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GOVERNMENT NOTICES • GOEWERMENTSKENNISGEWINGS

DEPARTMENT OF SCIENCE AND TECHNOLOGY

NO. 805

29 MAY 2019

NOTICE OF EFFECTIVE DATE OF THE REGULATIONS ON ASTRONOMY PROTECTION REGARDING CERTAIN ACTIVITIES WITHIN THE SUTHERLAND CENTRAL ASTRONOMY ADVANTAGE AREA IN TERMS OF THE ASTRONOMY GEOGRAPHIC ADVANTAGE ACT, 2007

I, Mmamoloko Kubayi-Ngubane, Minister of Science and Technology, in accordance with sections 50 and 51 of the Astronomy Geographic Advantage Act, 2007 (Act No. 21 of 2007) (hereinafter referred to as "the Act") and having obtained the concurrence of the Minister of Finance (to the extent that these Regulations have financial implications), hereby give notice that the Regulations for astronomy protection regarding certain activities within the Sutherland Central Astronomy Advantage Area shall become effective on the date of the publication of these Regulations in the *Government Gazette*.

The said Regulations are set out in the attached Schedules listed hereunder:

Schedule 1 - Protection Regulations to be applied within the Sutherland Central Astronomy Advantage Area declared for optical astronomy purposes; and

Schedule 2 - Regulations on financial compensation procedures for the Sutherland Central Astronomy Advantage Area.

These Regulations apply to the Sutherland Central Astronomy Advantage Area declared for the purpose of optical astronomy and related scientific endeavours in terms of section 9(1) and (2) of the Act published on 12 March 2014, in Government Gazette Number 37434, under Notice Number 199.



MS MT KUBAYI-NGUBANE, MP
MINISTER OF SCIENCE AND TECHNOLOGY

DATE: