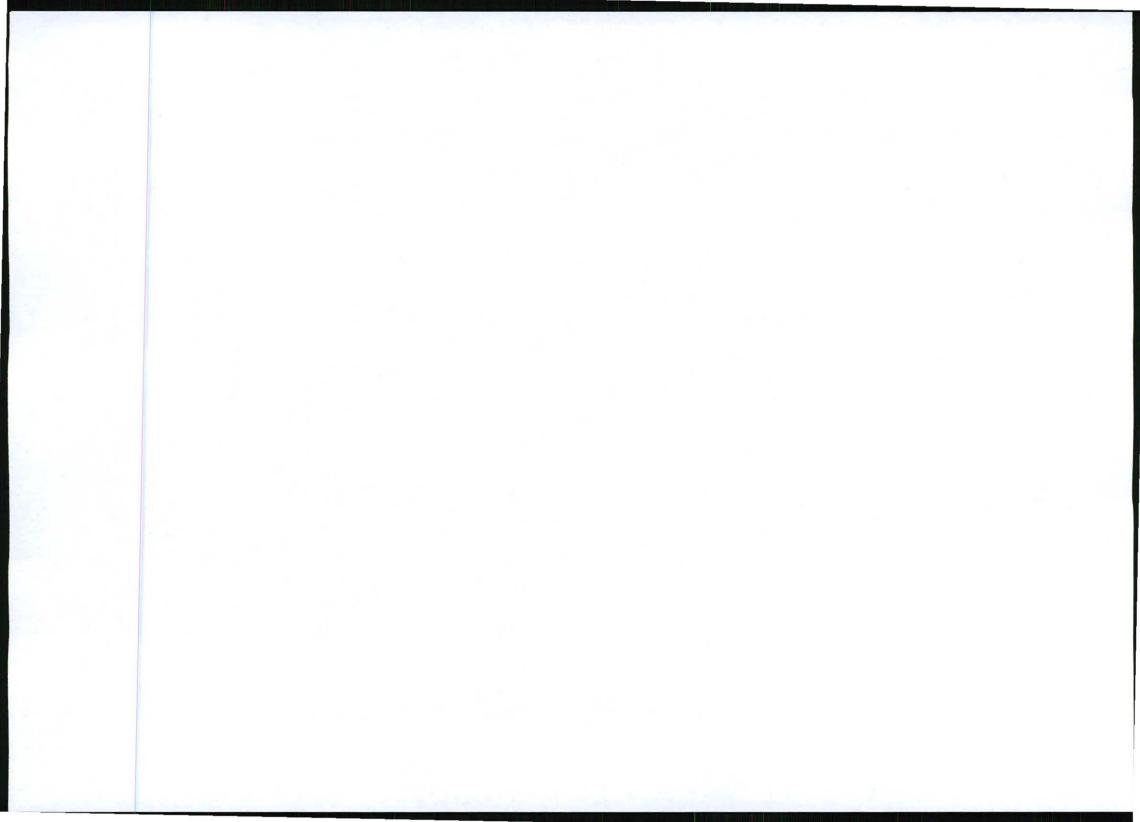
#### SECTION D: BASIC ASSESSMENT REPORT

Prepare a basic assessment report that complies with Regulation 22 of the Environmental Impact Assessment Regulations, 2010. The basic assessment report must be attached to this form and must contain all the information that is necessary for the competent authority to consider the application and to reach a decision contemplated in Regulation 25, and must include:

(Checklist for official use only)

		use only)
1.	A description of the environment that may be affected by the proposed activity and the manner in which the geographical, physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed activity.	
2.	An identification of all legislation and guidelines that have been considered in the preparation of the basic assessment report.	
3.	Details of the public participation process conducted in terms of Regulation 21(2)(a) in connection with the application, including –  (i) the steps that were taken to notify potentially interested and affected parties of the proposed application;  (ii) proof that notice boards, advertisements and notices notifying potentially interested and affected parties of the proposed application have been displayed, placed or given;  (iii) a list of all persons, organisations and organs of state that were registered in terms of regulation 55 as interested and affected parties in relation to the application; and  (iv) a summary of the issues raised by interested and affected parties, the date of receipt of and the response of the EAP to those issues;	
4.	A description of the need and desirability of the proposed activity;	
5.	A description of any identified alternatives to the proposed activity that are feasible and reasonable, including the advantages and disadvantages that the proposed activity or alternatives will have on the environment and on the community that may be affected by the activity;	
7.	A description and assessment of the significance of any environmental impacts, including—  (i) cumulative impacts, that may occur as a result of the undertaking of the activity or identified alternatives or as a result of any construction, erection or decommissioning associated with the undertaking of the activity;  (ii) the nature of the impact;  (iii) the extent and duration of the impact;  (iv) the probability of the impact occurring;  (v) the degree to which the impact can be reversed;  (vi) the degree to which the impact may cause irreplaceable loss of resources; and  (vii) the degree to which the impact can be mitigated;  Any environmental management and mitigation measures proposed by the EAP;	
	Any inputs and recommendations made by specialists to the extent	
8.	that may be necessary;	
<ol> <li>8.</li> <li>9.</li> </ol>		





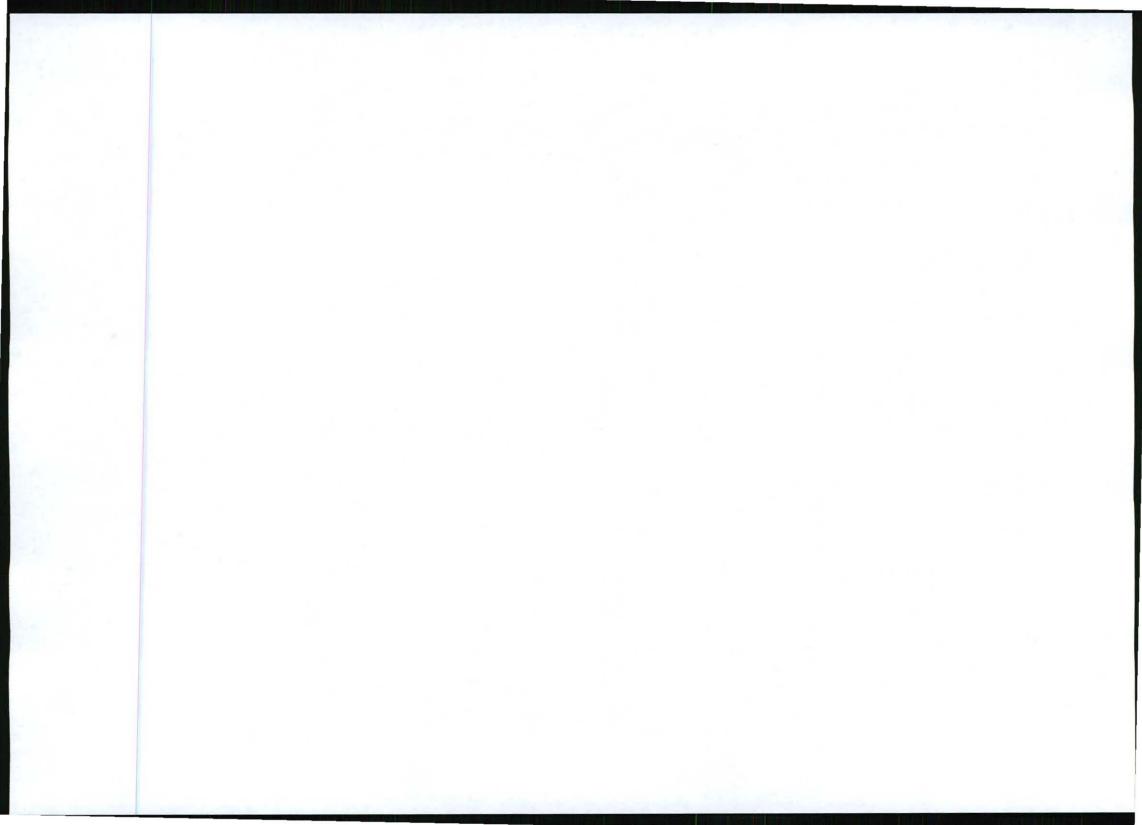
	knowledge;	
11.	A reasoned opinion as to whether the activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation	
12.	Any representations, and comments received in connection with the application or the basic assessment report;	
13.	The minutes of any meetings held by the EAP with interested and affected parties and other role players which record the views of the participants;	
14.	Any responses by the EAP to those representations, comments and views;	
15.	Any specific information required by the competent authority; and	
	Any other matters required in terms of sections 24(4)(a) and (b) of the Act.	

#### The basic assessment report must take into account -

- (a) any relevant guidelines; and
- (b) any departmental policies, environmental management instruments and other decision making instruments that have been developed or adopted by the competent authority in respect of the kind of activity which is the subject of the application.
- \* In terms of Regulation 22(4), the EAP managing the application must provide the competent authority with detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in subregulation 22(2)(h), exist.

Have reasonable and feasible alternatives been identified, described and assessed?	YES	NO
If NO, the motivation and investigation required in terms of Reg attached as an Appendix to this document	ulation 22(4)	must be





#### 1. A DESCRIPTION OF THE ENVIRONMENT

This section describes the environment that may be affected by the proposed activity and the manner in which the geographical, physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed activity in terms of Regulation 22 sub-regulation 2 (d) of the EIA Regulations, 2010.

#### PHYSICAL ENVIRONMENT

#### Gradient of the Site

Indicate the general gradient of the site.

#### Alternative S1:

Flat	1:50	-	1:20	_	1:15	-	1:10	_	1:7,5	-	Steeper than
	1:20		1:15		1:10		1:7,5		1:5		1:5
Alterna	tive S2 (	if an	y): App	olied	for Exe	mpti	on				
Flat	1:50	_	1:20	_	1:15	_	1:10	_	1:7,5	_	Steeper than
	1:20		1:15		1:10		1:7,5		1:5		1:5
Alterna	tive S3 (	if an	y): App	olied	for Exe	mpti	on				
Flat	1:50	-	1:20	_	1:15	_	1:10	_	1:7,5	-	Steeper than
	1:20		1:15		1:10		1:7,5		1:5		1:5

#### Location in landscape

Indicate the landform(s) that best describes the site:

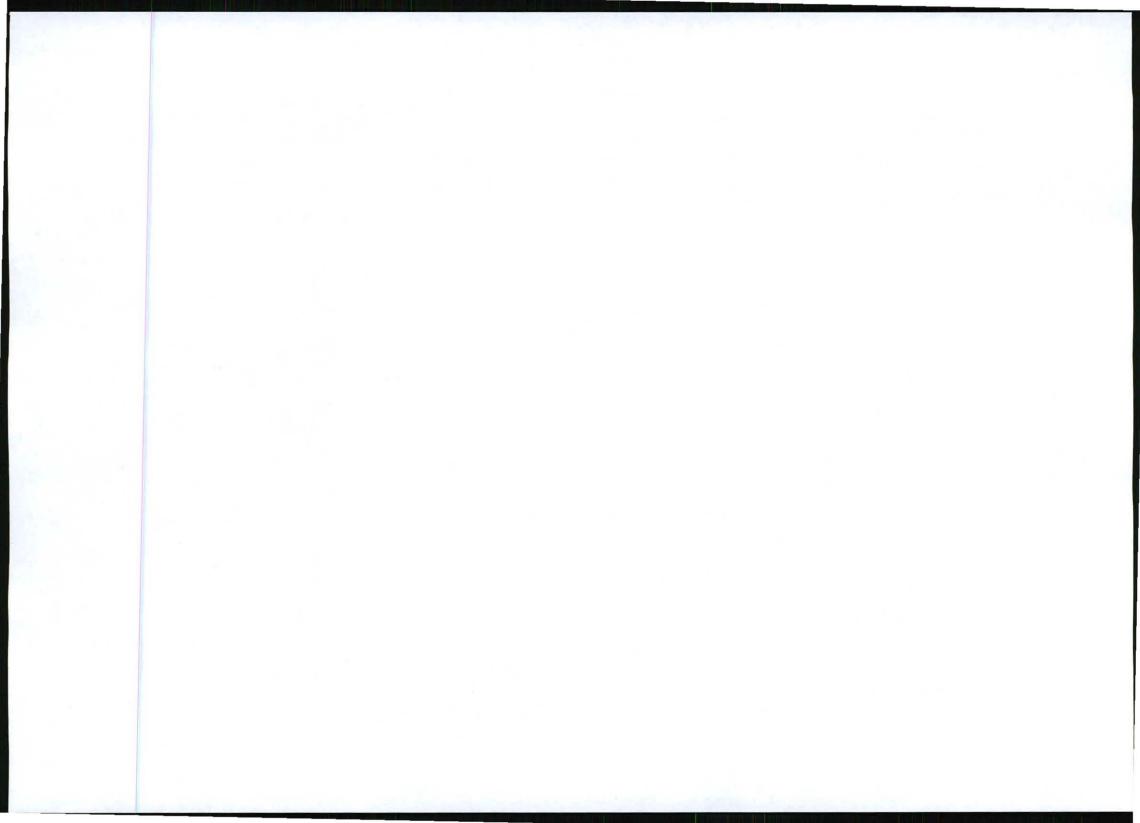
- 2.1 Ridgeline
- 2.2 Plateau
- 2.3 Side slope of hill/mountain
- 2.4 Closed valley
- 2.5 Open valley
- 2.6 Plain
- 2.7 Undulating plain / low hills
- 2.8 Dune
- 2.9 Seafront

#### Groundwater, Soil and Geological stability of the site

Is the site(s) located on any of the following (tick the appropriate boxes)?

	Alterna S1:	ative	Alterna (if any	ative S2 ):	Alterna (if any	ative S3 ):
Shallow water table (less than 1.5m deep)	YES	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO	YES	NO	YES	NO





Soils with high clay content (clay fraction more than 40%) Any other unstable soil or geological feature An area sensitive to erosion

YES	NO
YES	NO
YES	NO

YES	NO
YES	NO
YES	NO

YES	NO
YES	NO
YES	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

#### **BIOLOGICAL ENVIRONMENT**

#### Groundcover

Indicate the types of groundcover present on the site:

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition <sup>E</sup>	Natural veld with scattered aliens <sup>E</sup>	Natural (disturbed) veld with heavy alien infestation <sup>E</sup>	Veld dominated by alien species <sup>E</sup>	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

If any of the boxes marked with an "E" "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

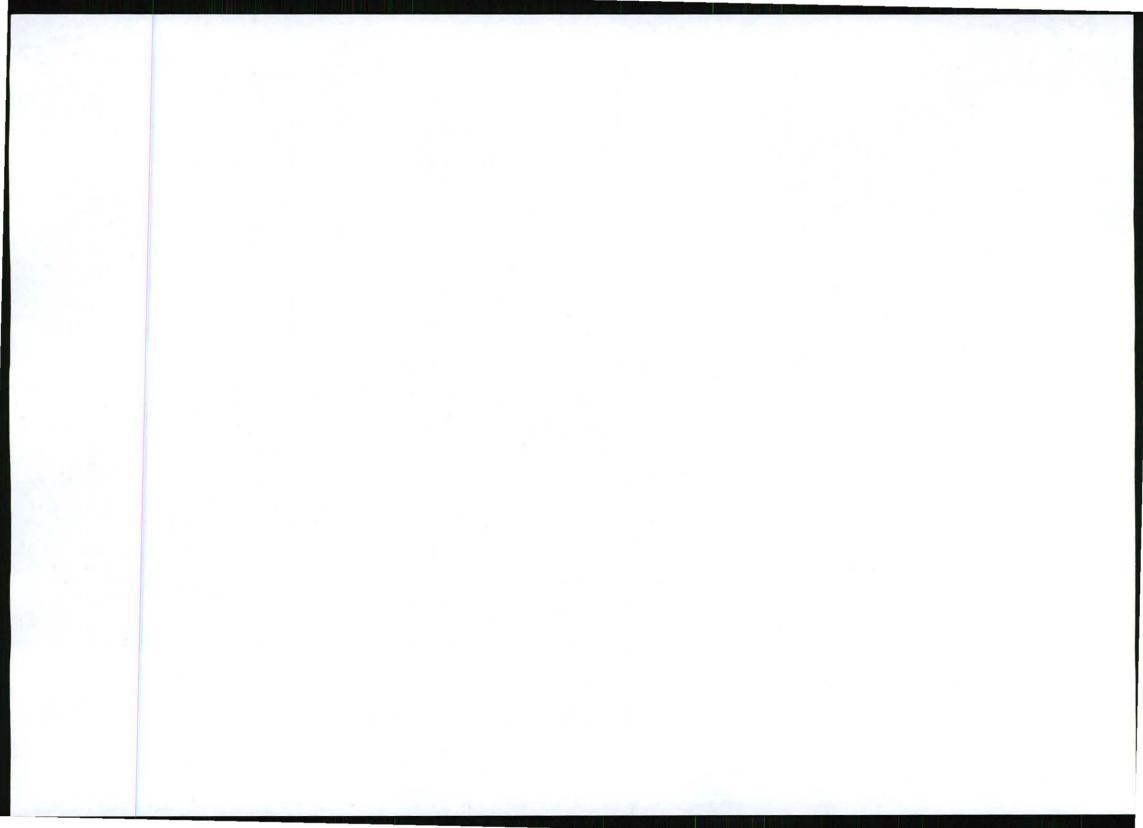
#### SOCIAL AND ECONOMICAL ENVIRONMENT

#### Land use character of surrounding area

Indicate land uses and/or prominent features that does currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

- 5.1 Natural area
- 5.2 Low density residential
- 5.3 Medium density residential
- 5.4 High density residential
- 5.5 Informal residential<sup>A</sup>
- 5.6 Retail commercial & warehousing
- 5.7 Light industrial
- 5.8 Medium industrial AN
- 5.9 Heavy industrial AN





5.10 Power station

5.11 Office/consulting room

5.12 Military or police base/station/compound

5.13 Spoil heap or slimes dam<sup>A</sup>

5.14 Quarry, sand or borrow pit

5.15 Dam or reservoir

5.16 Hospital/medical centre

5.17 School

5.18 Tertiary education facility

5.19 Church

5.20 Old age home

5.21 Sewage treatment plant<sup>A</sup>

5.22 Train station or shunting yard N

5.23 Railway line N

5.24 Major road (4 lanes or more)<sup>N</sup>

5.25 Airport N

5.26 Harbour

5.27 Sport facilities

5.28 Golf course

5.29 Polo fields

5.30 Filling station H

5.31 Landfill or waste treatment site

5.32 Plantation

5.33 Agriculture

5.34 River, stream or wetland

5.35 Nature conservation area

5.36 Mountain, koppie or ridge

5.37 Museum

5.38 Historical building

5.39 Protected Area

5.40 Gravevard

5.41 Archaeological site

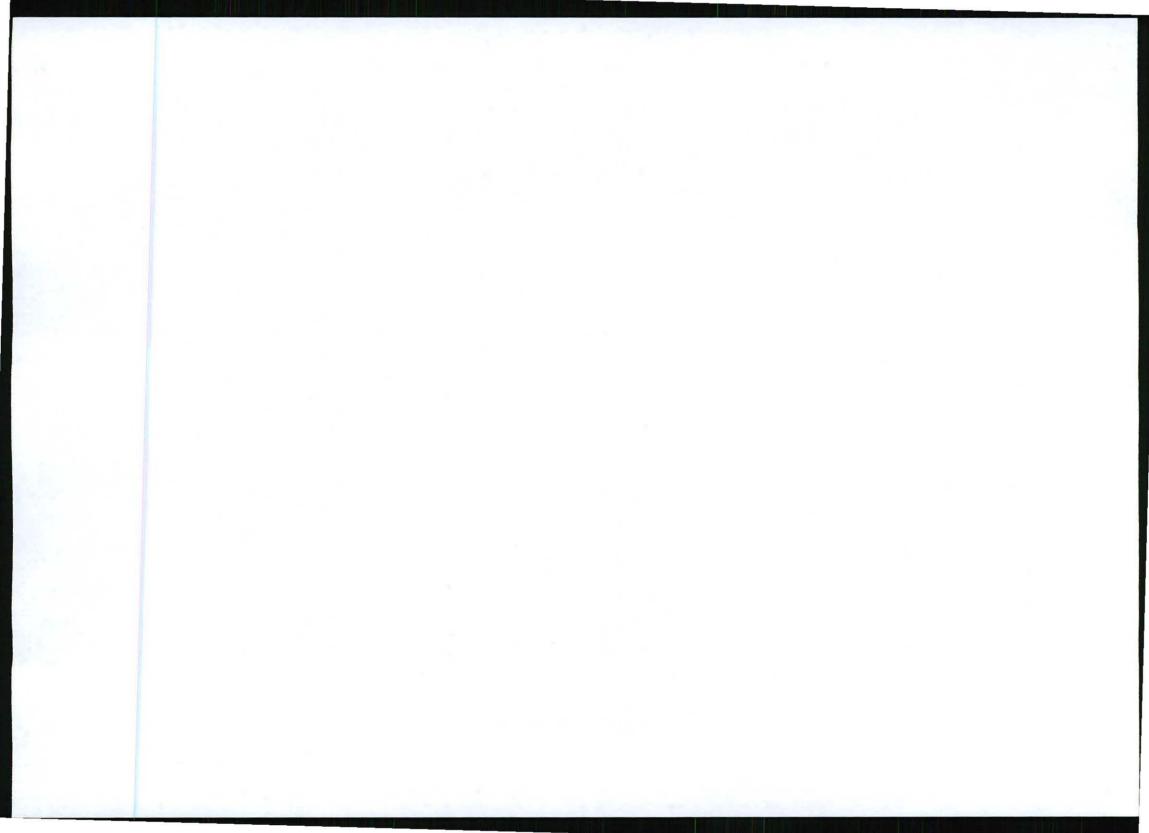
5.42 Other land uses (describe)

If any of the boxes marked with an "N" "are ticked, how will this impact / be impacted upon by the proposed activity?  $\bf No$ 

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? **No**If YES, specify and explain:
If YES, specify:

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity. **No** If YES, specify and explain: If YES, specify:

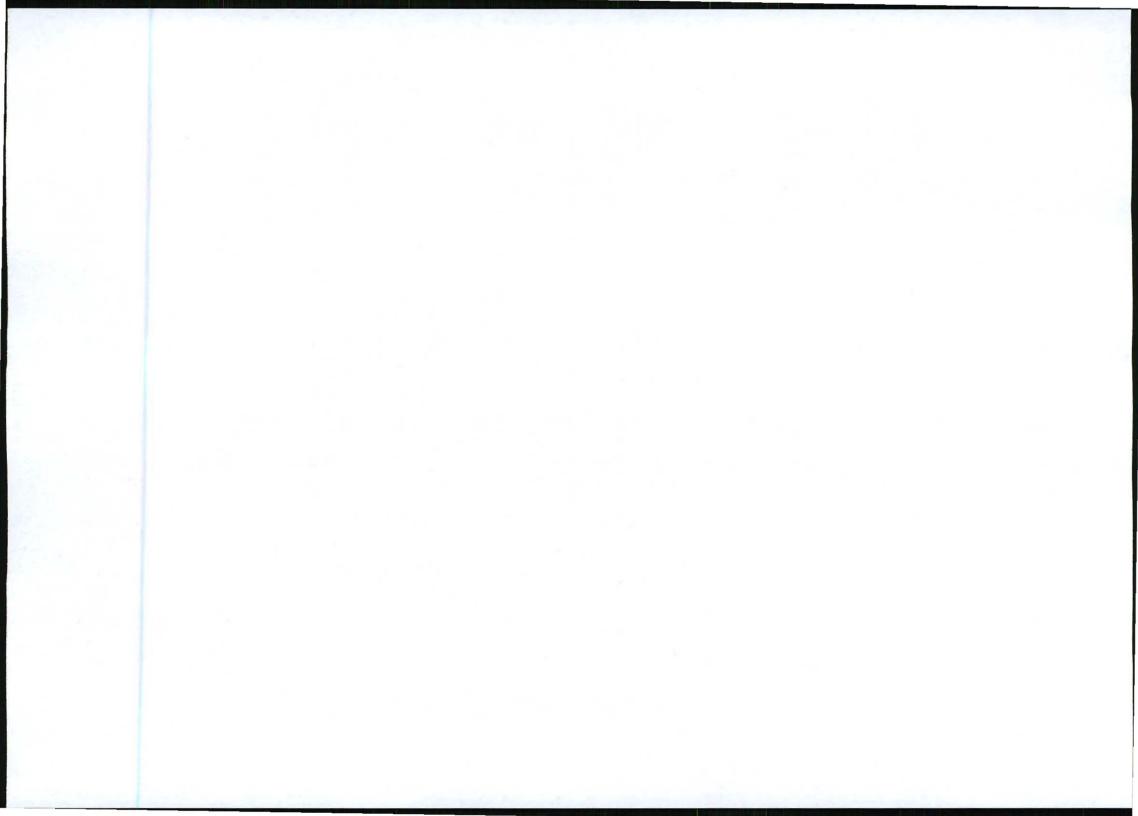




# Waste, effluent, emission and noise management

waste water if any: NA

(a) Solid wa	aste management					
	vity produce solid	construction	waste during	the	YES	NO
	timated quantity will b	e produced pe	r month?	1	2m3 (6	
,,	mater quantity iiii 2	о разова ро			weeks	
					constru	ection
					period	
How will the co	enstruction solid waste	he disnosed	of (describe)?	l	periou	Offig)
	ransported by a su				vehicle	to the
	ered landfill site.					
Where will the	construction solid was	ste be dispose	d of (describe	)?		
	egistered landfill sit					
Will the activity	produce solid waste	during its oper	ational phase	?	YES	NO
If yes, what est	timated quantity will b	e produced pe	r month?		$m^3$	
	olid waste be disposed			,		
-		1				
Where will the	solid waste be disp	osed if it doe	s not feed in	to a m	unicipal	waste
stream (descrit	The state of the s				1 : X : X : X : X : X : X : X : X : X :	
-						
If the solid wa	ste (construction or	operational ph	ases) will not	be dis	sposed o	of in a
registered land	Ifill site or be taken up	p in a municipa	al waste strea	m, the	n the ap	plicant
	with the competent					
	pplication for scoping					
	of the solid waste be		nazardous in	terms	YES	NO
of the relevant						
	the competent author	rity and reque	est a change	to an	applicat	on for
scoping and El					• • • • • • • • • • • • • • • • • • • •	
Is the activity	that is being applie	d for a solid	waste handli	ng or	YES	NO
treatment facili	ty?					
If yes, then the	e applicant should co	onsult with the	competent a	uthorit	y to dete	ermine
whether it is no	ecessary to change to	an application	for scoping a	nd EIA	۸.	
(b) Liquid e		24	2		C	1
	produce effluent, oth		al sewage, tha	t will b	e YES	NO
the state of the s	a municipal sewage s	· ·			-	
	timated quantity will b				m <sup>3</sup>	
	ity produce any eff	luent that wi	ll be treated	and/c	r Yes	NO
disposed of on						W. The
	licant should consult v			to dete	ermine w	hether
	to change to an appli					
	y produce effluent that	at will be treate	ed and/or disp	osed o	of YES	NO
at another facil						
If yes, provide	the particulars of the	facility:				
Facility	-					
name:						
Contact	-					
person:						
Postal	-					
address:						
Postal code:						
Telephone:	:=::		Cell:	Tele	phone:	
2			Fax:	-		
E-mail:						
Describe the n	neasures that will be	taken to ensu	re the ontimal	TOLICA	or recvi	ling of



#### (c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

If yes, is it controlled by any legislation of any sphere of government?

YES NO

YES

YES

NO

NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

Non-ionised electromagnetic fields with power density < 10W/m<sup>2</sup> (Department of Health Guidelines based on International Commission on Non-Ionising Radiation Protection (ICNIRP) and World Health Organisation (WHO) guidelines.

#### (d) Generation of noise

Will the activity generate noise?

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine

whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

Minimum noise generation will emanate from the installed air conditioners at a <60dB noise level. The level of noise generation is well within the acceptable norm and will not cause a disturbance to the surrounding environment.

#### (e) Water Use

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

municipal	water	groundwater	river,	stream,	other	the activity will not
	board		dam or	lake		use water

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month:

Does the activity require a water use permit from the Department of Water Affairs?

er YES NO

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

#### (f) Energy Efficiency

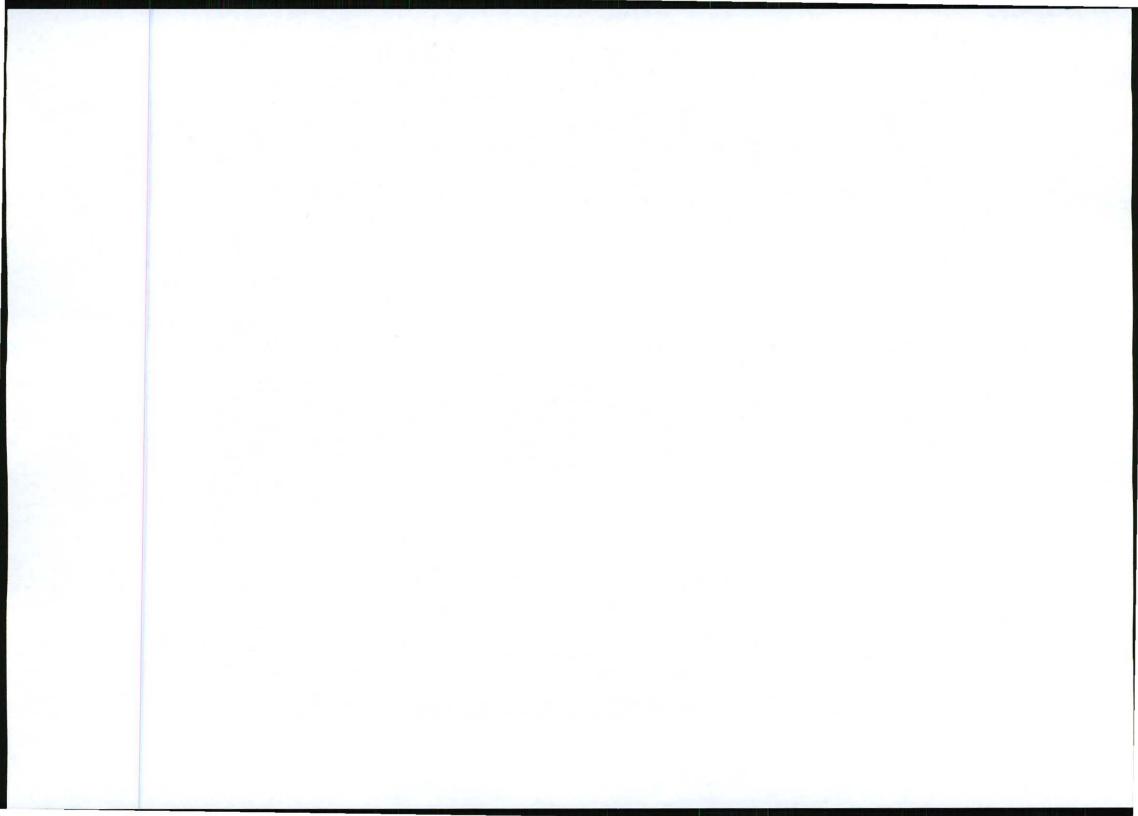
Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

High technological mobile telecommunication operating systems are in principle designed for minimum, cost effective energy consumption in order to preserve resources and to optimise the financial yield generated by the base station.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

Alternative energy sources have not been taken into account in the design of the activity.





#### **CULTURAL ENVIRONMENT**

#### **Cultural/Historical Features**

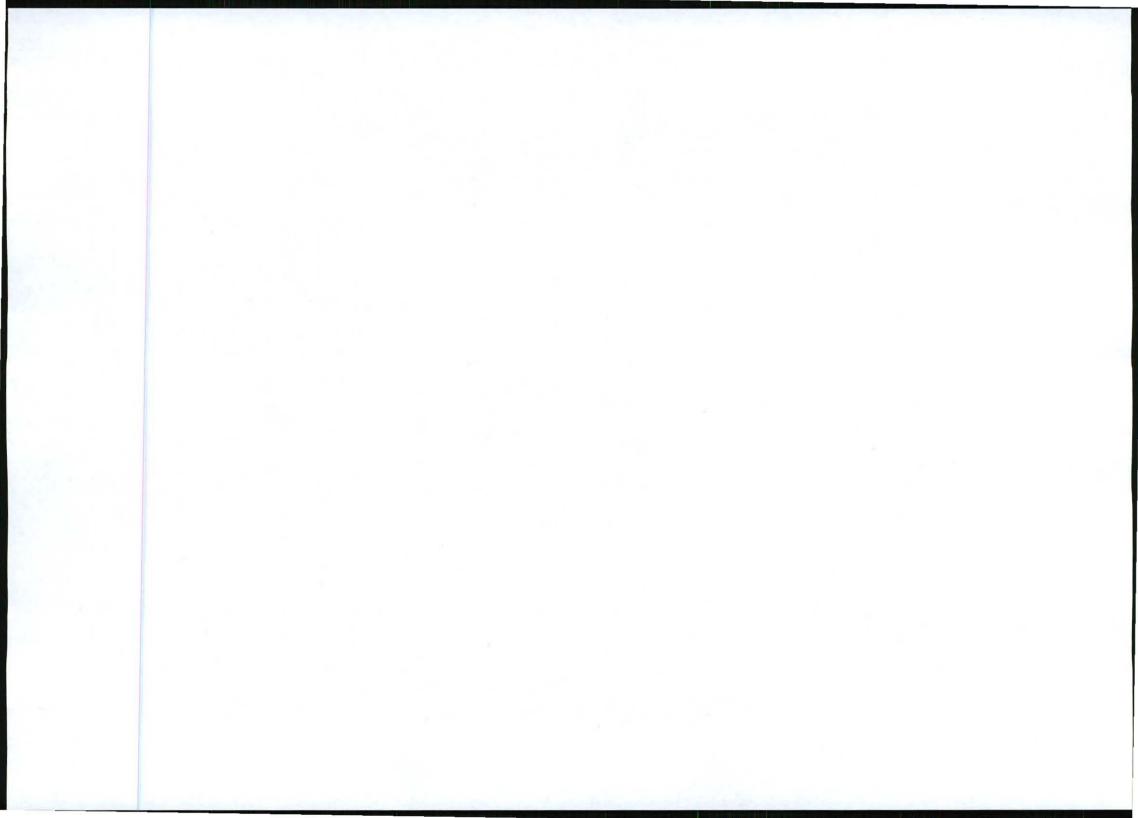
Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act,	YES	NO
1999, (Act No. 25 of 1999), including		
Archaeological or palaeontological sites, on or close (within 20m) to the site?	Uncerta	ain
If YES, -		
explain:		
If uncertain, conduct a specialist investigation by a recognised spec		the field to
establish whether there is such a feature(s) present on or close to the	ne site.	
Briefly -		
explain the		
findings of		
the		
specialist:		
Will any building or structure older than 60 years be affected in	YES	NO
any way?		WAS STORY
Is it necessary to apply for a permit in terms of the National	YES	NO
Heritage Resources Act, 1999 (Act 25 of 1999)?		
If yes, please submit or, make sure that the applicant or a special	cialist si	ubmits the
necessary application to SAHRA or the relevant provincial heri	tage ag	gency and
attach proof thereof to this application if such application has been if	made.	

# 2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES – IN TERMS OF Regulation 22 sub-regulation 2 (e) of the EIA Regulations, 2010

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable: Title of legislation, policy or guideline: Administering Date:

riac criegiciation, policy or guideline.	authority:	Duto.
National Environmental Management Act (NEMA) No. 107 of 1998 & related regulations & guidelines	Mpumalanga Province Department of Economic Development, Environment and Tourism	27/11/1998
Civil Aviation Act, 2009 (Act No. 13 of 2009)	South African Civil Aviation Authority	2009
Approval in terms of town planning schemes and/or National Building Regulations	Gert Sibande District Municipality (Msukaligwa Local Municipality	2007
Occupational Health and Safety Act (No. 85 of 1993)	Department of Labour	1993
National Veld and Forest Fire Act (No. 101 of 1998)	Department of Water and Environmental Affairs	1998
National Heritage Resources Act (No. 25 of 1999)	South African Heritage Resources Agency	1999



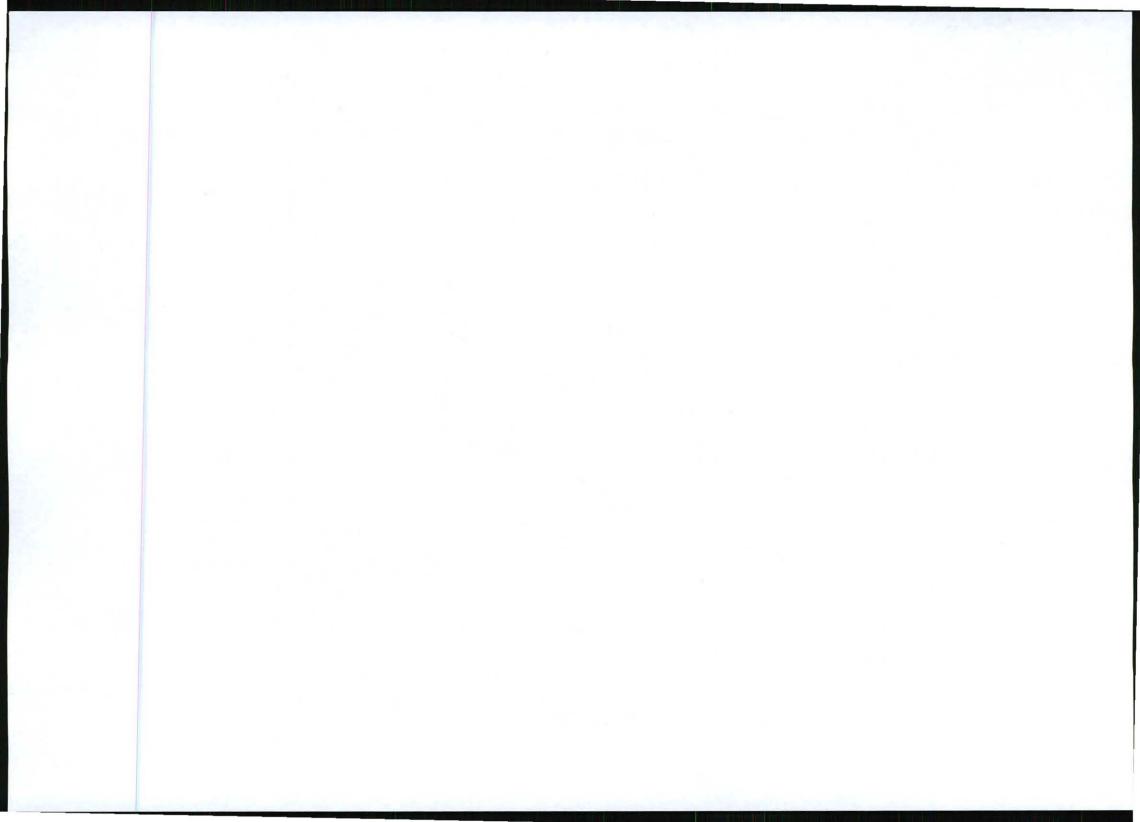


# 3. PUBLIC PARTICIPATION – IN TERMS OF Regulation 22 sub-regulation 2 (f) of the EIA Regulations, 2010

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
  - the site where the activity to which the application relates is or is to be undertaken; and
  - (ii) any alternative site mentioned in the application;
- (b) giving written notice to-
  - the owner or person in control of that land if the applicant is not the owner or person in control of the land;
  - the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  - the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
  - (v) the municipality which has jurisdiction in the area;
  - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
  - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in-
  - (i) one local newspaper; or
  - (ii) any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official Gazette referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
  - (i) illiteracy;
  - (ii) disability; or
  - (iii) any other disadvantage.





#### **Content of Advertisements and Notices**

A notice board, advertisement or notices must:

- indicate the details of the application which is subjected to public participation;
   and
- (b) state-
  - that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
  - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation:
  - (iii) the nature and location of the activity to which the application relates;
  - (iv) where further information on the application or activity can be obtained; and
  - (iv) the manner in which and the person to whom representations in respect of the application may be made.

#### Placement of Advertisements and Notices

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

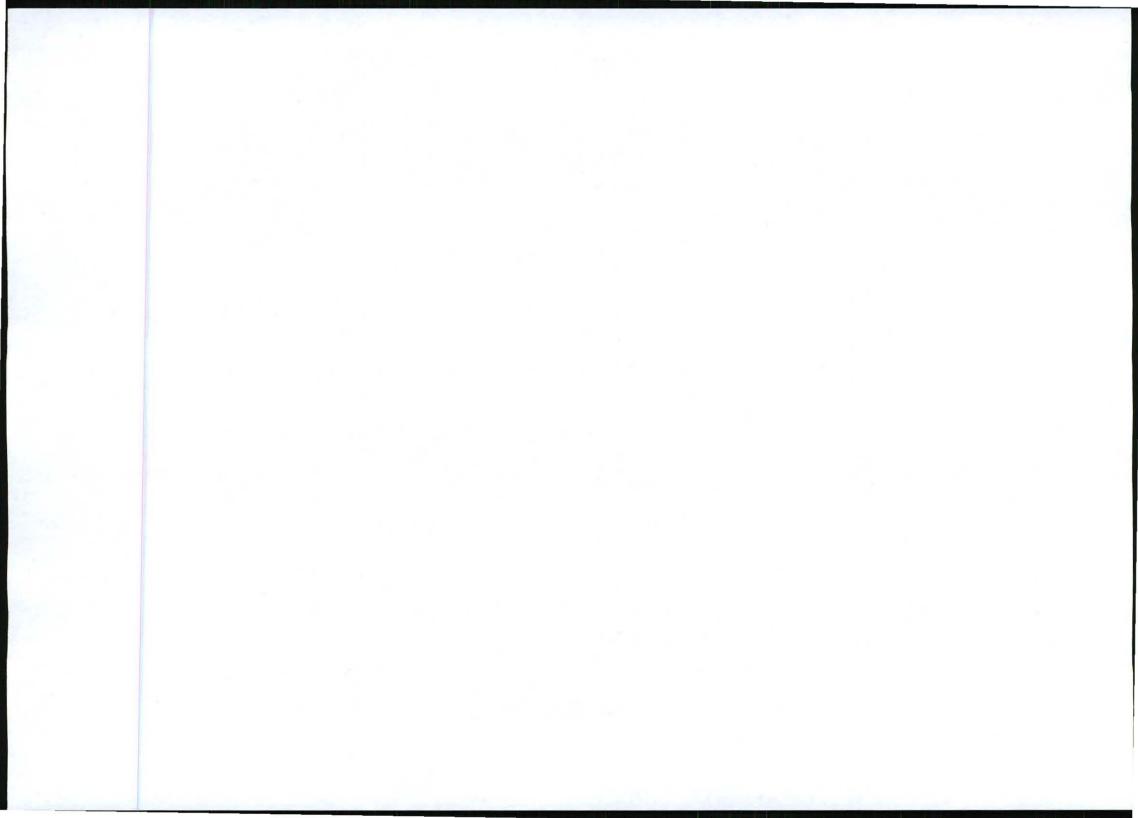
#### **Determination of Appropriate Measures**

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

#### Comments and response report

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

13



#### **Authority Participation**

Please note that a complete list of all organs of state and or any other applicable authority with their contact details must be appended to the basic assessment report or scoping report, whichever is applicable.

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input.

List of authorities informed:

Msukaligwa Local Municipality
Gert Sibande District Municipality
Ward Councillor
South African Civil Aviation Authority
South Africa Historical Resources Agency

List of authorities from whom comments have been received:

No comments were received from any authorities yet, but the Draft Basic Assessment Report will also be submitted to the Local & District Municipality, Ward Councillor and South Africa Heritage Resources Agency.

#### Consultation with other Stakeholders

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that subregulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable.

Has any comment been received from stakeholders?

YES NO

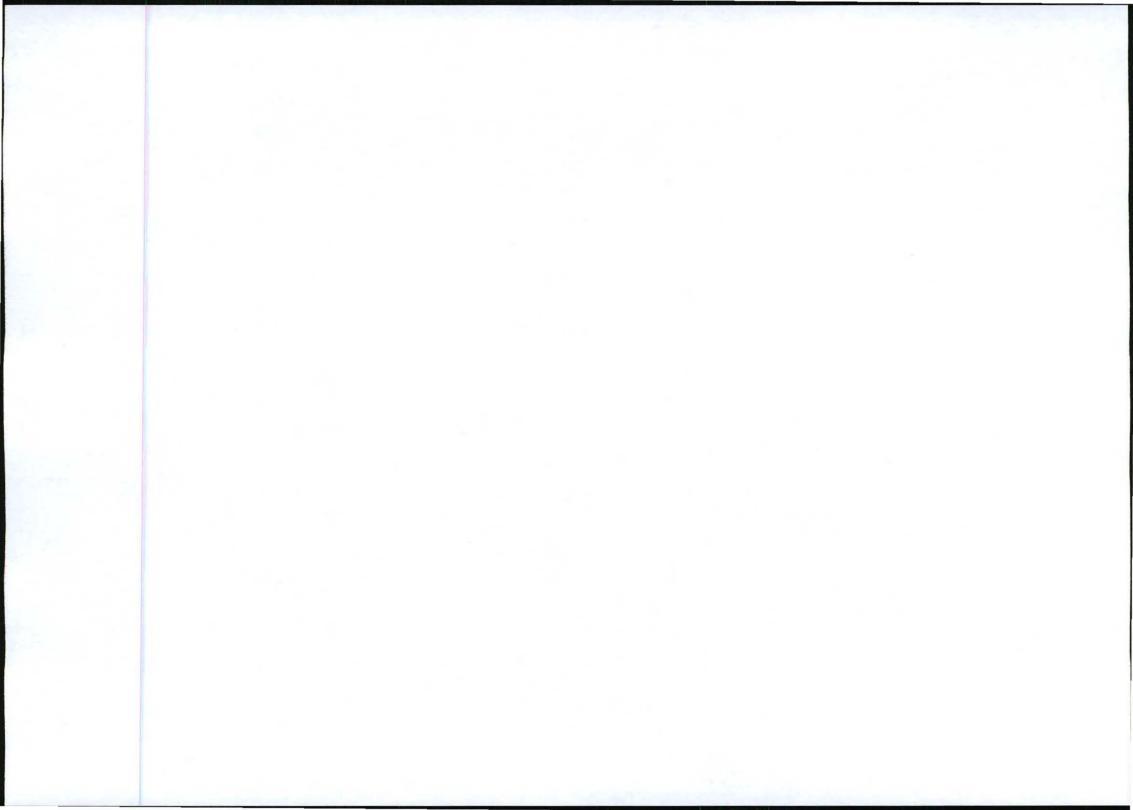
If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

4. NEED AND DESIRABILITY- IN TERMS OF Regulation 22 sub-regulation 2 (g) of the EIA Regulations, 2010

#### **ACTIVITY MOTIVATION**

Socio-economic value of the activity What is the expected capital value of the activity on completion? R 500 000 What is the expected yearly income that will be generated by or as a Unknown result of the activity? Will the activity contribute to service infrastructure? YES NO Is the activity a public amenity? YES NO How many new employment opportunities will be created in the 0 development phase of the activity? What is the expected value of the employment opportunities during the R<sub>0</sub> development phase? 0% What percentage of this will accrue to previously disadvantaged individuals?





How many permanent new employment opportunities will be created during the operational phase of the activity?	0
What is the expected current value of the employment opportunities during the first 10 years?	R0
What percentage of this will accrue to previously disadvantaged individuals?	0%

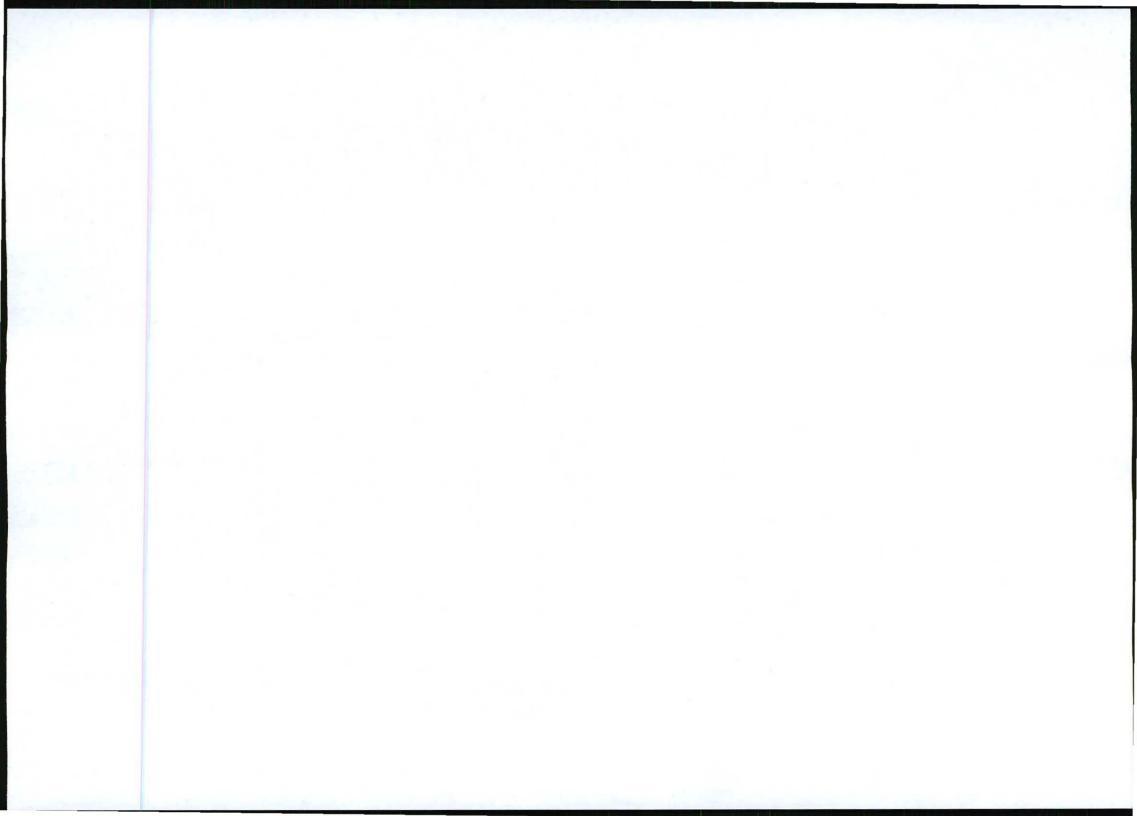
# (b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

NE	ED:				
1.	Was the relevant provincial planning department involved in the application?	YES	NO		
2.	Does the proposed land use fall within the relevant provincial planning framework?	YES	NO		
3.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:				
	•				

DESIR	ABILITY:						
1.	Does the proposed land use / development fit the surrounding area?	YES	NO				
2.	Does the proposed land use / development conform to the relevant structure plans, SDF and planning visions for the area?	YES	NO				
3.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES	NO				
4.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:						
5.	Will the proposed land use / development impact on the sense of place?	YES	NO				
6.	Will the proposed land use / development set a precedent?	YES	NO				
7.	Will any person's rights be affected by the proposed land use / development?	YES	NO				
8.	Will the proposed land use / development compromise the "urban edge"?	YES	NO				
9.	Will the proposed land use / development compromise the "urban YES NO						





from the ground.

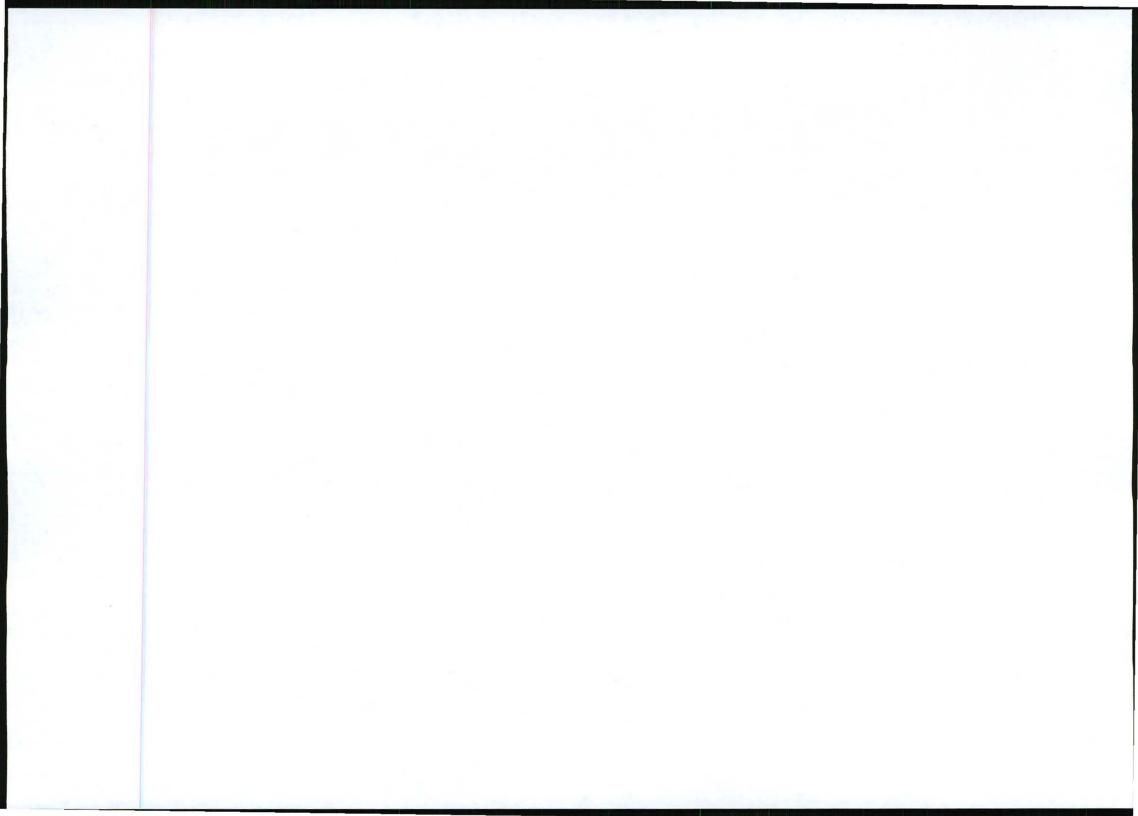
- The 54m high lattice mast painted red and white will be highly visible from the air and from the ground on the short to medium range. The design of the mast cannot be disguised as a tree because of the SACAA required day and night markings. A tree type mast cannot be painted red and white. The only other possible design alternative would be a 54m high monopole type mast painted red and white. This design would result in a significantly higher visual impact because of the lower blending capability of the more solid type structure against the sky background. The proposed lattice type mast will have a lower visual impact on the medium to long range due to the higher blending capability of the more transparent type structure against the sky background. The monopole design would also not be suitable for this application due to the higher limitations with regard to antennae placement and associated supply cables as well as lower wind load capacity on a monopole type mast. The lattice type mast is more suitable for the required antennae and associated equipment in terms of space and wind load capacity.
- The significance of the visual impact will further be determined by the amount of people who are exposed to the visibility of the mast:
  - 1. The short range visual impact is limited to the local residents on the property (low density residential), the staff working on the farm and the travellers using the farm road (off the R33, Carolina -Chrissiesmeer, ±12km South of Carolina), mainly restricted to local farmers in the area. The short range visual impact is high due to the high visibility of the mast but considered to be of low significance due to relatively low amount of people who are exposed to it.
  - The medium range impact is limited to the same individuals as the short range impact. The medium range visual impact is high but considered to be of low significance due to the small amount of people who are exposed to it.
  - 3. The long range visual impact is also limited to the same individuals as the short and medium range impact. Due to the more transparent type of mast (lattice structure), the blending capability against the sky background increases with distance away from the mast. Further blending capability is enhanced by the surrounding vegetation and topography of the landscape. Therefore the significance of the long range visual impact is considered to be low.

Overall significance of visual impact on the short, medium and long range is considered to be low due to the relatively low amount of people exposed to the mast, the screening of the mast by surrounding vegetation, topography and manmade structures as well as the high blending capability of the more transparent type structure against the sky background.

5. ALTERNATIVES— IN TERMS OF Regulation 22 sub-regulation 2 (h) of the EIA Regulations, 2010

FEASIBLE AND REASONABLE ALTERNATIVES – Please refer to the motivation that no feasible and reasonable alternatives exists in this instance attached in Appendix G of this Basic Assessment Report.





"alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

#### **ACTIVITY POSITION**

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection. List alternative sites, if applicable.

### Alternative:

Alternative S1<sup>1</sup> (preferred or only site alternative)

Alternative S2 (if any)

Alternative S3 (if anv)

#### In the case of linear activities:

#### Alternative:

Alternative S1 (preferred or only route alternative)

- · Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

#### Alternative S2 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

#### Alternative S3 (if any)

- · Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

_atitude (	S	:

Latitude (S):

#### Longitude (E):

Longitude (E):

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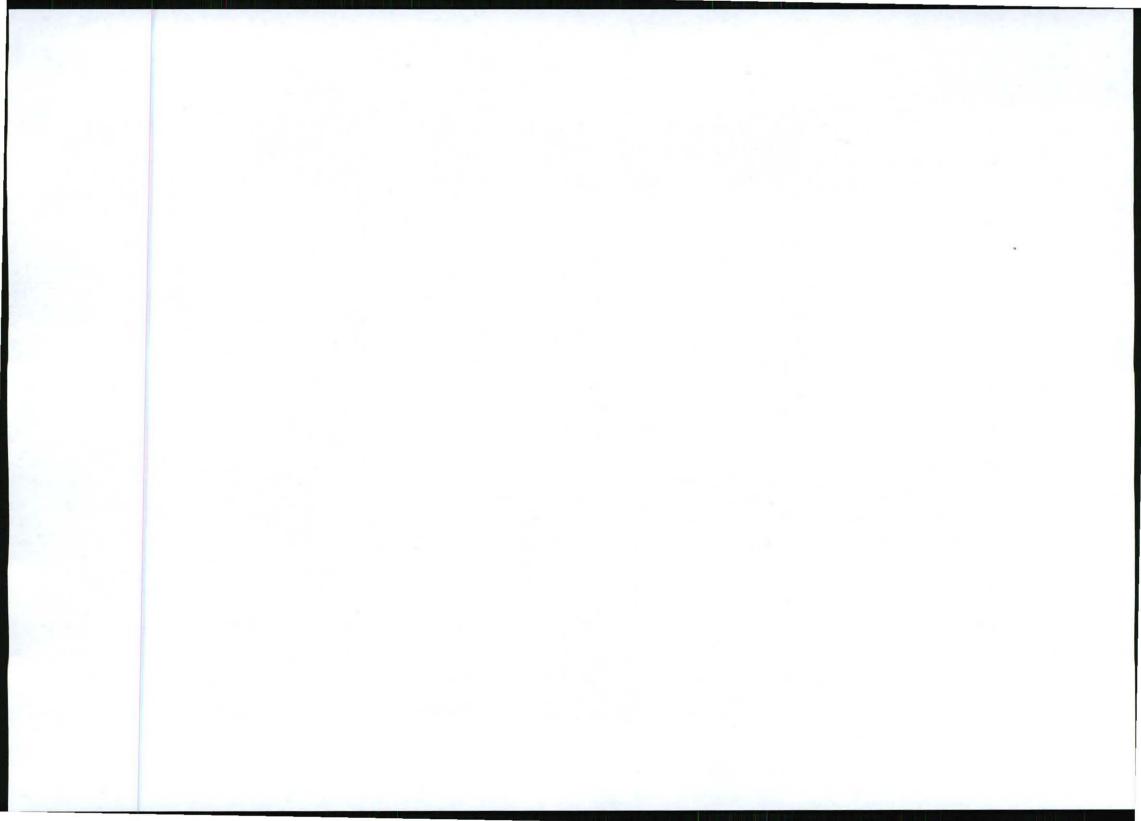
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<sup>1 &</sup>quot;Alternative S..." refer to site alternatives.





For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

# A. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical s	size of	the preferred	activity/technology	as	well a	as	alternative
activities/technologies	(footpri	nts):					

Alternative:	Size of the activity:
Alternative A12 (preferred activity	81m <sup>2</sup>
alternative)	
Alternative A2 (if any)	m <sup>2</sup>
Alternative A3 (if any)	m <sup>2</sup>
or, for linear activities:	

Length	of	the
activity:		

#### Alternative:

Alternative.				
Alternative A1	(preferred	activity	m	
alternative)				
Alternative A2 (if	any)		m	
Alternative A3 (if	any)		m	1

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative	:			site/servitude:
Alternative alternative)	A1	(preferred	activity	281.2557 Ha
Alternative A	A2 (if a	ny)		Н
Alternative A	A3 (if a	ny)		m <sup>2</sup>

# B. SITE ACCESS

Does ready access to the site exist?	YES	NO
If NO, what is the distance over which a new access road will be built	-	

Describe the type of access road planned:

an indication of the road in relation to the site.

Include the position of the access road on the site plan and required map, as well as

# C. SITE OR ROUTE PLAN

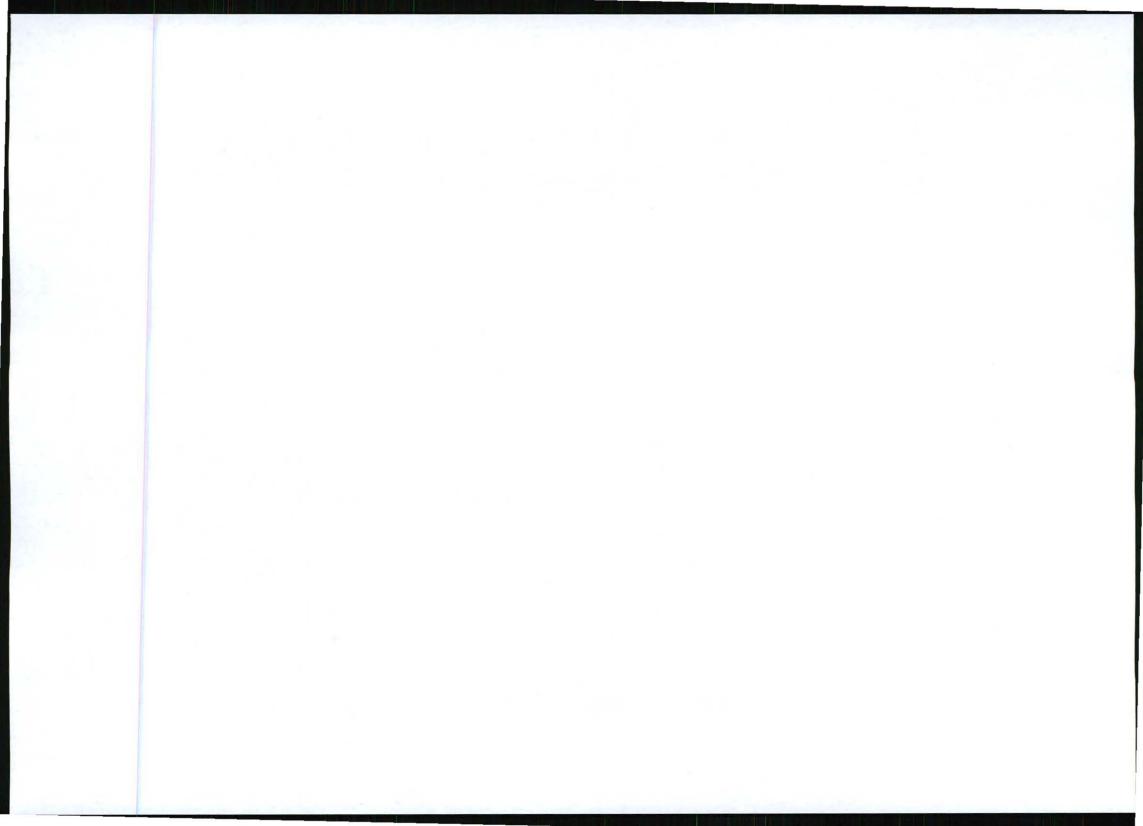
A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;

<sup>&</sup>lt;sup>2</sup> "Alternative A.." refer to activity, process, technology or other alternatives.





- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
  - rivers:
  - the 1:100 year flood line (where available or where it is required by DWA);
  - ridges
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 6.10 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.11 the positions from where photographs of the site were taken.

#### D. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

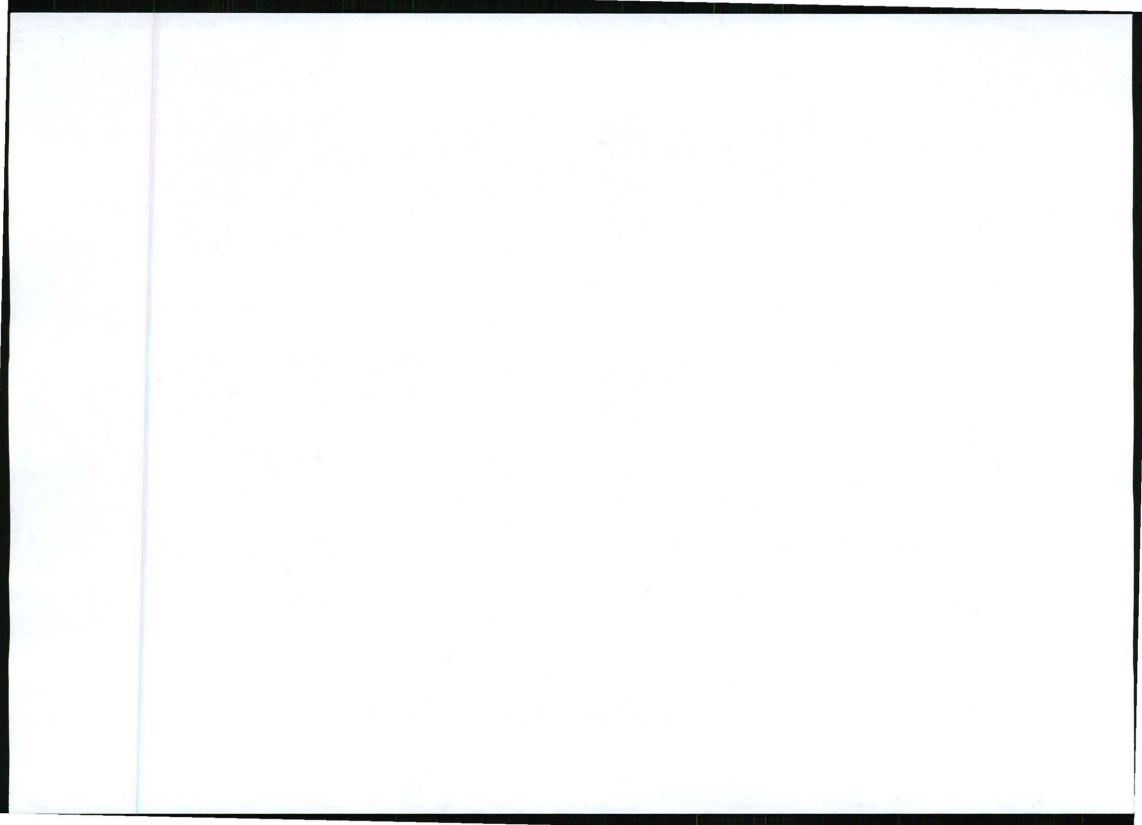
#### E. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

# F. ADVANTAGES AND DISADVANTAGES OF THE PROPOSAL AND ALTERNATIVES

ADVA	NTAGES:		
1.	Will the land use / development have any benefits for society in general?	YES	NO
2.	Explain:		
	<ul> <li>Increased and improved national MTN coverage footprint users to communicate on the MTN network where ever the</li> <li>Additional fulfilment of one of government's objectives to establishment of national communication network grids a spart of a sustainable economic growth pattern.</li> </ul>	ey are. ensure	the
3.	Will the land use / development have any benefits for the local communities where it will be located?	YES	NO





4.	Explain:		
	The motivation and benefits to society in general above apply community directly. It will furthermore ensure that the commu capability and capacity of the local community will keep pace growing and availability of communication facilities nationwid	nicatio with th	n
DISA	DVANTAGES:		
1.	Will the land use / development have any disadvantages for society in general?	YES	NO
	will be negatively affected by the visibility of the structure. However telecommunication mast is identified as necessary modern infrastrum improve telecommunication in the area. Due to the relatively low number people travelling through or working in the area surrounding the madisadvantage of the visual impact is considered to be low. It is furth that the possible negative visual impact is outweighed by the position the mast. Therefore the aesthetical/visual impact is considered to be significance.	ucture to umber of ast, the ner argu- ve bene	ed efits of
2.	Will the land use / development have any disadvantages for the local communities where it will be located?  Explain:	YES	NO
	The motivation and benefits to society in general also apply to		
	the local community directly. It will furthermore ensure that the communication capability and capacity of the local community will keep pace with the ever growing and availability of communication facilities nationwide.		

# 6 & 7. IMPACT ASSESSMENT- IN TERMS OF Regulation 22 sub-regulation 2 (i) - (j) of the EIA Regulations, 2010

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

#### ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

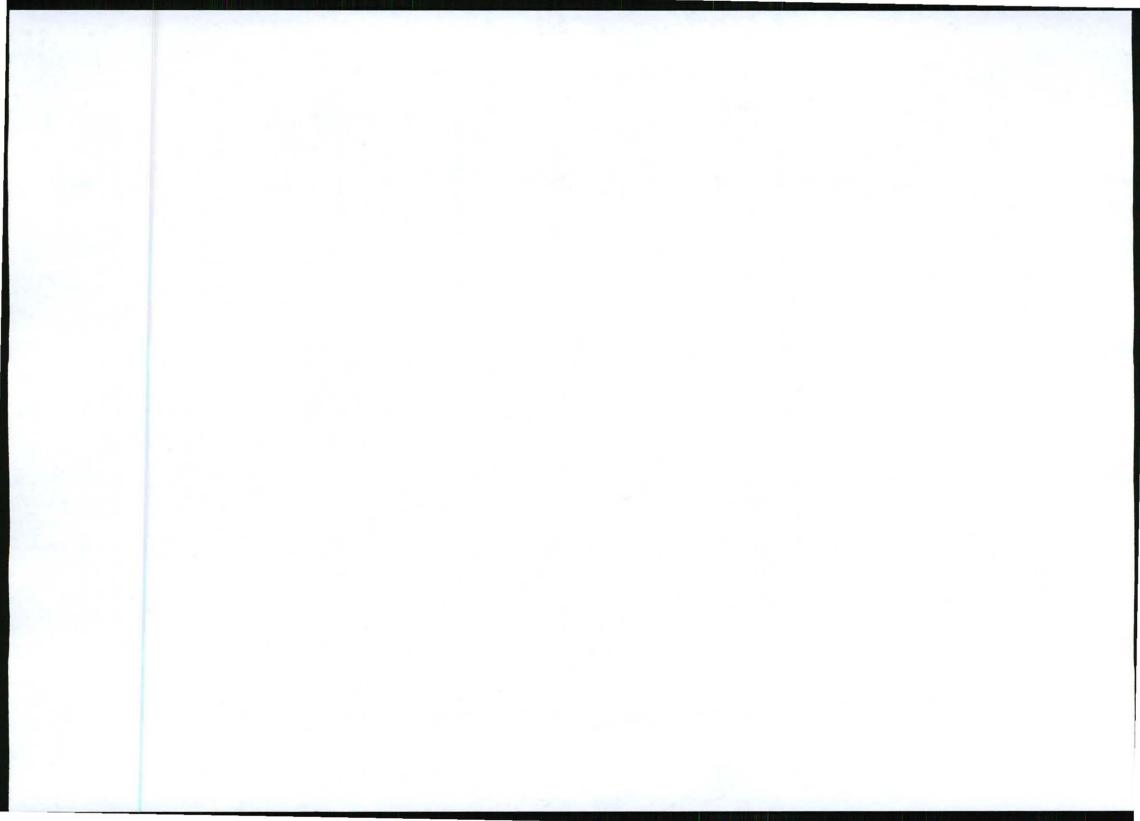
List the main issues raised by interested and affected parties.

- 1) Breeding and feeding area of the protected Blue Crane.
- Requested maps to indicate exact site localities and mast alternatives, and whether the masts would need anchoring cables.
- 3) Requested motivation for applying for exemption of alternatives.
- 4) Requested outline of the planned public participation process and associated timelines.
- 5) Requested Draft BAR for review.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report as Annexure E):

- 1&2) Submitted the maps and drawings to indicate the exact site locality and proposed design of the mast without anchoring cables.
- 3) **Motivation for applying for exemption to assess alternatives:** The Environmental Impact would be of the same significance if the mast was moved to another locality within a certain radius of the proposed area. Therefore there are no





feasible or reasonable site alternatives for this application. The Civil Aviation Authority (SACAA) requires red & white painted masts for all structures above 45m in height to prevent aircraft accidents. Unfortunately, a red & white mast of this height cannot be made highly visible to aircraft and at the same time be camouflaged to prevent visibility from the ground. Therefore there are no feasible or reasonable design alternatives available for this application. For the above mentioned reasons we will apply for exemption to assess alternatives to the Department (Mpumalanga Department of Economic Development, Environment and Tourism).

4&5) Outline of the planned public participation process and associated timelines: The Public Participation Process was initiated on 26 January 2012. Public Notices are put up at the property of the proposed development, a Legal Notice was placed in the Local Newspaper and Public Notices were hand delivered or posted to the owners of the adjacent properties via registered mail. The end date for the standard Public Participation Process is 3 March 2012. All registered Interested & Affected Parties will be Acknowledged & Registered. Additional Information will be send on Request. All registered Interested & Affected Parties will receive a copy of the Draft Basic Assessment Report for their perusal and comment after the standard Public Participation Process period. The registered I&APs have 40 days to respond to the EAP regarding the Draft BAR. All correspondence between I&APs and the Environmental Assessment Practitioner (EAP) will be included in the Draft Basic Assessment Report (BAR) and submitted to the Department (Mpumalanga of Economic Development, Environment and Tourism). correspondence between I&APs and the EAP will also be included in the Final BAR to the Department.

# IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/ activity/ design/ technology/ operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

#### IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN PHASE

List the potential site alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, including impacts relating to the choice of site alternatives.

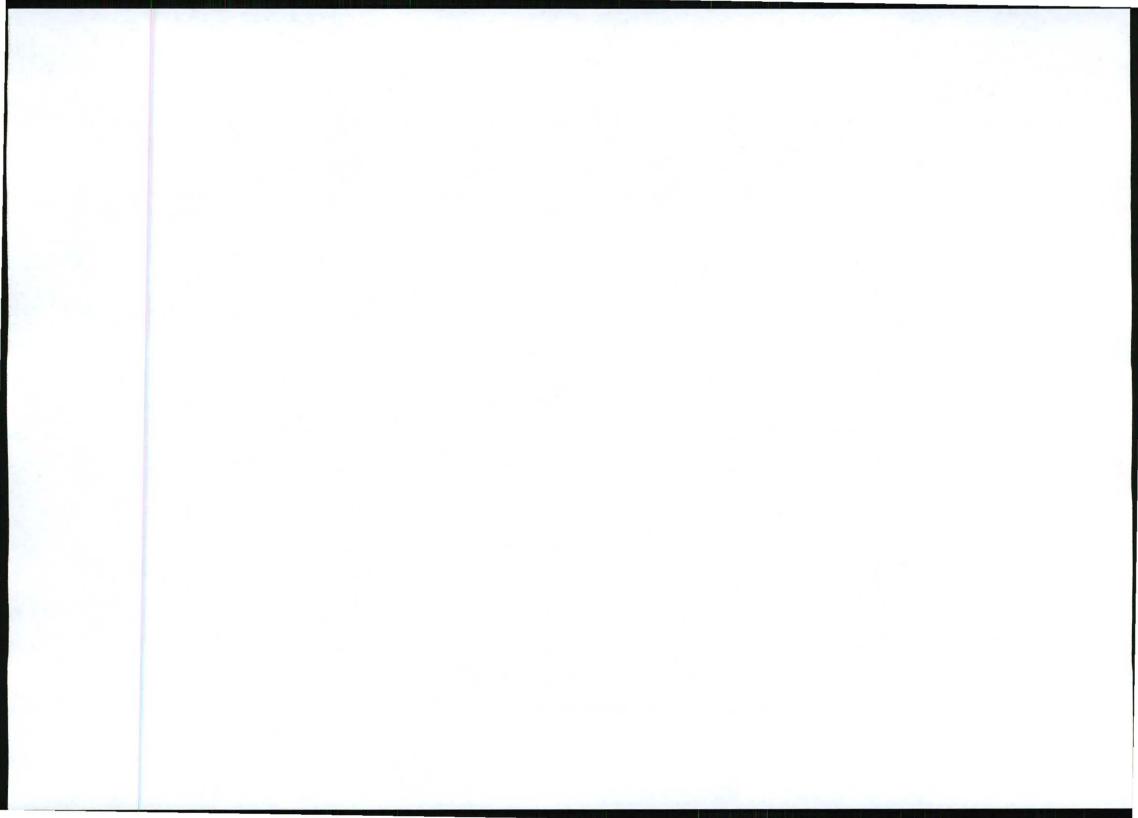
# Alternative S1:

## Direct impacts:

#### PHYSICAL:

- Safety aspects: The following safety aspects were taken into consideration in planning the base station:
  - Position & height in terms of official airports, helipads and air traffic routes as determined by SACAA. Mitigated in terms of the SACAA prescribing day & night markings to prevent aircraft accidents.
  - General installation safety for the general public, owners, technicians etc.: Engineering services incorporated in the design of the mast, foundations and other design and construction safety aspects of the base station;
  - · Base station to be surrounded with a 2.4m high steel palisade fence to





prevent unauthorised access to the base station area and mast.

- 2. Visual impact: Evaluation of structure type, height & position, taking into consideration the purpose and objective of the planned activity in terms of mobile telecommunication coverage area and quality of coverage. Establishment of 54m lattice telecommunication mast painted red & white selected as most appropriate based on:
  - Investigation of sharing existing infrastructure:

The specific site requirements needed by MTN are:

- Physical space for two sets of antennae, and 12 feeder cables;
- > Wind load capacity for above mentioned equipment;
- Minimum height of 54m to reach required coverage objectives; and
- Space and load capacity for future upgrading or advances in technology.

No existing facility or infrastructure within range that can fulfil the required capacity in terms of the coverage objectives.

- 54m height required to achieve maximum coverage objectives in the specific environment and therefore reducing the need for additional base stations to achieve/maintain the same coverage within the coverage target area;
- Lattice type structure suitable to fulfil the coverage objectives of the base station due to the coverage range required and the flexibility of utilising the mast height for varying antennae installation configurations due to the specific characteristics of the area;
- Lattice design mast painted red & white provides maximum mitigation from the air to prevent aircraft accidents by increased visibility. Red & white lattice mast provides low mitigation of the visual impact from the ground on the short to medium range viewpoints due to the high visibility of the structure. The lattice structure provides high mitigation on the long range due to the high blending capability of the more transparent type mast against the sky background. The overall significance of the actual visual impact of the mast is considered to be low due to the low population density in the direct area surrounding the mast and will further be screened by the topography, the surrounding vegetation and buildings.

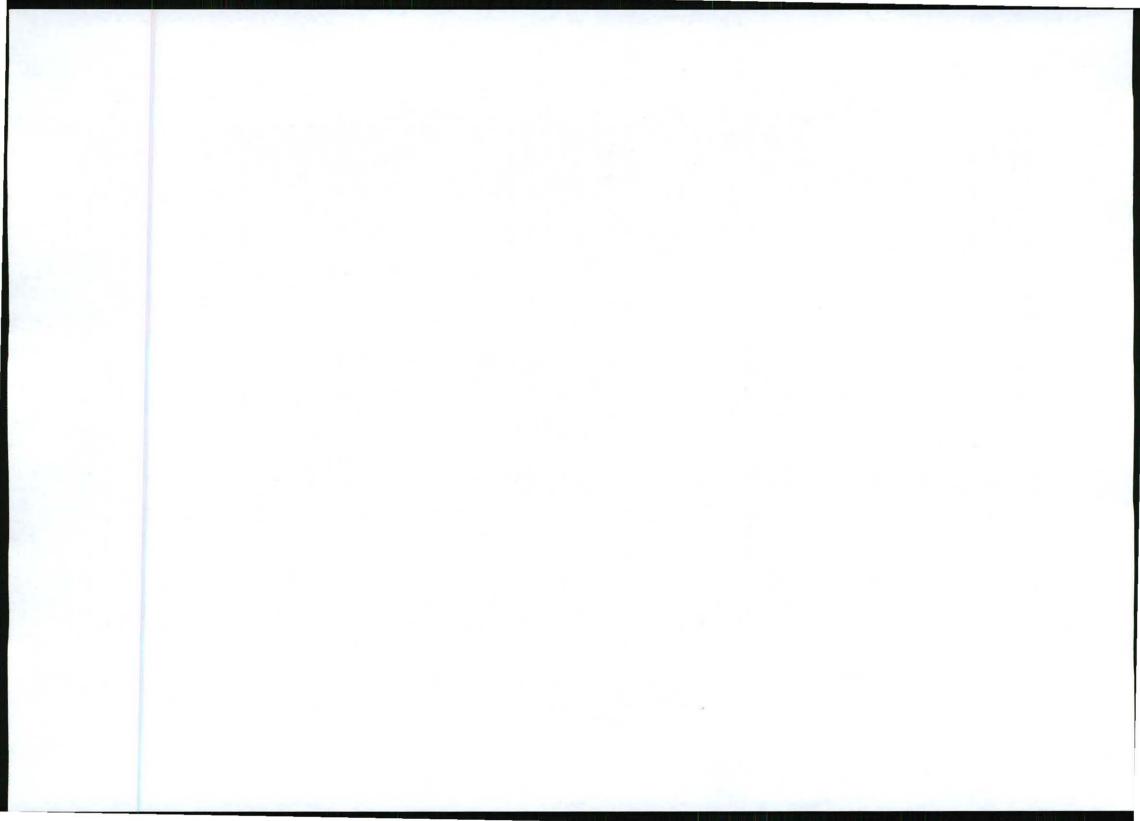
#### BIOLOGICAL:

The EWT submitted a concern with regard to the endangered Blue Cranes breeding and feeding in the area around the mast. Birds often get injured when they fly into the anchoring cables of guyed masts. Although the masts are normally quite visible the anchoring cables are not, and birds can easily get injured when flying into these cables. The proposed mast for this application is a free standing lattice mast with no anchoring cables or guy ropes. The mast has to be painted red & white as prescribed by the CAA to increase visibility to aircraft in order to reduce accidents. The increased visibility to aircraft will also ensure that the mast will be highly visible to birds and should prevent any collisions with the mast. No expected or proven biological impacts will result from the proposed development. The base station is situated in an area that is already disturbed by human activity. No endangered plants or tall trees will need to be removed from the 81m² footprint site.

#### SOCIO-ECONOMIC:

Site position has been determined based on the requirement to deliver mobile telecommunication signal coverage and availability within the target area enabling the residents, business entities and the general public within the area to select and maintain quality telecommunication services and





connectivity via the MTN mobile telecommunication network. MTN (Pty) Ltd is obliged to fulfil their licence terms and conditions, as determined by government, in providing mobile telephony and related services on a reliable national network grid.

# Indirect impacts:

The property coverage and development potential has been taken into consideration in selecting the position of the activity. The exact position of the activity on the property was determined, in consultation with the property owner, to minimise the possible impact on existing operations and future development plans or phases. Therefore the commercial value of the property is maintained.

Electricity will be supplied from the existing electricity grid. Minimum usage due to economical and energy efficient design.

#### Cumulative impacts:

No cumulative impacts relating to the design and planning phases are applicable.

#### Alternative S2

Applied for exemption

#### Alternative S3

Applied for exemption.

#### No-go alternative (compulsory)

# Direct impacts:

- Status quo: Unacceptable mobile telecommunication coverage and quality standards on the MTN (Pty) Ltd network within the target area;
- Status quo: Limitations in terms of mobile telecommunication network choice for residents, businesses and the general public;
- No visual impact on the base station, specifically the mast structure, on the short, medium and long distance visual impact.

#### Indirect impacts:

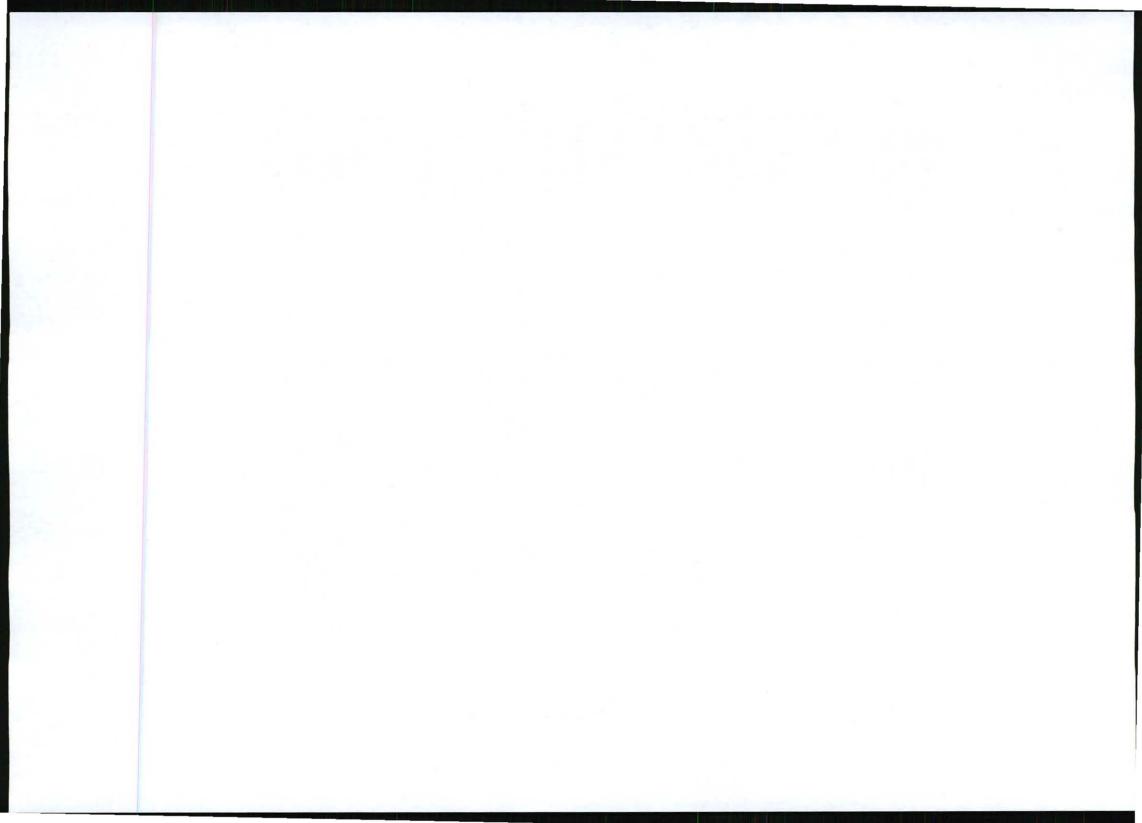
- Non performance in terms of the MTN (Pty) Ltd license conditions as prescribed by government.
- Potential loss of income for businesses and individuals in the area currently contracted on the MTN (Pty) Ltd network as well as potential losses on commercial opportunities, clients etc. for the network operator.

#### Cumulative impacts:

- Potential negative economical impact on the mobile telecommunication coverage target area.
- MTN (Pty) Ltd not fulfilling the applicable required license conditions.
- Incomplete MTN (Pty) Ltd mobile telecommunication network.

Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

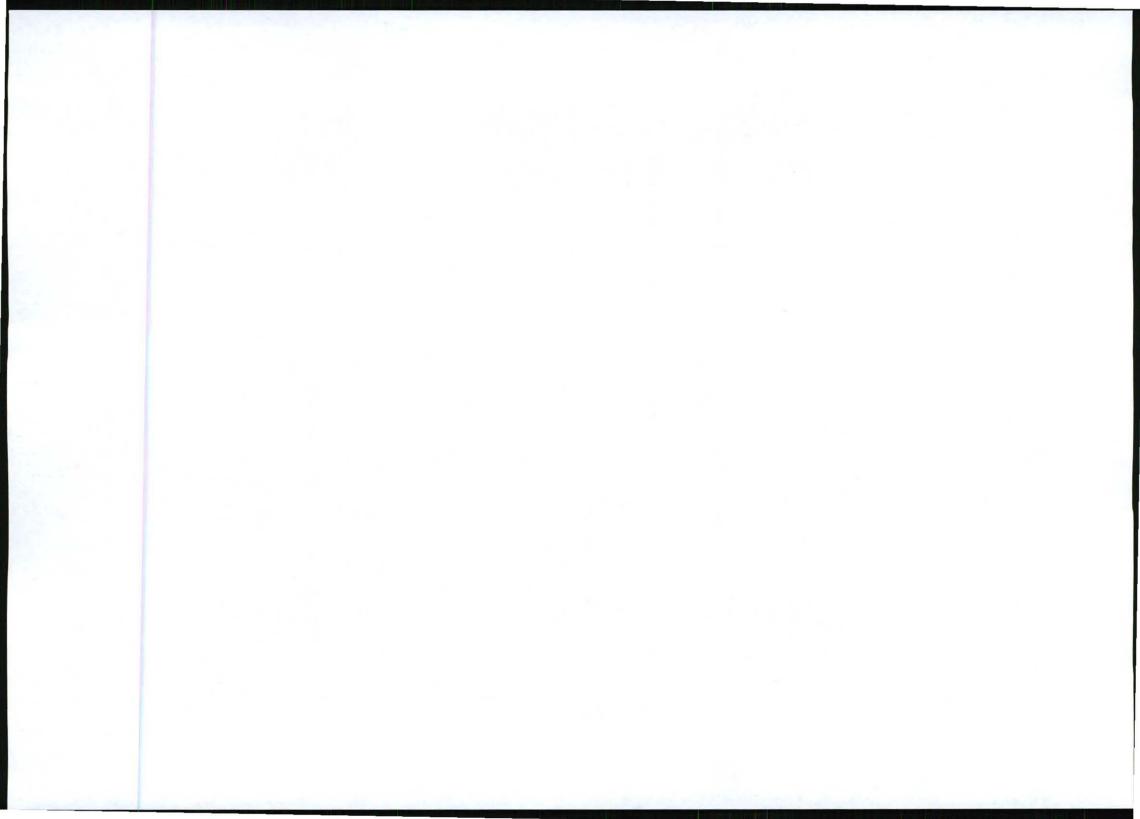




Alternative S1	Alternative S2	Alternative S3
1. Prescribed SACAA day	Applied for exemption	Applied for exemption.
& night markings to		
prevent aircraft		
accidents.		
2. Lattice type mast		
painted red & white to		
provide maximum		
mitigation on visual		
impact.		
3. 2.4m high steel		
palisade fence		
enclosure to prevent		
unauthorised access		
to the mast.		
4. Provision for		
infrastructure sharing.		
Alternative A1 Direct impacts:	t of the planning and design per chnology alternatives for the tations.	
Cumulative impacts:		
Alternative A2		
Applied for exemption		
Alternative A3		
Applied for exemption.	P. C.	
No-go alternative (compul	sory)	
Direct impacts:		
Status quo		
Indirect impacts:		
Status quo		
Cumulative impacts:		
Status quo	H 1 - 1 - 1	
	s that may eliminate or reduc	e the potential impacts listed
above:	Alternative A2:	Alternative A2:
Alternative A1:	Alternative A2:	Applied for exemption
There are no activity or	Applied for exemption	Applied for exemption.

Alternative A1:	Alternative A2:	Alternative A3:
There are no activity or technology alternatives for the establishment of mobile telecommunication base stations.	Applied for exemption	Applied for exemption.





#### IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE

List the potential site alternative related impacts (as appropriate) that are likely to occur as a result of the construction phase:

## Alternative S1

#### Direct impacts:

Construction of the telecommunication base station will extend over a period of approximately 6 weeks only;

- Increased activity and traffic at the property including material delivery and work team movements.
- 2. Minimum disruption of operations within the vicinity as the base station is located in an area with low activity.
- Increased workplace accident risk due to the mere occurrence of the activity.
- 4. Creation of dust and disturbance of specific soil layers due to earthwork activities.
- 5. Erosion and contamination of topsoil.
- Generation of standard building rubble & the transportation thereof to the appropriate licensed landfill site.
- 7. Generation of construction noise created by earthwork machinery and other applicable tooling used for the establishment of the base station.

Indirect impacts:

Additional waste at appropriately certified dumping site.

#### Cumulative impacts:

Construction activity.

#### Alternative S2

App	lied	for	exe	mpf	tion

#### Alternative S3

		-			
App	led	tor	exer	not	on.

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Direct impacts:

Status quo

Indirect impacts:

Status quo

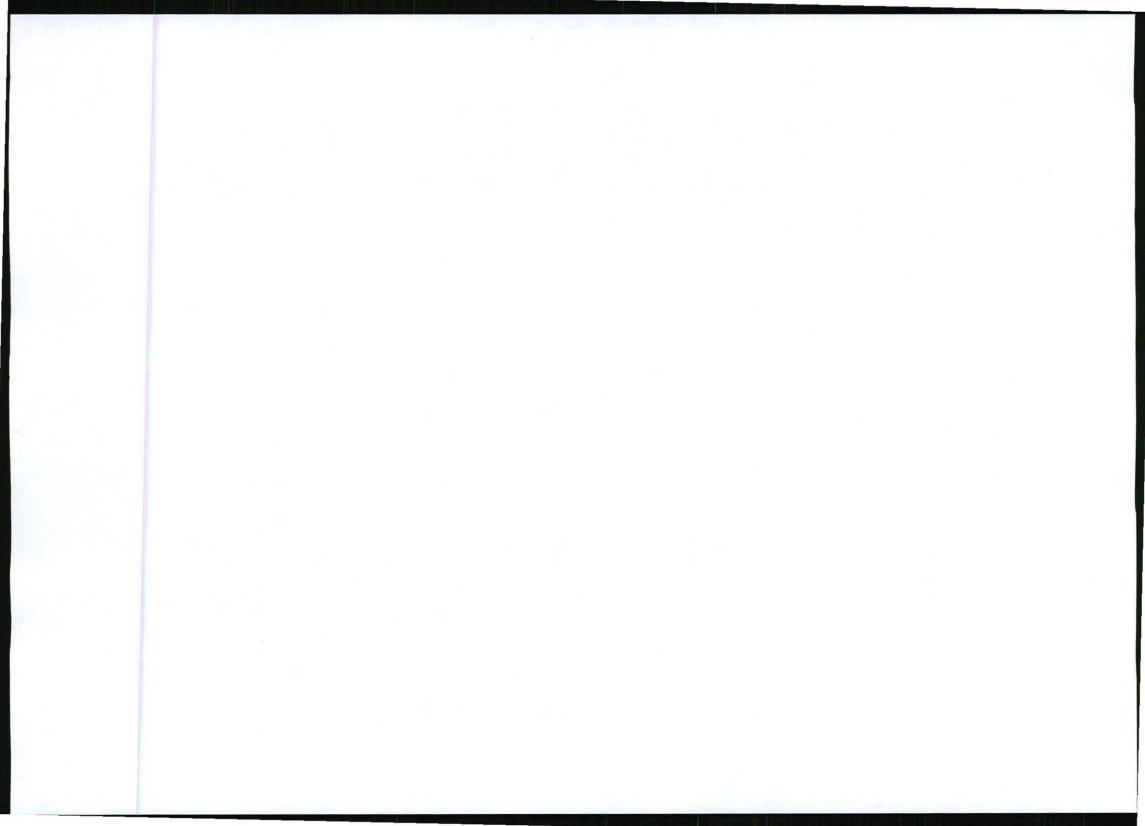
Cumulative impacts:

Status quo

Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative S1	Alternative S2	Alternative S3
<ol> <li>Specific arrangements with property owner to minimise disruption of normal activities.</li> </ol>	Applied for exemption	Applied for exemption.
Implement & maintain specific construction site safety measures in accordance with the applicable clauses of the OHS Act.     Implement specific		
construction measures		





	to prevent dust e.g.	
	regular sprinkling bare	
	areas with water as	
	needed.	
4.	Prevent and minimise	
	construction waste	
	generation. Transport	
	construction waste on	
	a regular basis to the	
	appropriate landfill	
	site.	
5.	Store topsoil	
	separately for	
	appropriate	
	landscaping	
	distribution on	
	completion of	
	construction. Prevent	
	pollution and	
	contamination and	
	erosion of topsoil by	
	covering it with water	
	proof covering when	
	experiencing rainy or	
	windy conditions.	
	Service construction	
	vehicles and	
	machinery before	
	construction to ensure	
	that no oil or fuel will	
	leak onto soil.	
6.	Minimise noise	4
1	generation to absolute	
	minimum. Service	
	vehicles and	
	machinery before start	
	of construction to	
	ensure proper working	
	condition.	
	Construction activities	
	should not be allowed	
	outside normal	
	working hours or on	
	Sundays and Public	
	Holidays.	

List the potential activity/technology alternative related impacts (as appropriate) that are likely to occur as a result of the construction phase:

## Alternative A1

## Direct impacts:

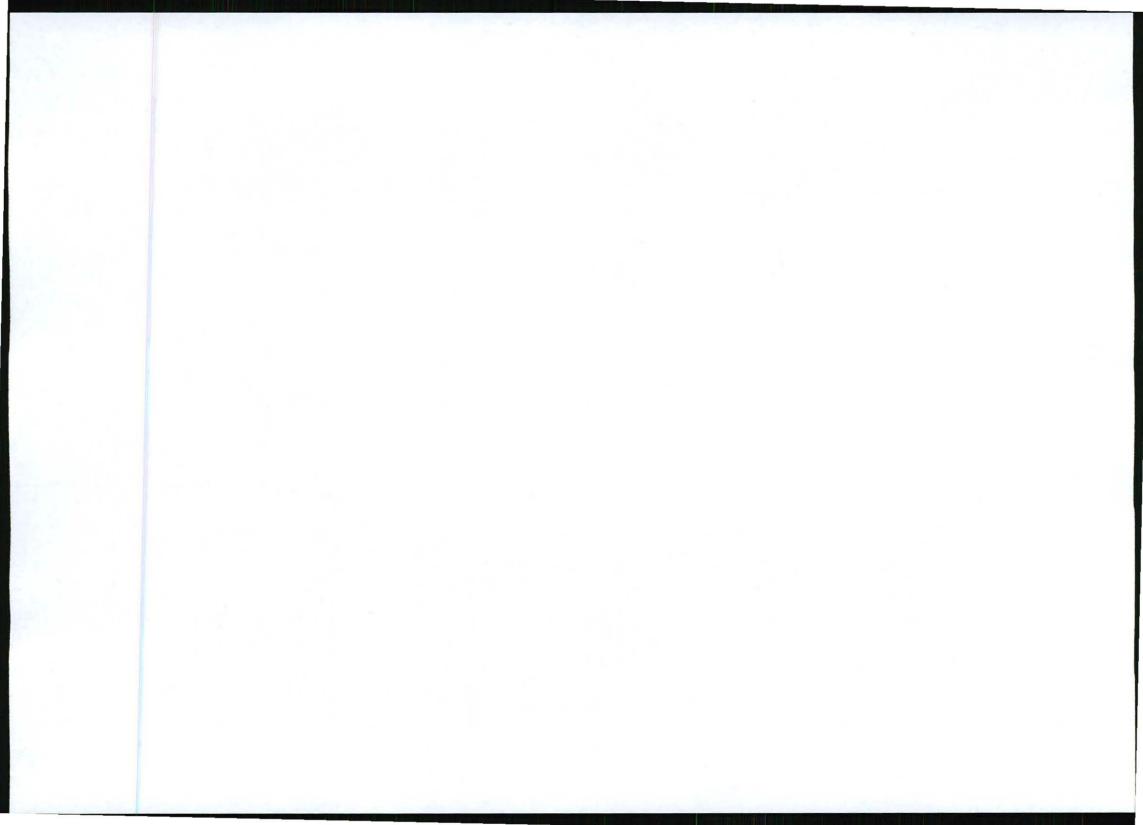
There are no activity or technology alternatives for the establishment of mobile telecommunication base stations.

Indirect impacts:

Cumulative impacts:

-





# Alternative A2

Applied for exemption

## **Alternative A3**

Applied for exemption.

No-go alternative (compulsory)

Direct impacts:

Status quo.

Indirect impacts:

Status quo.

Cumulative impacts:

Status quo.

Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative A1:	Alternative A2:	Alternative A3:
There are no activity or technology alternatives for the establishment of mobile telecommunication base stations.	Applied for exemption	Applied for exemption.

#### IMPACTS THAT MAY RESULT FROM THE OPERATIONAL PHASE

List the potential site alternative related impacts (as appropriate) that are likely to occur as a result of the operational phase:

# Alternative S1

## Direct impacts:

- Noise generation by air conditioning units and by backup generator if electricity supply fails.
- 2. Non-ionising electromagnetic fields emissions on allocated frequency.
- 3. Increase in potential air traffic obstacles.
- 4. Visual impact of the 54m lattice mast painted red & white on short, medium and long distance observation.
- 5. Increased mobile telecommunication network capacity.

#### Indirect impacts:

 Increased use of quality telecommunication services with the appropriate revenue increase and potential increased economic activity and financial returns.

#### Cumulative impacts:

1. Increased telecommunication infrastructure availability and quality.

#### Alternative S2

Applied for exemption

Alternative S3

Applied for exemption.

No-go alternative (compulsory)

Direct impacts:

Status quo.

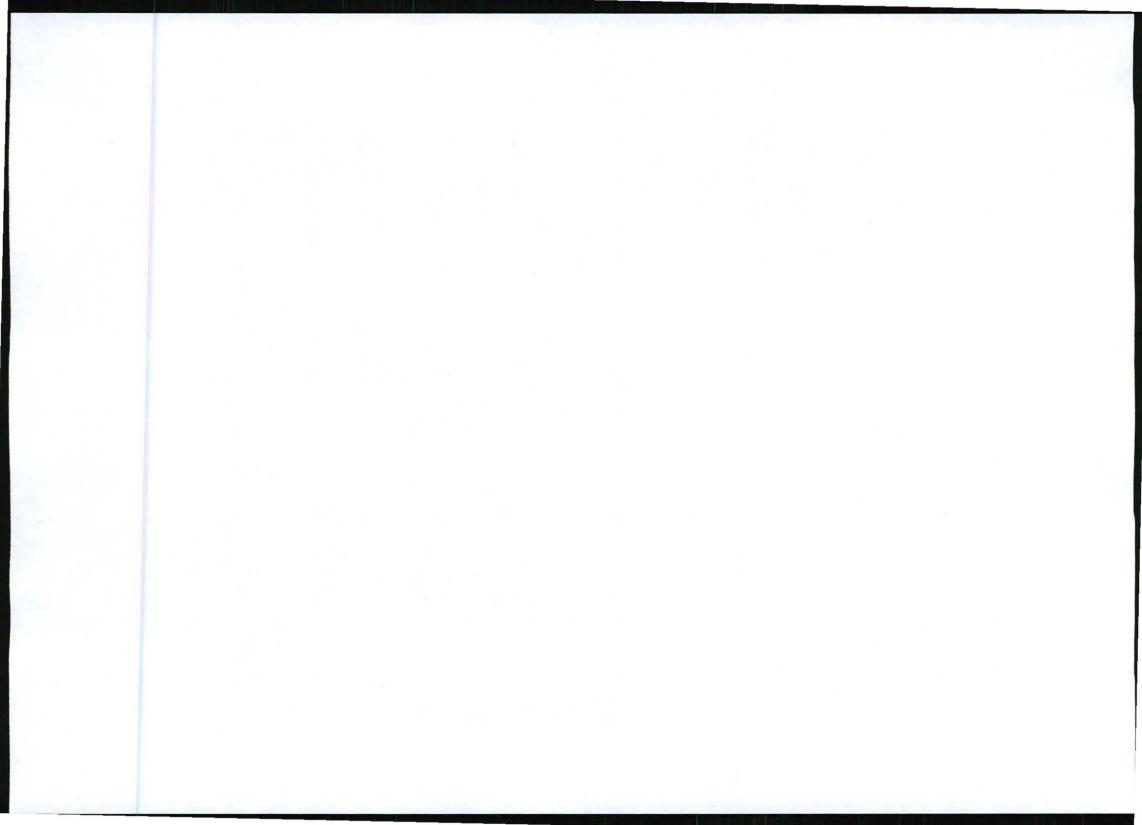
Indirect impacts:

Status quo.

Cumulative impacts:

Status quo.





Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative S1	Alternative S2	Alternative S3
1. Scheduled	Applied for exemption	Applied for exemption.
preventative		
maintenance program		1
implementation and		
control.		
2. Maintain level of non-		
ionising		
electromagnetic field		1
emissions within		
International		
Commission on Non-		
Ionising Radiation		
Protection (ICNIRP) &		
World Health		
Organisation (WHO)		
guidelines.		
3. Installation/application		
and maintenance of		
day & night markings		
as prescribed by		
SACAA to reduce		
potential air traffic		
safety impact.		
4. Lattice design mast		
painted red & white	(36)	
provides maximum		
mitigation due to the		
high blending		
capability of the		
transparent type		
structure against the		
sky background. The		
significance of the		
visual impact of the		
mast is considered to be low due to the low		
population density in the direct area		
surrounding the mast		
and will further be		
screened by the		
buildings, surrounding		
vegetation and		
topography.		
topography.		

List the potential activity/technology alternative related impacts (as appropriate) that are likely to occur as a result of the operational phase:

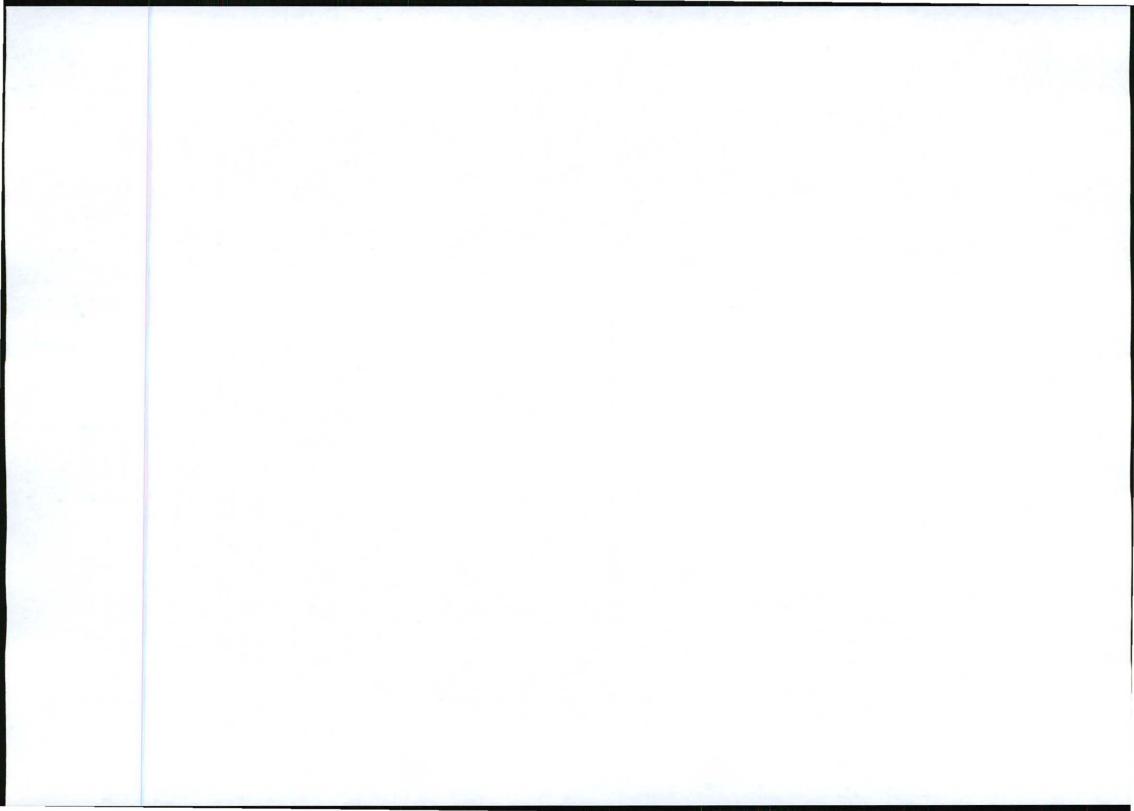
# Alternative A1

# Direct impacts:

There are no activity or technology alternatives for the establishment of mobile telecommunication base stations.

Indirect impacts:





-	
Cumulative impacts:	
•	
Alternative A2	
Applied for exemption	
Alternative A3	
Applied for exemption.	
No-go alternative (compulsory)	
Direct impacts:	
Status quo.	
Indirect impacts:	
Status quo.	
Cumulative impacts:	
Status quo.	

Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative A1	Alternative A2	Alternative A3
There are no activity or technology alternatives for the establishment of mobile telecommunication base stations.	Applied for exemption	Applied for exemption.

# IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING AND CLOSURE PHASE

List the potential site alternative related impacts (as appropriate) that are likely to occur as a result of the decommissioning or closure phase:

#### Alternative S1

#### Direct impacts:

- Establishment of new mobile telecommunication infrastructure elsewhere to fill the network coverage gap caused by decommissioning.
- 2. Creation of waste due to decommissioning.
- 3. Disturbed area.

#### Indirect impacts:

Potential waste of resources.

Cumulative impacts:

None

#### Alternative S2

Applied for exemption

#### Alternative S3

Applied for exemption.

No-go alternative (compulsory)

Direct impacts:

Status quo.

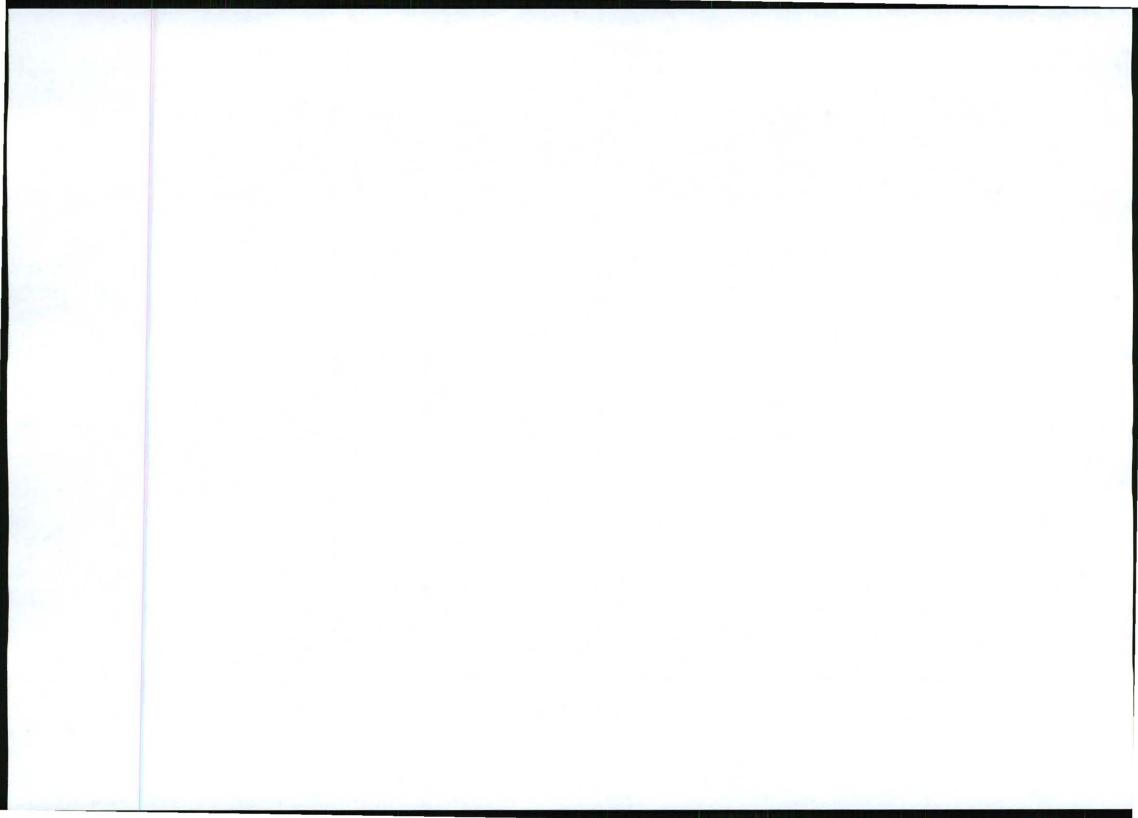
Indirect impacts:

Status quo.

Cumulative impacts:

Status quo.





Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative S1		ernative S1 Alternative S2	
1.	Ensure planned base station fulfils planned and required network parameters i.e. prevent decommissioning.	Applied for exemption	Applied for exemption.
2.	If decommissioning is required the site area must be rehabilitated to its original state.		

List the potential activity/technology alternative related impacts (as appropriate) that are likely to occur as a result of the decommissioning and closure phase:

#### Alternative A1

There are no activity or technology a	alternatives f	or the	establishment	of mobile
telecommunication base stations.				

Direct impacts:

Indirect impacts:

Cumulative impacts:

A	ter		i.,	_	A	2
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				4:
ADD	lied	tor	exemp	tion

**Alternative A3** 

Applied for exemption.

N	lo-do a	Iternative (	compu	SON
,	io-go a	itei iiative	COILIDU	301 Y

Direct impacts:

Status quo.

Indirect impacts:

Status quo.

Cumulative impacts:

Status quo.

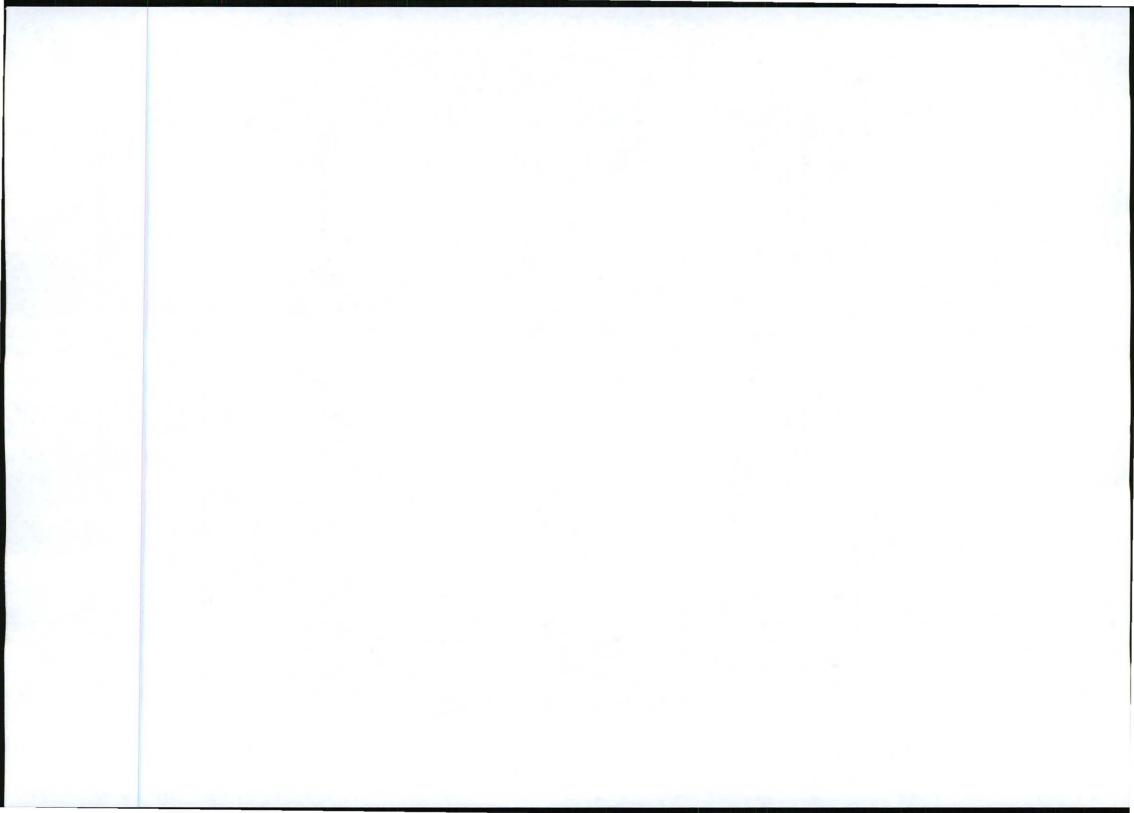
Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative A1	Alternative A2	Alternative A3
There are no activity or technology alternatives for the establishment of mobile telecommunication base stations.	Applied for exemption	Applied for exemption.

# **ENVIRONMENTAL IMPACT STATEMENT**

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.





#### Alternative 1

The positive impact of the proposed activity will, taking into consideration the implementation of mitigating measures to minimise the negative impacts on the environment, have a positive overall impact.

Physical impacts:

- The negative impacts during the construction phase, as indicated earlier in the assessment report, are temporary and will not have a long term effect on the proposed development or immediate area. These impacts will last for a maximum of approximately 6 weeks only.
- The planning & design of the telecommunication base station is considerate of operational and public demand needs and is done on the principle of minimising any negative impacts on the receiving environment.
- 3. The permanent visual impact of the lattice telecommunication mast is the highest contributing negative impact of the proposed activity on the receiving environment. Lattice design mast painted red & white provides maximum mitigation from the air due to the higher visibility to aircraft. Red & white lattice mast provides high mitigation of the visual impact on the short to long range viewpoints due to the higher blending capability of the more transparent type mast against the sky background. The significance of the visual impact of the mast is considered to be low due to the low population density in the direct area surrounding the mast and will further be screened by the buildings and the surrounding vegetation and topography.
- 4. 2.4m high steel palisade fence to provide maximum mitigation of the short to long range visual impact of the telecommunication base station due to the blending capability with the surrounding railway and station.
- The site is designed for use by additional telecommunication service providers. This mitigation measure will possibly prevent the establishment of additional base stations by other operators within the immediate area.

**Biological impacts:** 

6. The EWT submitted a concern with regard to the endangered Blue Cranes breeding and feeding in the area around the mast. Birds often get injured when they fly into the anchoring cables of guyed masts. Although the masts are normally quite visible the anchoring cables are not, and birds can easily get injured when flying into these cables. The proposed mast for this application is a free standing lattice mast with no anchoring cables or guy ropes. The mast has to be painted red & white as prescribed by the CAA to increase visibility to aircraft in order to reduce accidents. The increased visibility to aircraft will also ensure that the mast will be highly visible to birds and should prevent any collisions with the mast. No expected or proven biological impacts will result from the proposed development. The base station is situated in an area that is already disturbed by human activity. No endangered plants or tall trees will need to be removed from the 81m² footprint site.

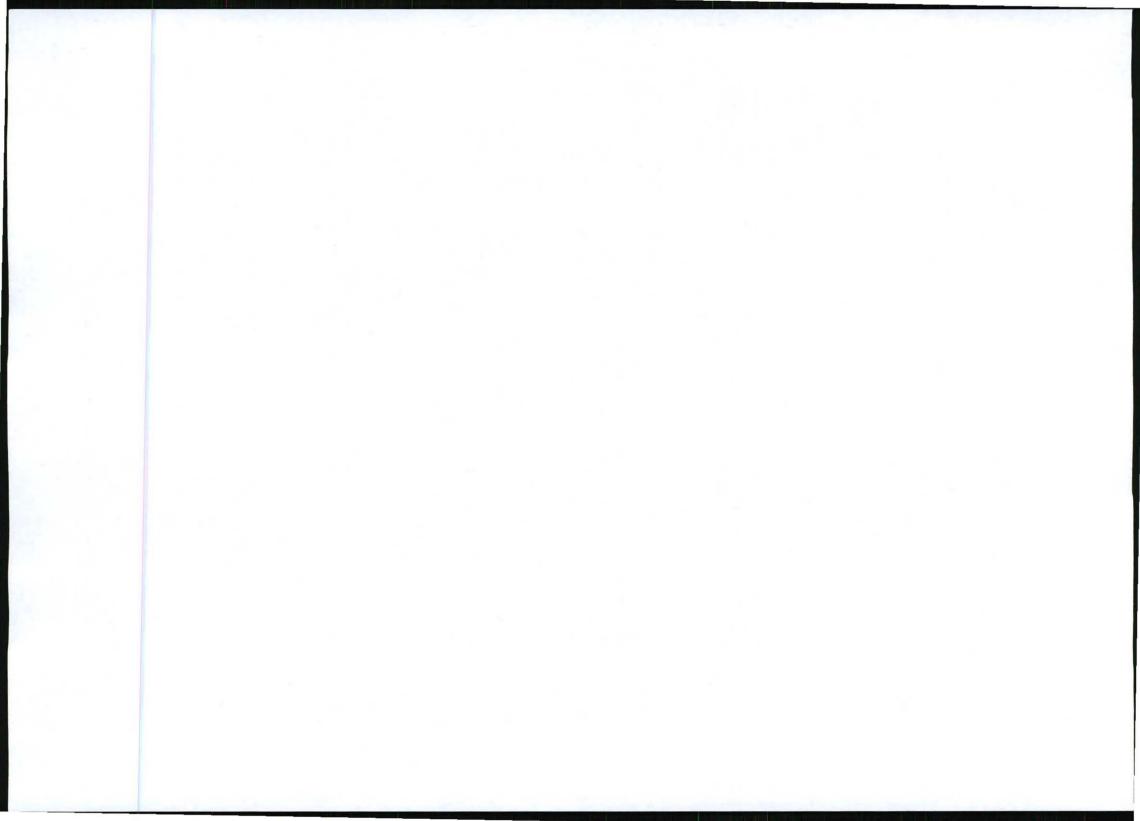
Socio-economic impacts:

7. Site position has been determined based on the requirement to deliver mobile telecommunication signal coverage and availability within the target area enabling the residents, business entities and the general public within the area to select and maintain quality telecommunication services and connectivity via the MTN mobile telecommunication network. MTN (Pty) Ltd is obliged to fulfil their licence terms and conditions, as determined by government, in providing mobile telephony and related services on a reliable national network grid.

Alternative 2

Applied for exemption





#### Alternative 3

Applied for exemption.

No-go alternative (compulsory)

If the activity does not take place, MTN (Pty) Ltd will not be in a position to fulfil certain commitments in terms of their license conditions, as issued by government, within the target area in question. This will implicate an incomplete network hampering and restricting communication quality and quantity on the network. The status quo will remain which defeats the objective of the planned activity.

- 8. ANY INPUTS AND RECOMMENDATIONS MADE BY SPECIALISTS TO THE EXTENT THAT MAY BE NECESSARY IN TERMS OF Regulation 22 sub-regulation 2 (k) of the EIA Regulations, 2010 Not in the scope of this application
- 9. THE EMPR IS ATTACHED AS APPENDIX F IN TERMS OF Regulation 22 sub-regulation 2 (I) of the EIA Regulations, 2010
- 10. ASSUMPTIONS, UNCERTAINTIES AND GAPS IN KNOWLEDGE IN TERMS OF Regulation 22 sub-regulation 2 (m) of the EIA Regulations, 2010

The information in this report is sufficient for the purposes of providing the department with sufficient information to make an informed decision to grant approval or not.

The nature of an impact study is always based on predicting the impacts of a proposed activity / development based on knowledge that can be substantiated and where there are gaps in knowledge, there are uncertainties and assumptions are also made.

There are no significant gaps in knowledge in this impact study. The only uncertainty due to a gap in knowledge in this impact study includes the health effects of non-ionised electromagnetic fields with power density < 10W/m² emitted from telecommunication antennae (operational phase), but not the listed activity i.e. the mast. We refer to the Department of Health Guidelines based on the International Commission on Non-Ionising Radiation Protection (ICNIRP) and the World Health Organisation (WHO) guidelines. According to these guidelines the non-ionised electromagnetic fields emitted by antennae mounted on telecommunication masts are well below the recommended level and is therefore improbable to have harmful effects on the health of human beings.

11. A REASONED OPINION AS TO WHETHER THE ACTIVITY SHOULD OR SHOULD NOT BE AUTHORISED, AND IF THE OPINION IS THAT IT SHOULD BE AUTHORISED, ANY CONDITIONS THAT SHOULD BE MADE IN RESPECT OF THAT AUTHORISATION – IN TERMS OF Regulation 22 sub-regulation 2 (n) of the EIA Regulations, 2010

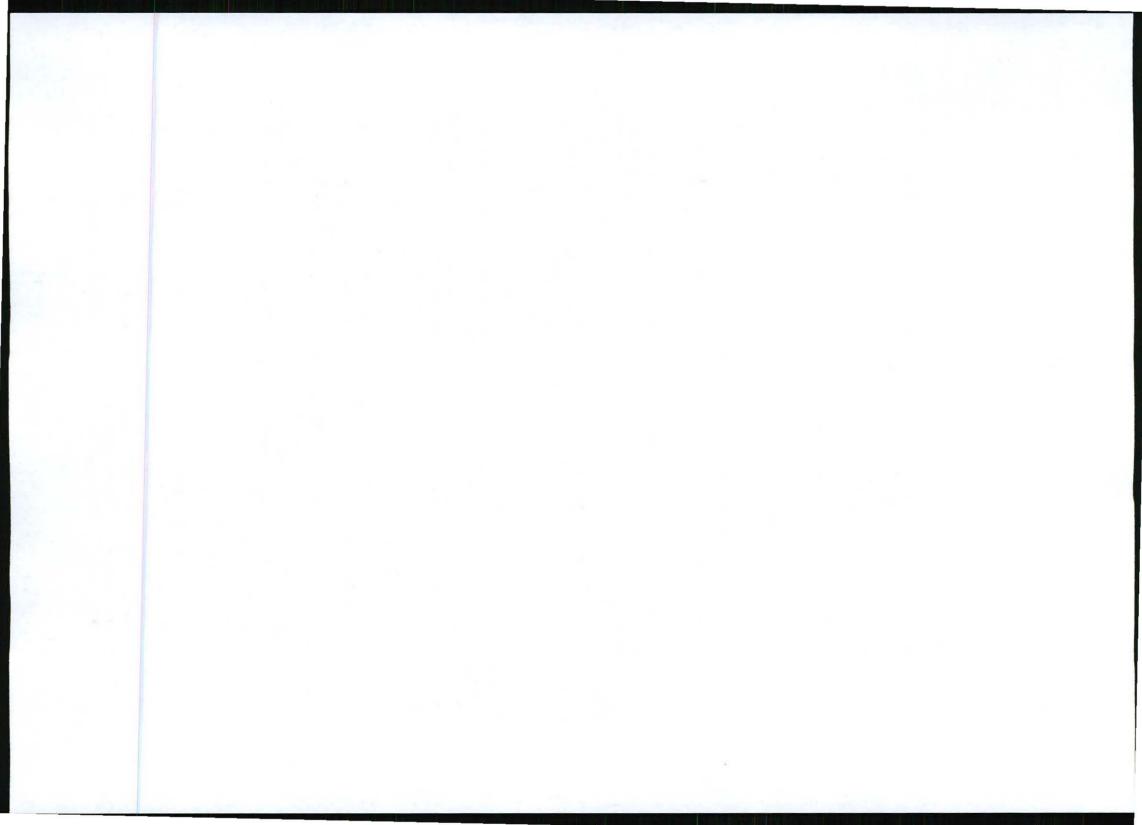
The Environmental Assessment Practitioner is of the opinion that the activity may be authorised due to:

Increased and improved national MTN coverage footprint enabling users to communicate on the MTN network where ever they are.

Additional fulfilment of one of government's objectives to ensure the establishment of national communication network grids and services as part of a sustainable economic growth pattern.

The motivation and benefits to society in general above apply to the local





community directly. It will furthermore ensure that the communication capability and capacity of the local community will keep pace with the ever growing and availability of communication facilities nationwide.

Should the activity not be authorised it will result in an incomplete network hampering and restricting communication quality and quantity on the network.

The possible negative impacts on the surrounding environment are considered to be of low significance.

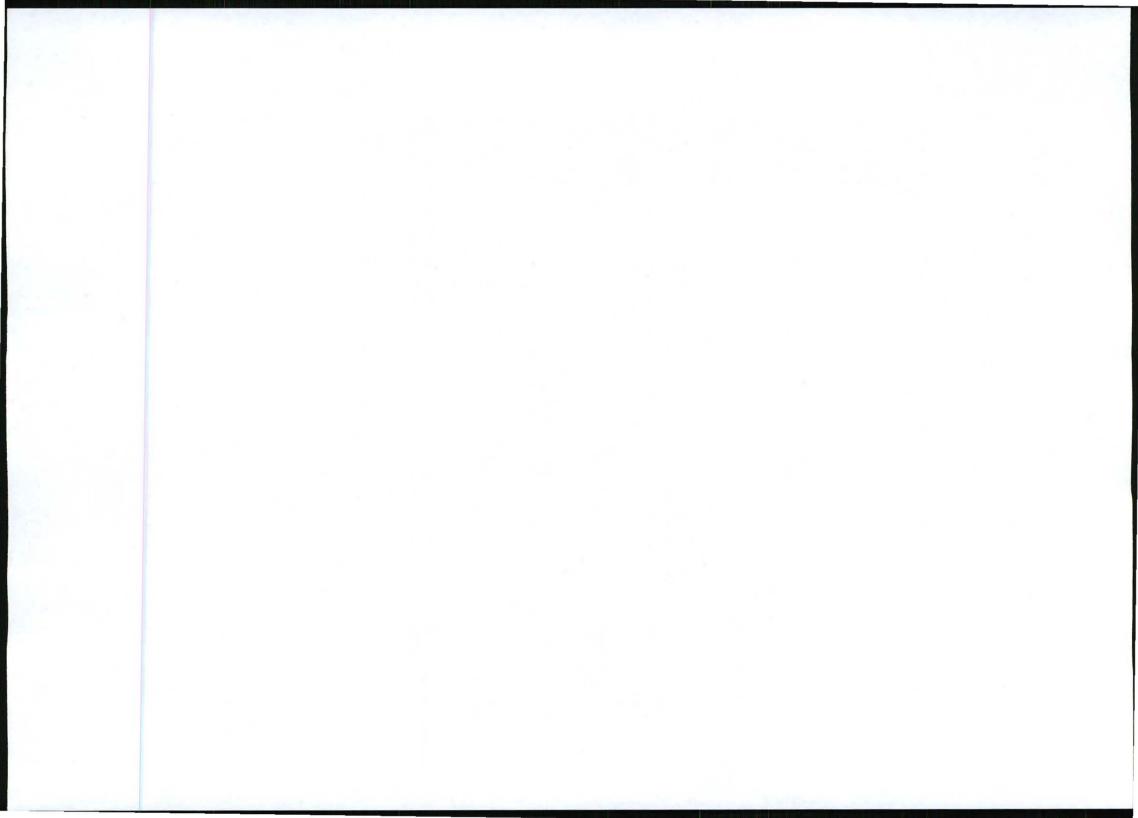
Recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

- 1. Establishment of a 54m lattice telecommunication mast painted red & white to be established on the Alternative 1 proposed position (LATITUDE) 26°10'03.10" S, (LONGITUDE) 30°06'39.96" E, as indicated on attached plans.
- Measures to be implemented for the duration of the construction period to prevent unauthorised access to the construction site.
- 3. Dust suppression measures to be implemented during earthworks.
- 4. Construction only to take place within normal daytime working hours.
- Appropriate arrangements to be made with the property owner for the use of existing sanitation facilities by construction workers or otherwise the contractor must provide chemical toilets during the construction phase.
- Telecommunication base station to be enclosed with a 2.4m high steel palisade fence.
- Required electricity connection point to be established in consultation with the property owner and electricity supplier.
- 8. Topsoil to be stored separately for appropriate landscaping distribution on completion of construction.
- All the prevention and mitigation measures described in this report and in the EMPR must be implemented and monitored.

# SECTION E: CONSULTATION WITH OTHER STATE DEPARTMENTS - IN TERMS OF Regulation 22 sub-regulation 2 (f) (iii) of the EIA Regulations, 2010

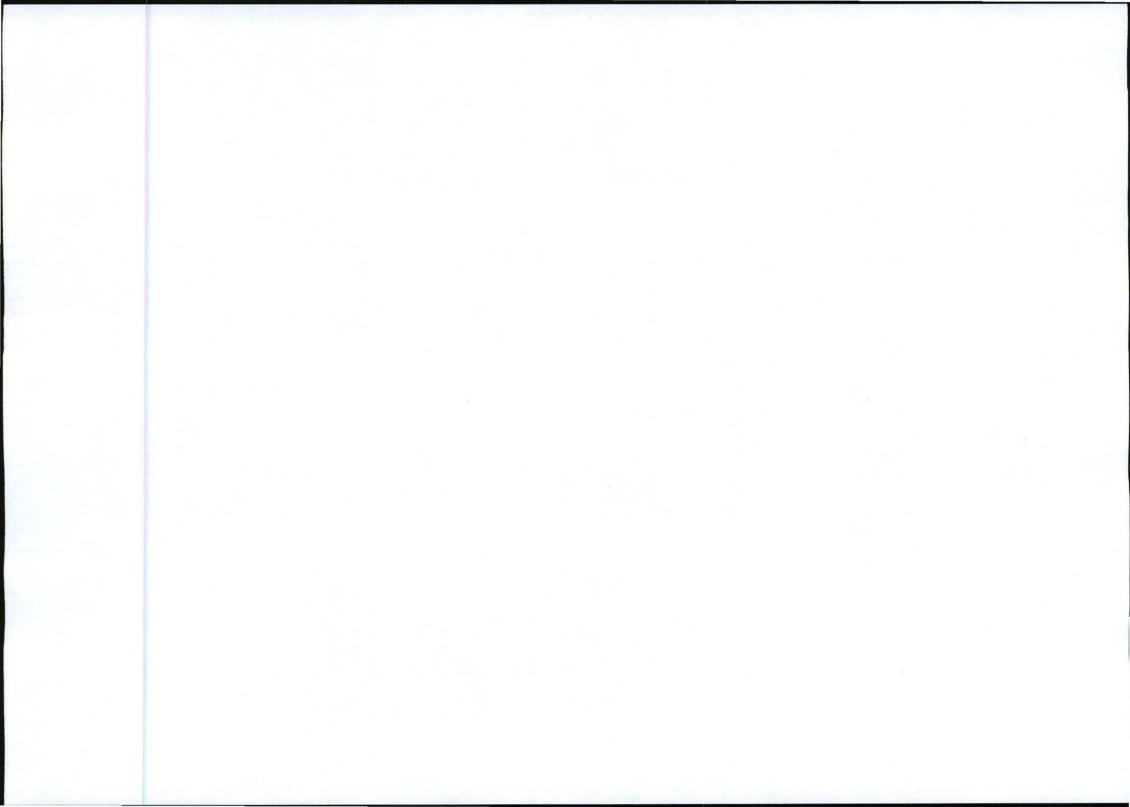
Provide a list of all State Departments / Organs of State that have been consulted and registered as interested and affected parties, and to whom draft reports have been submitted for comment. Proof of submission / delivery of the draft report to all State Department / Organs of State must be attached to this document.





Department	Maukaliawa Lasal Municipality						
Department:	Msukaligwa Local Municipality						
Contact person:	Mr T Dlamini						
Postal address:	PÖ Box 48, Ermelo						
Postal code:	2350	Cell:	ļ	•			
Telephone:	•	Fax:		017 8	01 3504		
E-mail:	•						
Department:	Msukaligwa Local Municipality						
Contact person:	CIr P T Sibeko						
Postal address:	P O Box 48, Ermelo						
Postal code:	2350	Cell:	l:  -				
Telephone:	•	Fax:		017 801 3851			
E-mail:		1 79755					
Department:	Gert Sibande District Municipality						
Contact person:	Mr MA Ngcobo						
Postal address:	P O Box 550, Secunda						
Postal code:	2302		Cell		-		
Telephone:	•	Fax:			017 631 1607		
E-mail:							
Department:	South African Heritage Resources Agency						
Contact person:	Phillip Hine						
Postal address:	PO Box 4637, Cape Town						
Postal code:	8000		Cell	:	-		
Telephone:	•		Fax:		-		
E-mail:	phine@sahra.org.	za					
	printe Godinaro, grad						
Department:	-						
Contact person:	•						
Postal address:							
Postal code:	•		Cell	:	-		
Telephone:	•		Fax:	l d	-		
E-mail:	•						
			,				
Department:							
Contact person:	-						
Postal address:	•						
Postal code:	•		Cell		-		
Telephone:	-		Fax:		(=		
E-mail:	-						





#### **SECTION F: APPENDICES**

The following appendices must be attached to the basic assessment report as appropriate:

Appendix A: Site plan(s) – IN TERMS OF Regulation 22 sub-regulation 2 (c) of the EIA Regulations, 2010

Appendix B: Photographs - IN TERMS OF Regulation 22 sub-regulation 2 (c) of the EIA Regulations, 2010

Appendix C: Facility illustration(s) – IN TERMS OF Regulation 22 sub-regulation 2 (c) of the EIA Regulations, 2010

Appendix D: Specialist reports - IN TERMS OF Regulation 22 sub-regulation 2 (k) of the EIA Regulations, 2010 - No specialist input required

Appendix E: Comments and Response Report - IN TERMS OF Regulation 22 subregulation 2 (f) (iv) and 2 (o) and (q) of the EIA Regulations, 2010

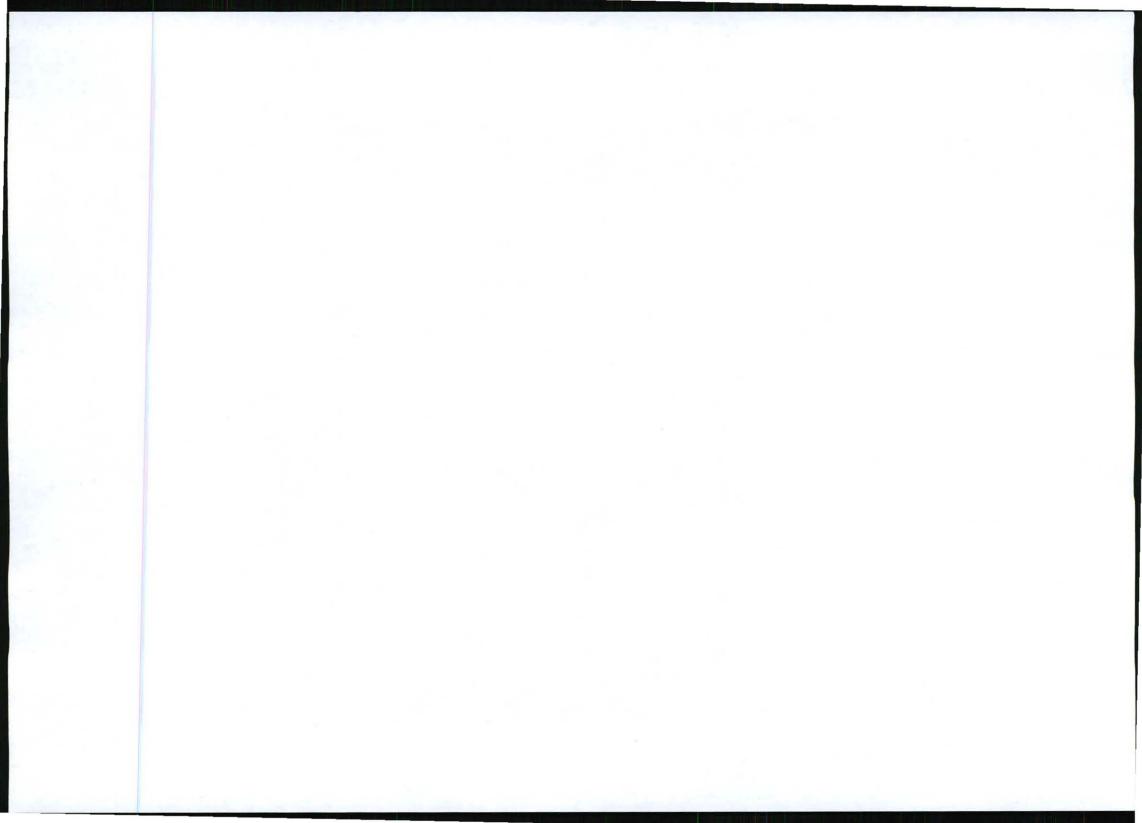
Appendix F: Environmental Management Programme (EMPr) - IN TERMS OF Regulation 22 sub-regulation 2 (I) of the EIA Regulations, 2010

Appendix G: Other information

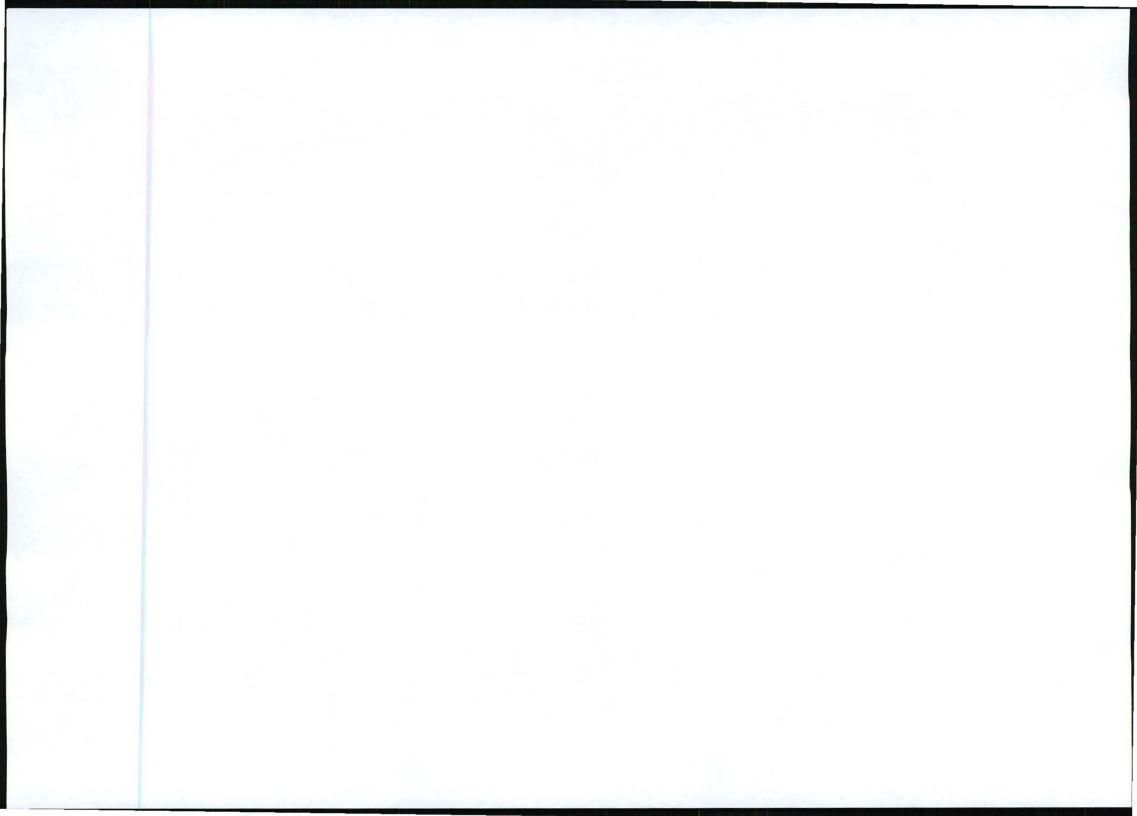
Public Participation – IN TERMS OF Regulation 22 sub-regulation 2 (f) of the EIA Regulations, 2010

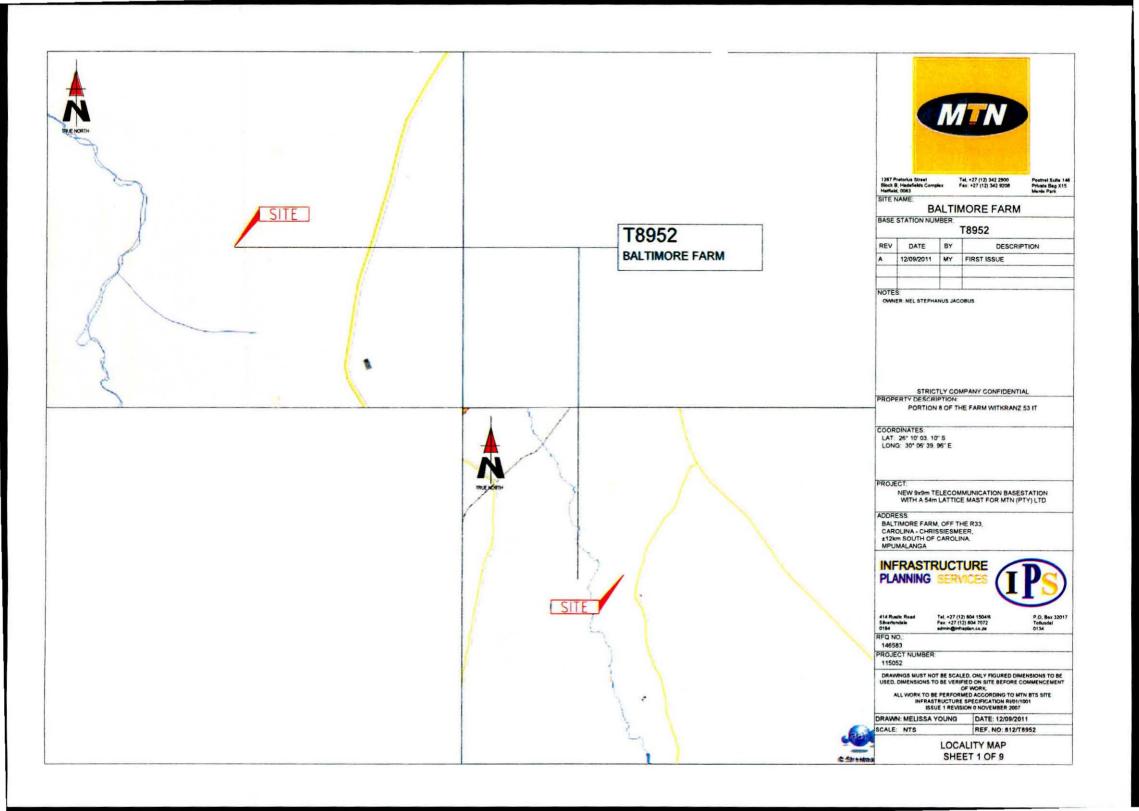
- G1 Public Participation Proof of Site Notice
- G2 Public Participation Written Notices
- G3 South African Civil Aviation Authority Approval
- G4 Public Participation Proof of Newspaper Advertisement
- G5 Motivation for exemption of assessing reasonable or feasible alternatives, as contemplated in subregulation 22 (2) (h) IN TERMS OF Regulation 22 sub-regulation 4 of the EIA Regulations, 2010

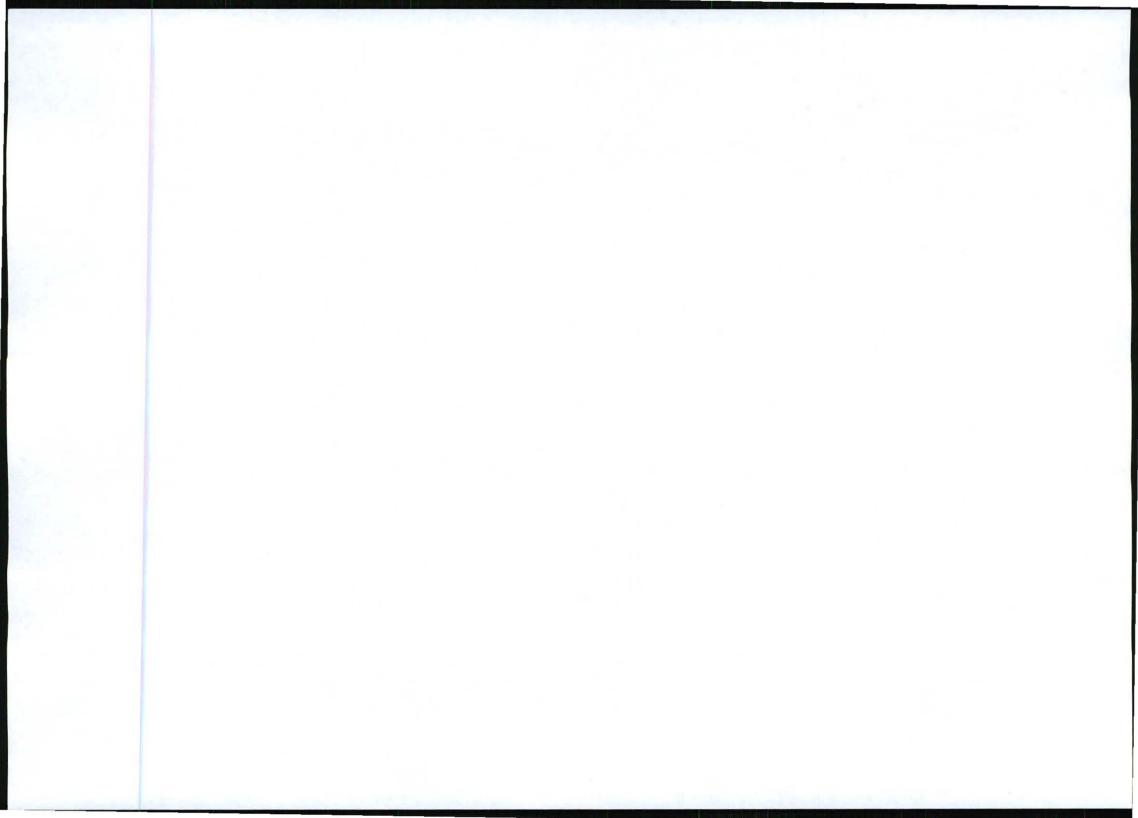


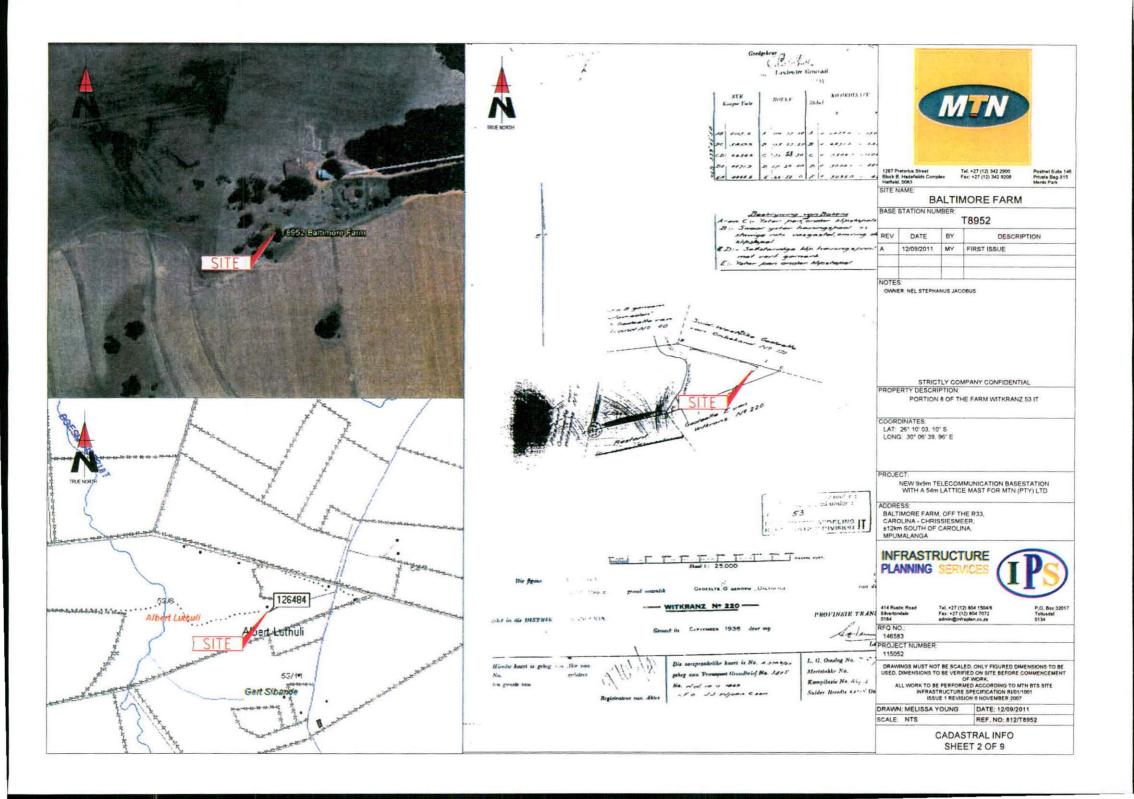


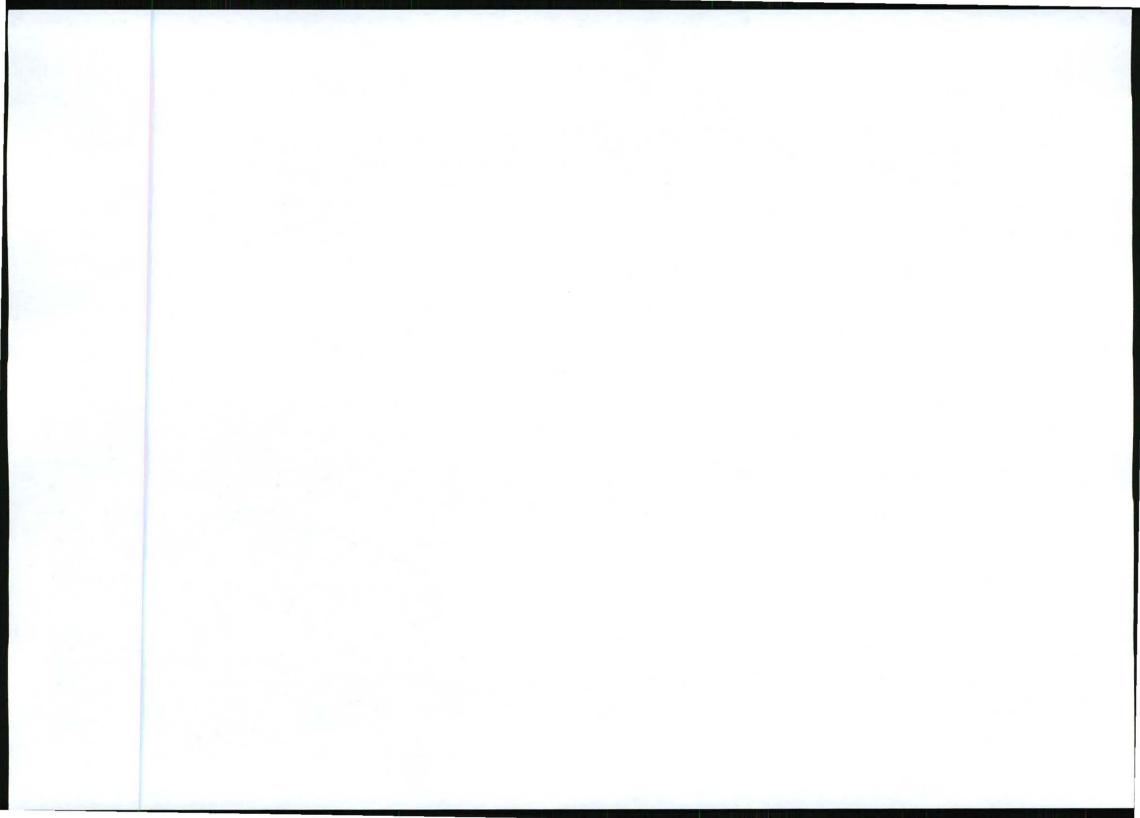
Appendix At Site Plans

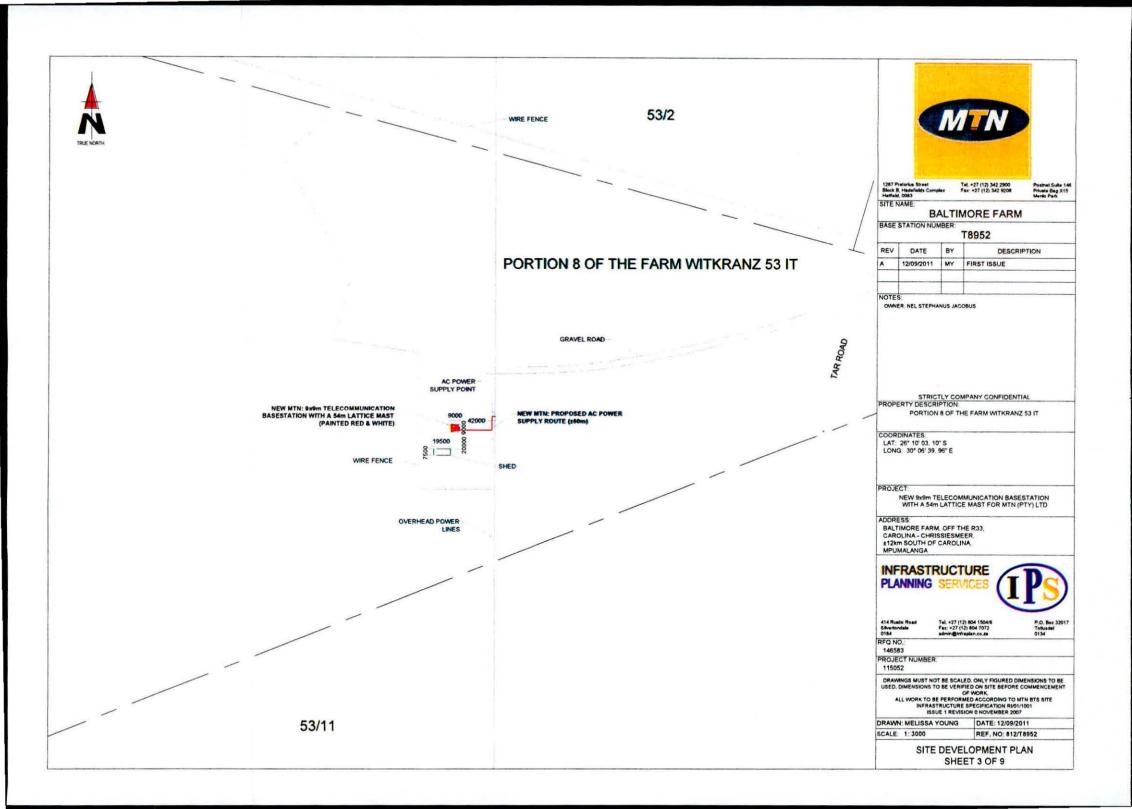


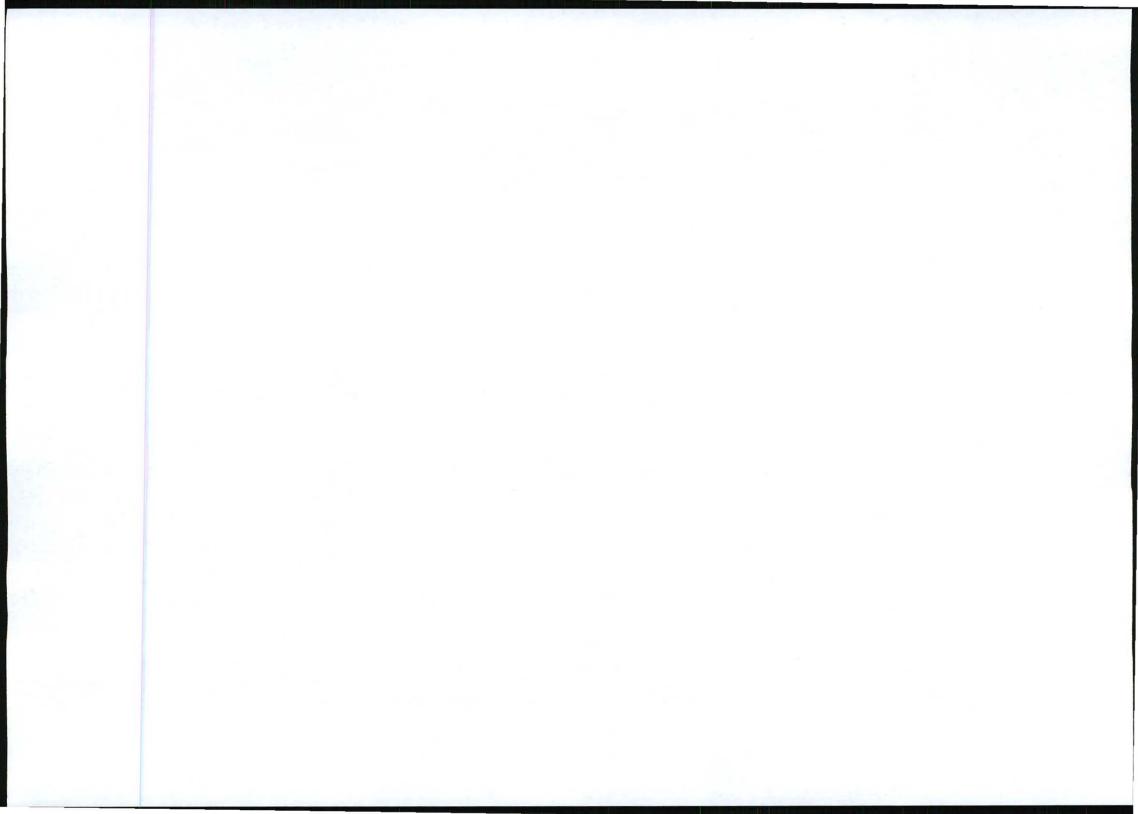


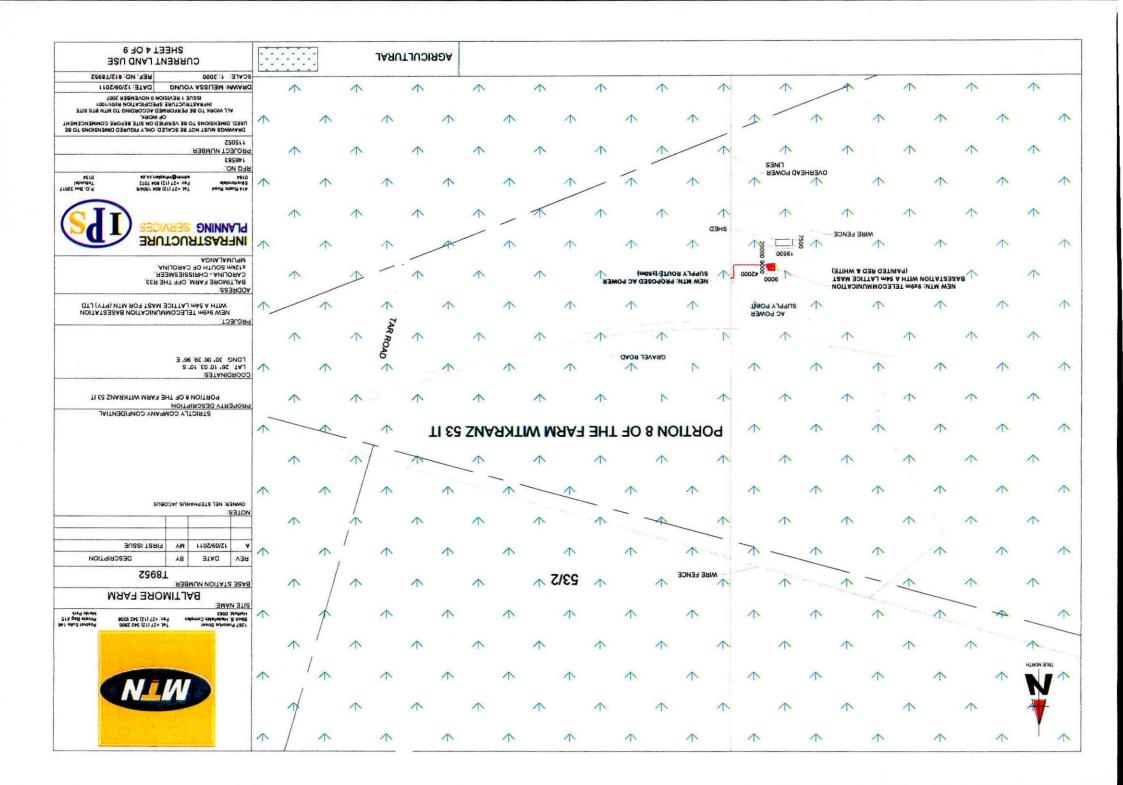


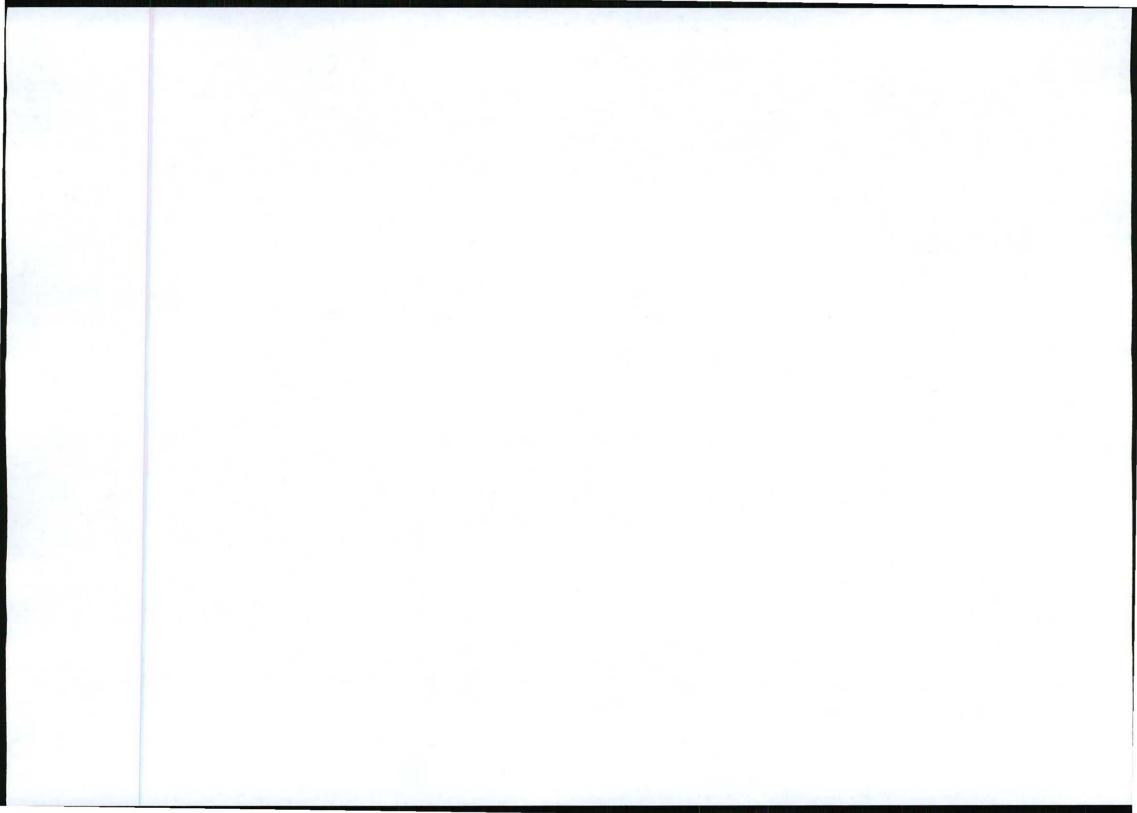


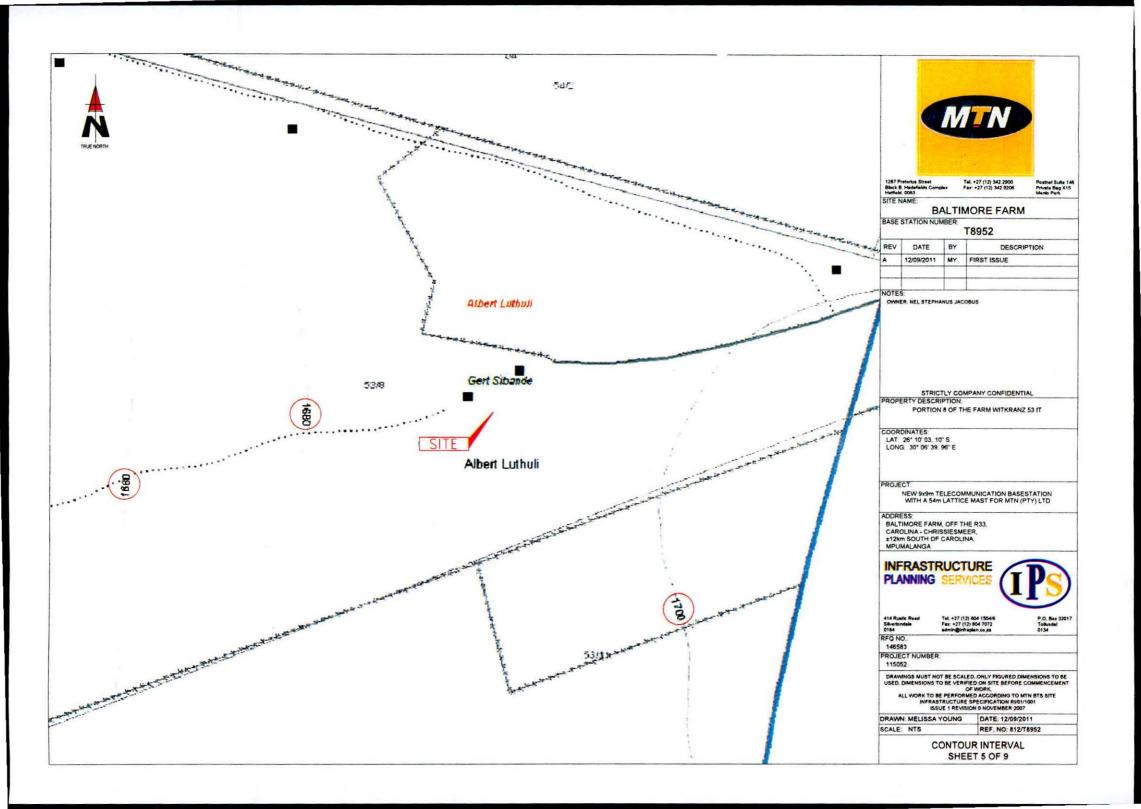


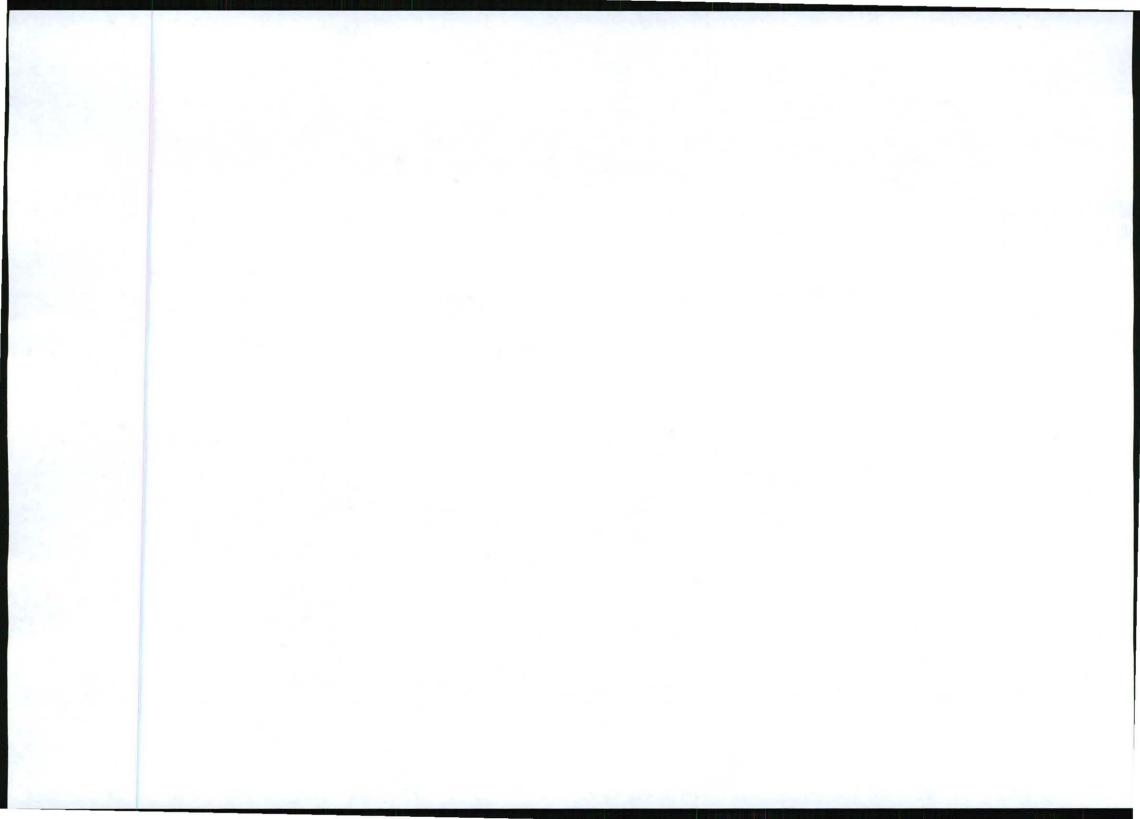


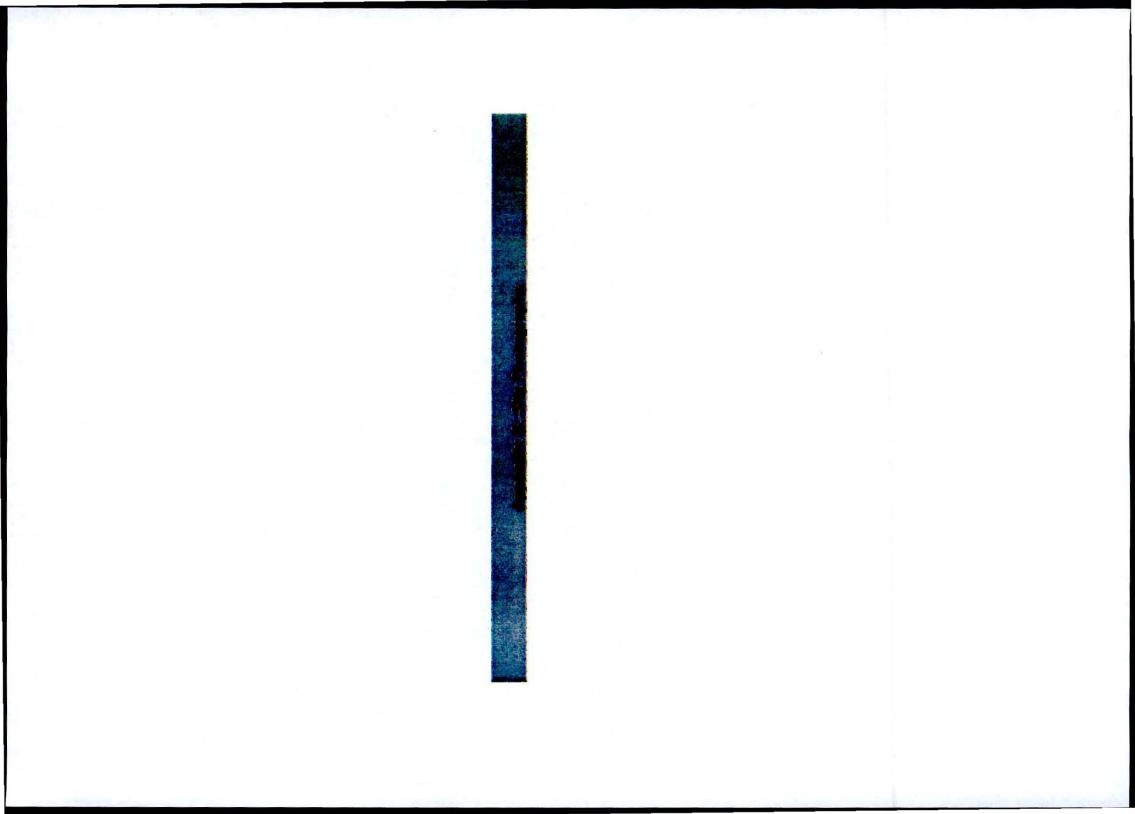


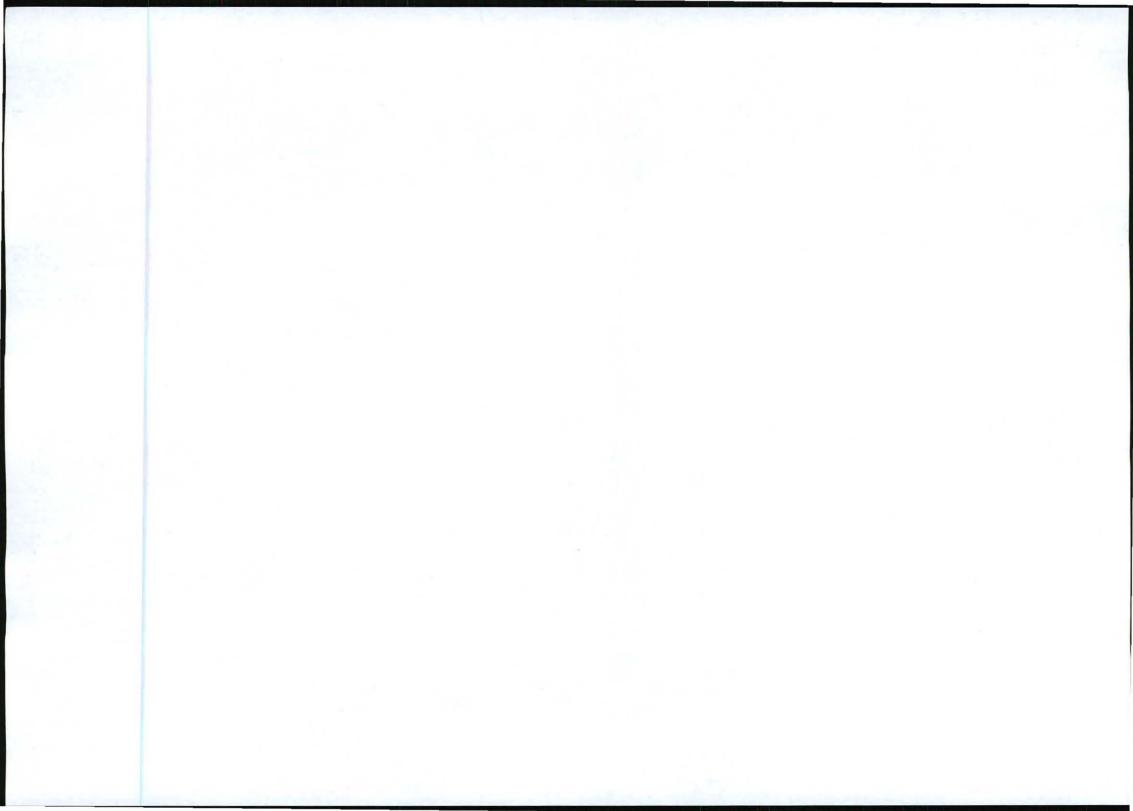


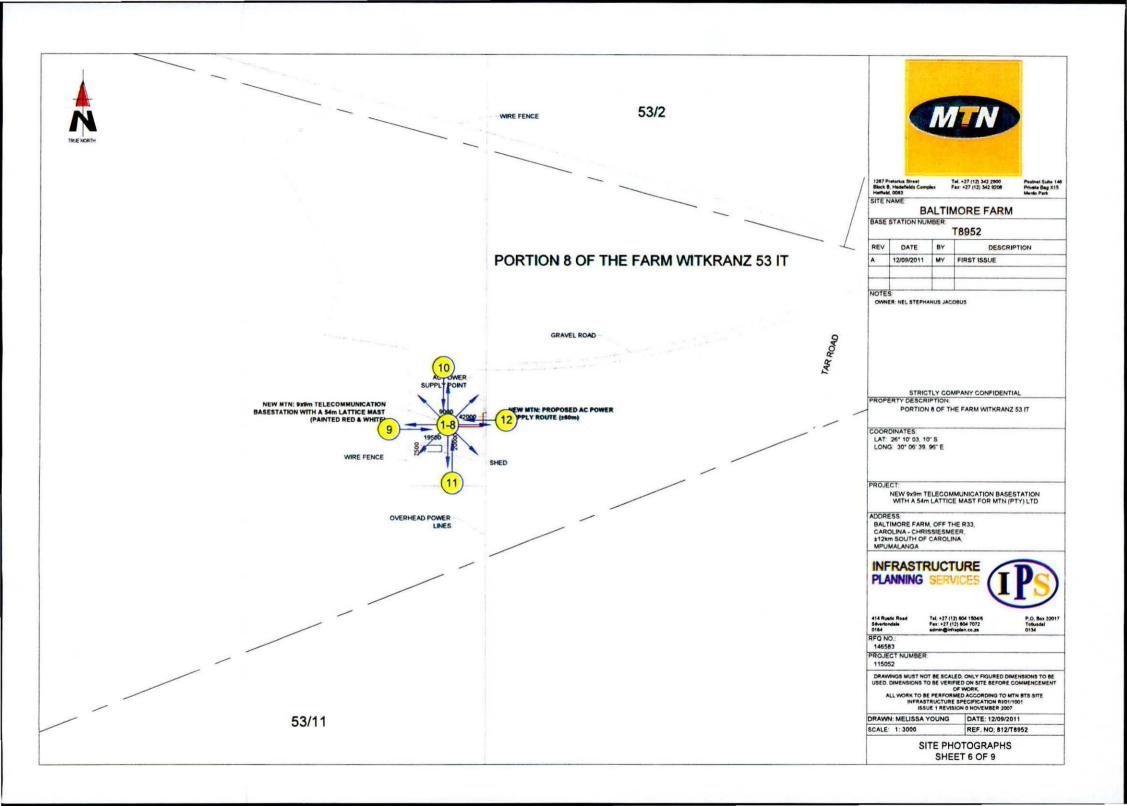


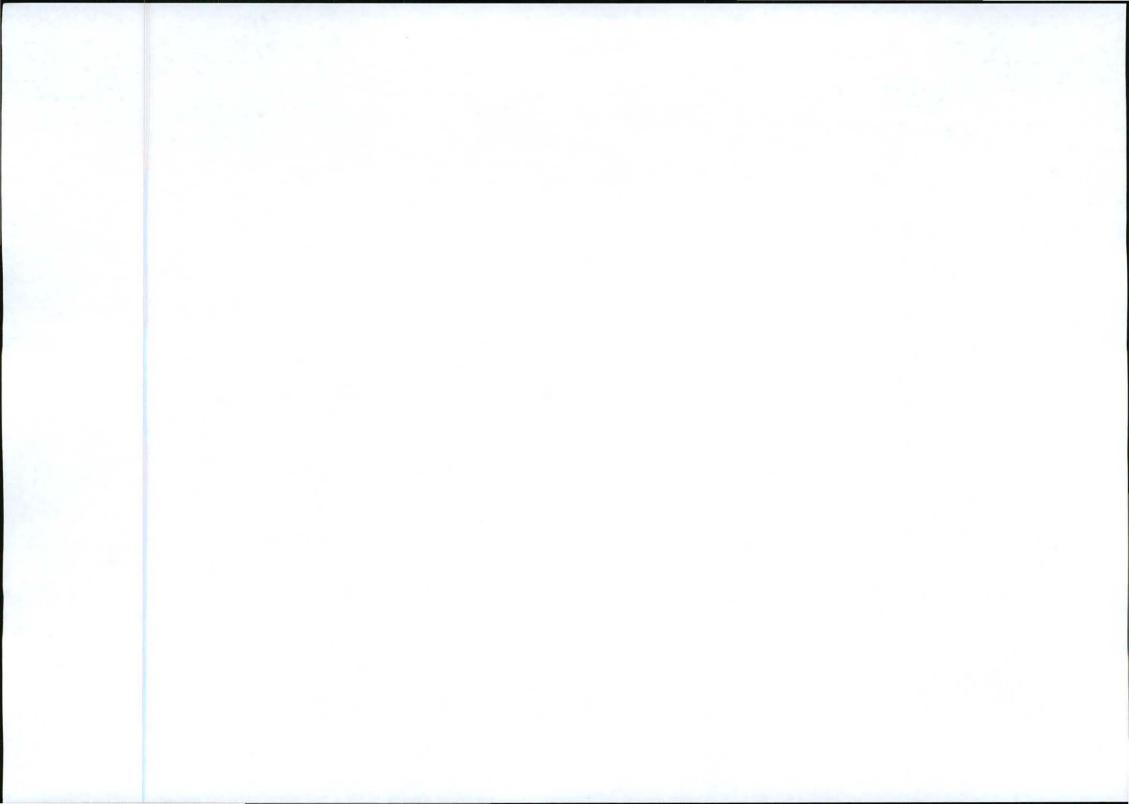










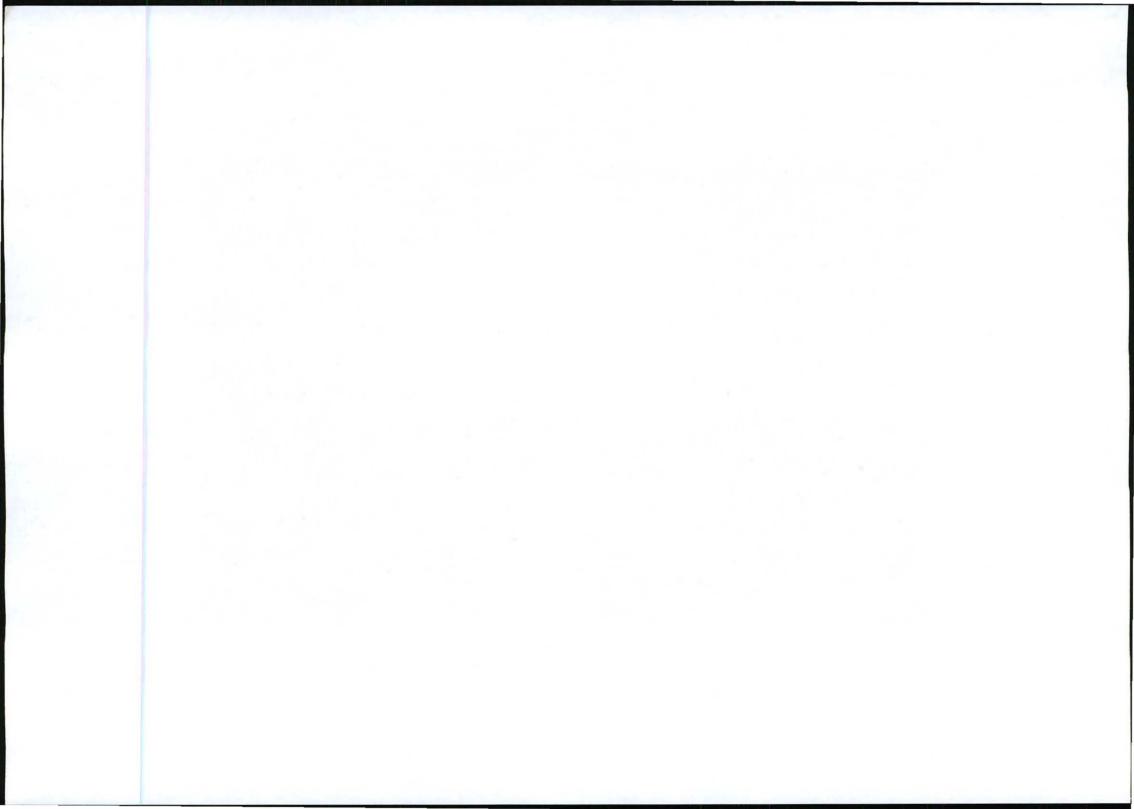


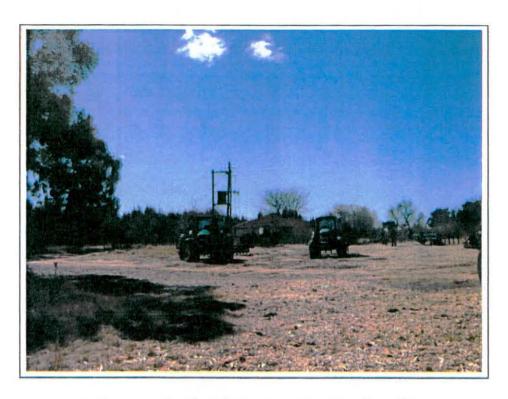


1. Panoramic view from the site direction North

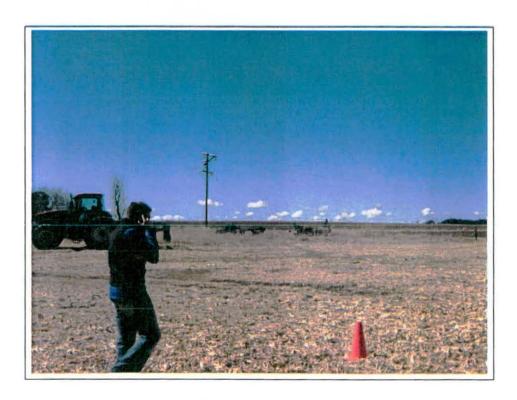


2. Panoramic view from the site direction North East

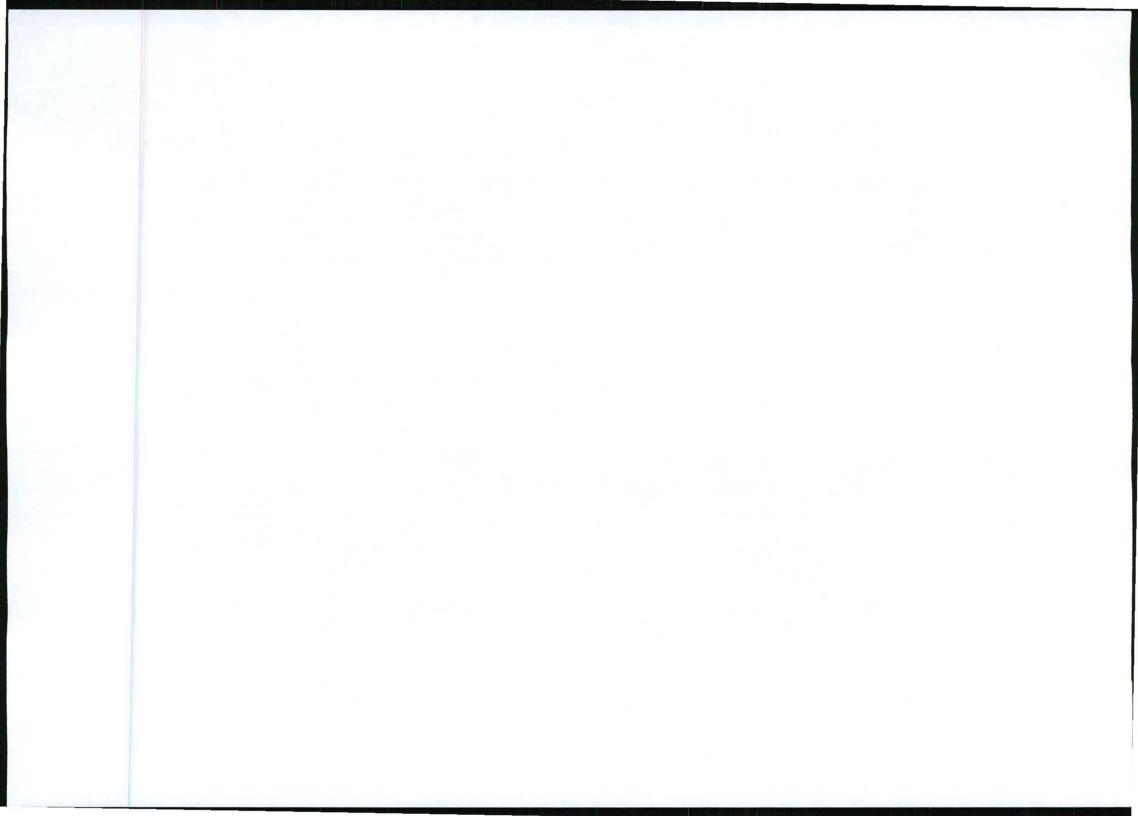


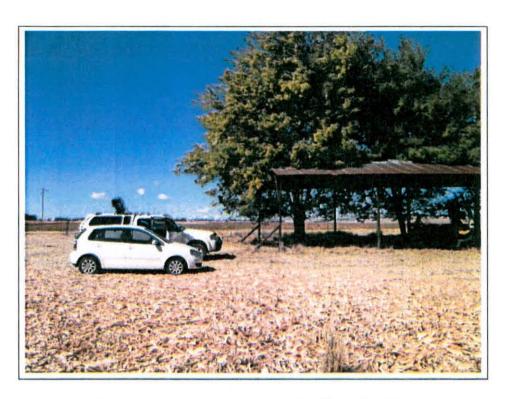


3. Panoramic view from the site direction East

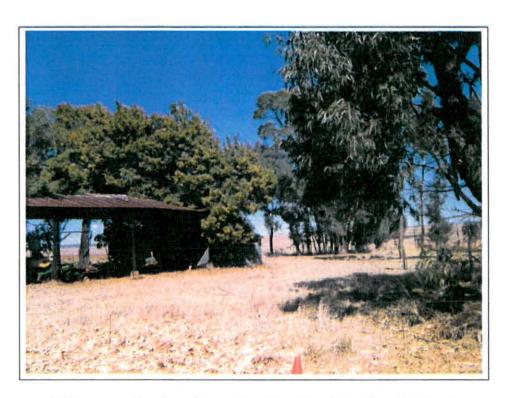


4. Panoramic view from the site direction South East

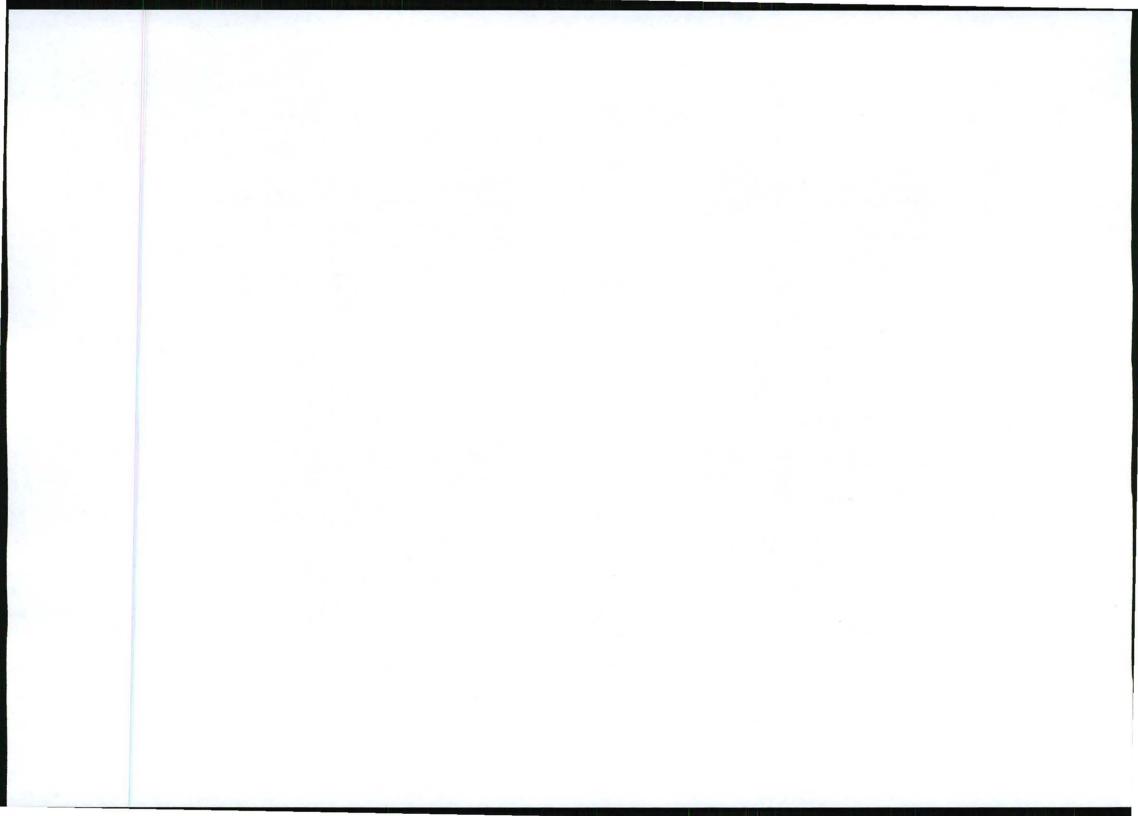


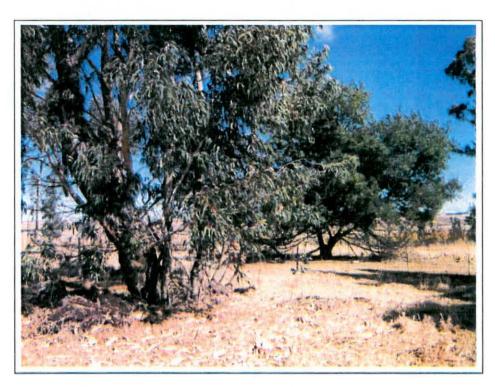


5. Panoramic view from the site direction South

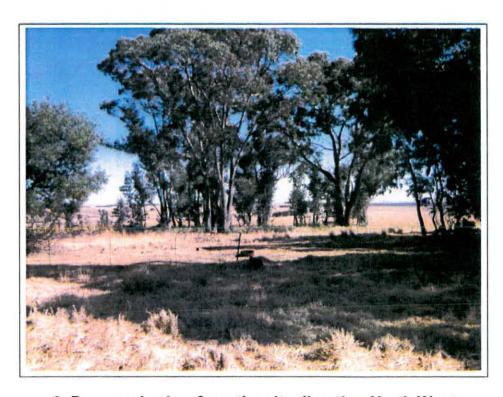


6. Panoramic view from the site direction South West

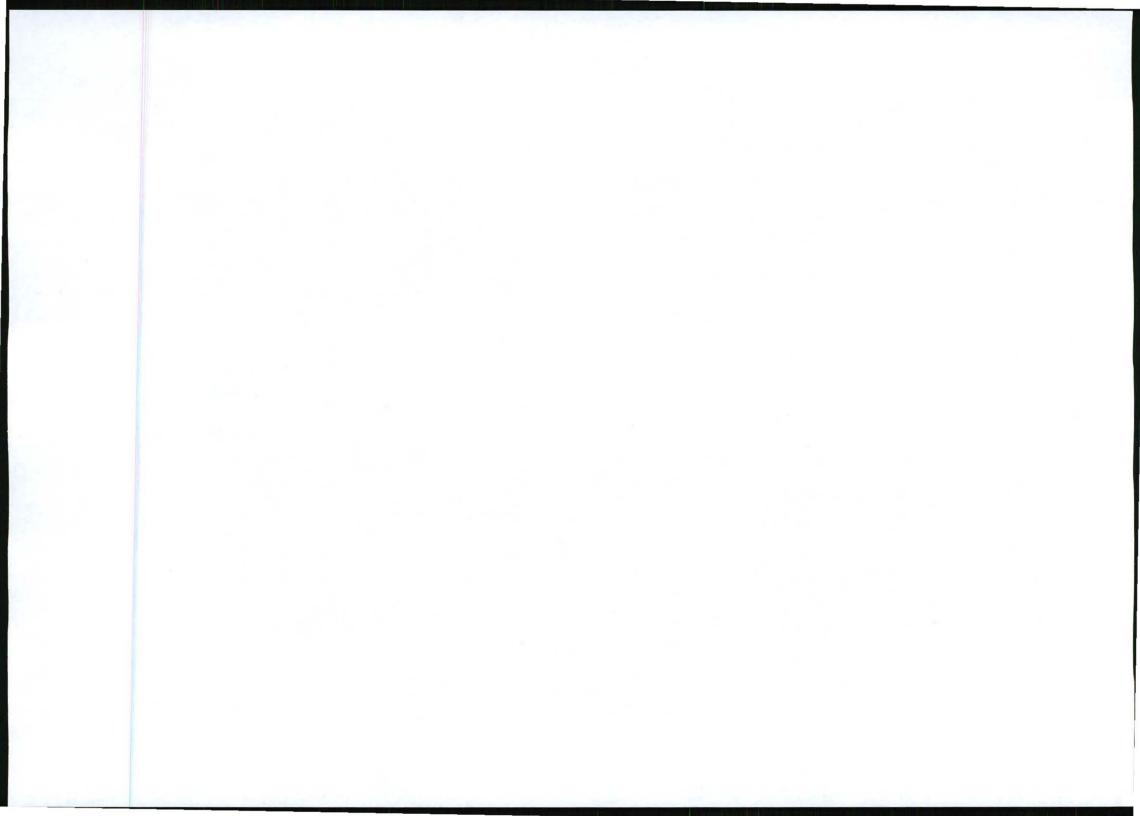


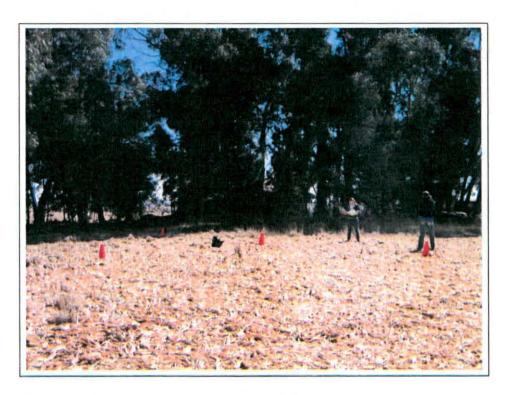


7. Panoramic view from the site direction West



8. Panoramic view from the site direction North West

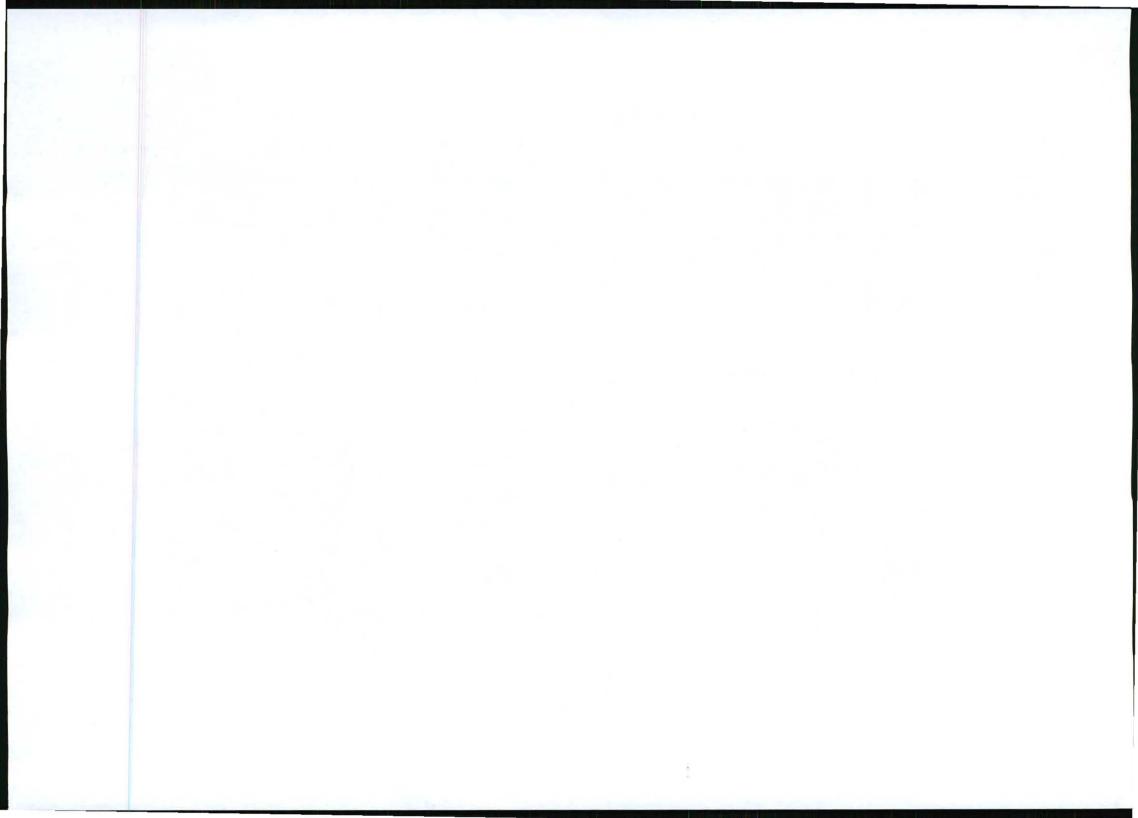


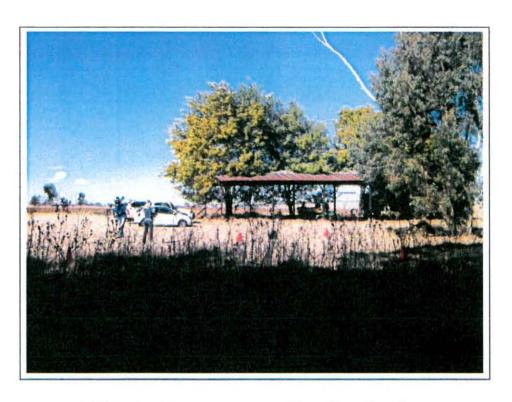


9. View on basestation position direction North



10. View on base station position direction East

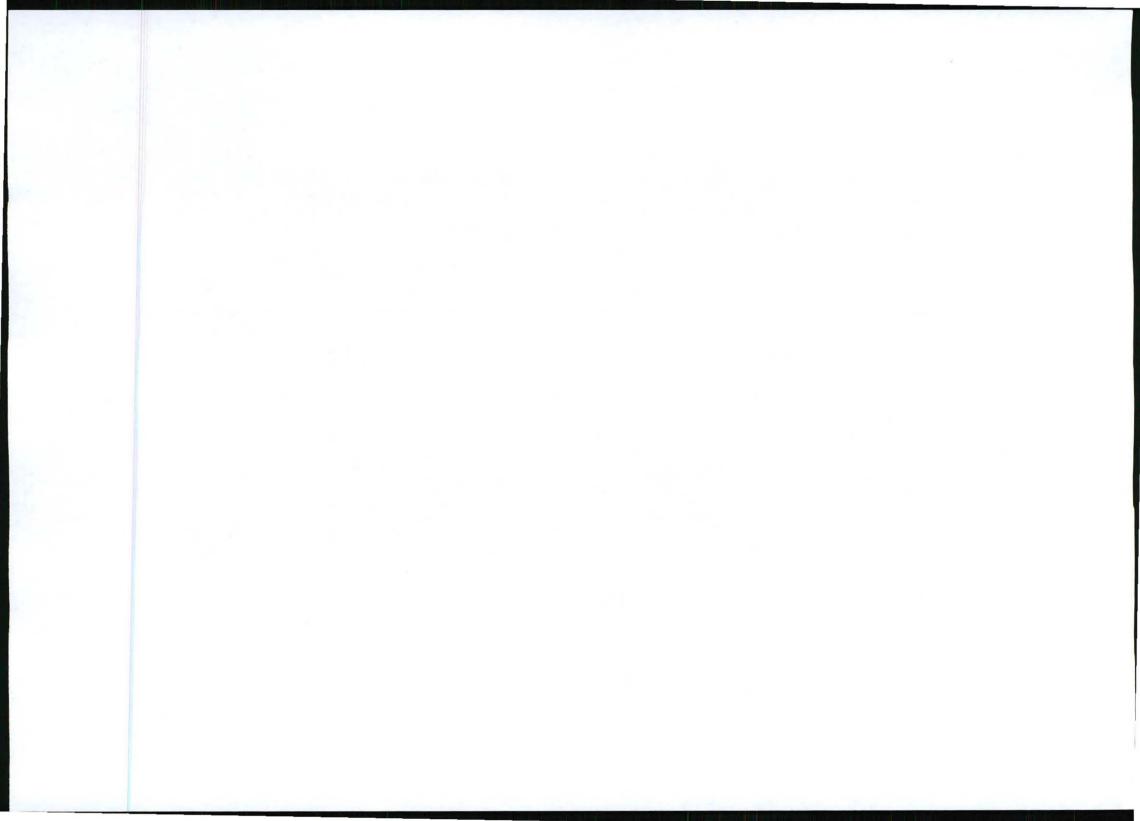


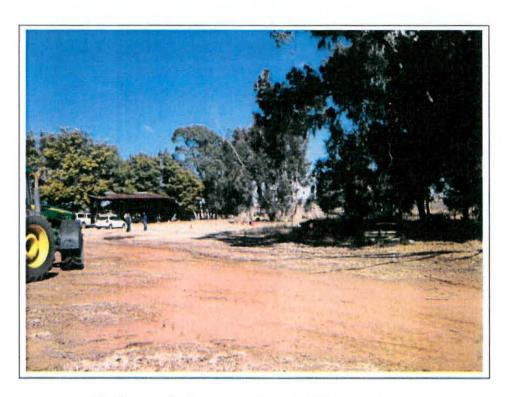


11. View on base station position direction South

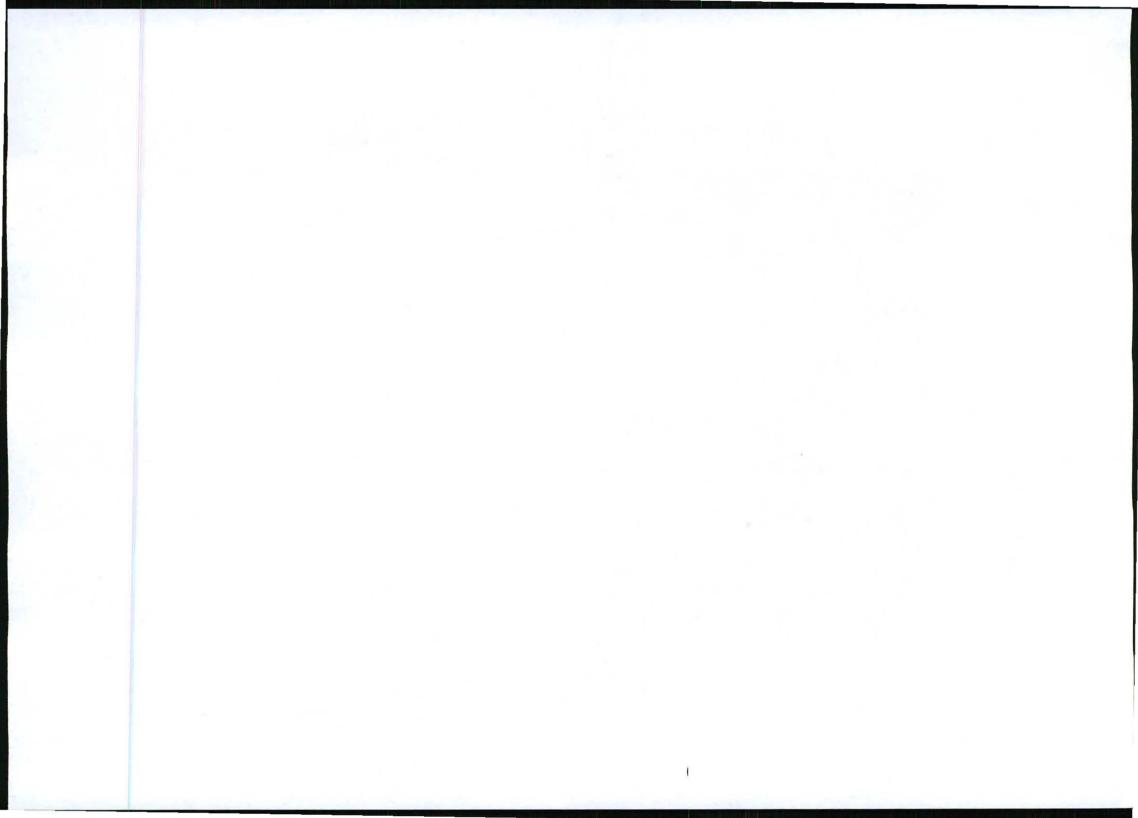


12. View on base station position direction West

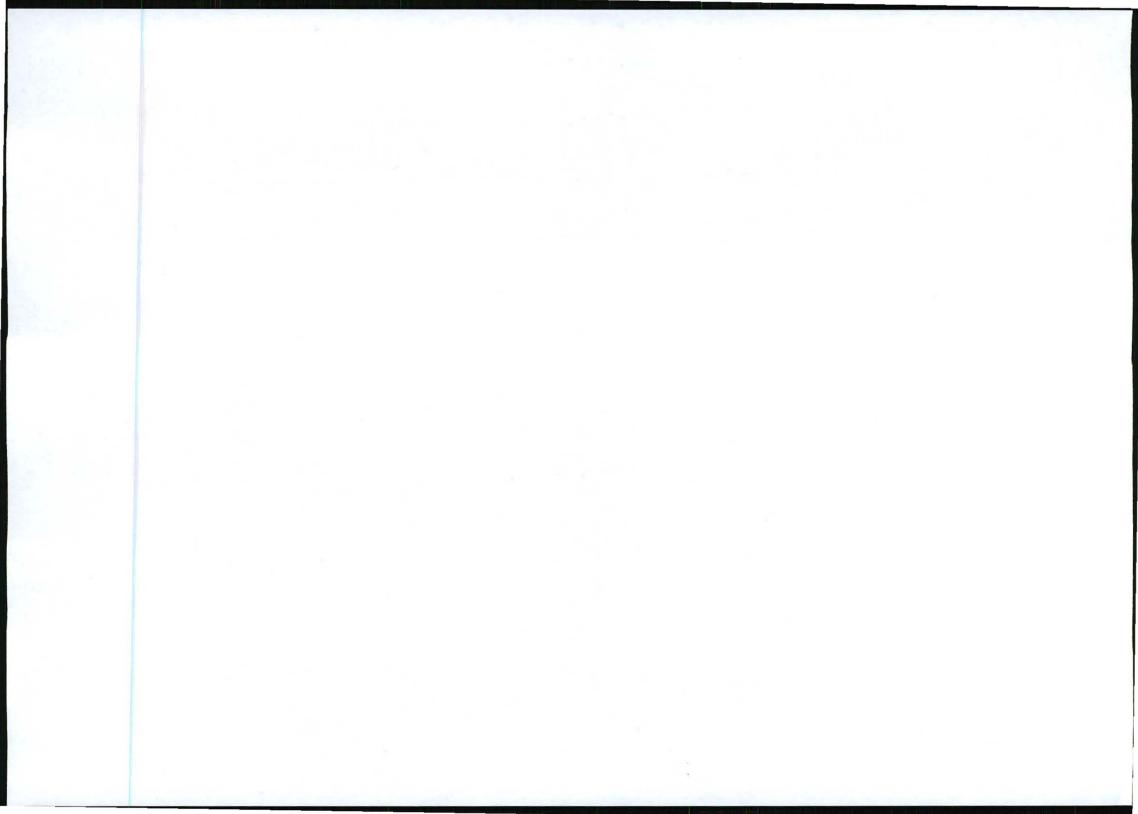




13. General view on site establishment area

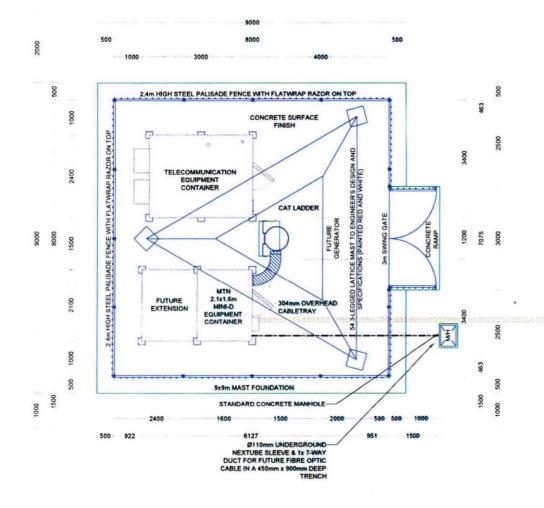


Appendik C: Facility Ilitustration





#### PORTION 8 OF THE FARM WITKRANZ 53 IT



Tel. +27 (12) 342 2900 Fax: +27 (12) 342 9206

Postnet Suite 14 Private Beg X15 Menio Park

SITE NAME

#### **BALTIMORE FARM**

BASE STATION NUMBER

T8952

DATE	BY	DESCRIPTION
12/09/2011	MY	FIRST ISSUE
	2,000	2

#### NOTES

OWNER, NEL STEPHANUS JACOBUS

STRICTLY COMPANY CONFIDENTIAL PROPERTY DESCRIPTION PORTION 8 OF THE FARM WITKRANZ 53 IT

COORDINATES

LAT: 26" 10" 03, 10" S LONG: 30" 06" 39, 96" E

PROJECT

Ø110mm NEXTUBE

SUPPLY CABLE

SLEEVE FOR AC POWER

NEW 9x9m TELECOMMUNICATION BASESTATION WITH A 54m LATTICE MAST FOR MTN (PTY) LTD

ADDRESS

BALTIMORE FARM OFF THE R33 CAROLINA - CHRISSIESMEER, ±12km SOUTH OF CAROLINA MPUMALANGA





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P.O. Box 32011 Totiusdal 0134

RFQ NO.

PROJECT NUMBER

115052

DRAWINGS MUST NOT BE SCALED. ONLY FIGURED DIMENSIONS TO BE USED. DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCEMENT

), DIMENSIONS TO BE VERIFIED OF WORK.

ALL WORK TO BE PERFORMED ACCORDING TO MTN BTS SITE
INFRASTRUCTURE SPECIFICATION RIGHTOOT
ISSUE 1 REVISION O NOVEMBER 2007

DRAWN: MELISSA YOUNG DATE: 12/09/2011 SCALE: 1:75

REF. NO: 812/T8952

SITE DETAIL SHEET 7 OF 9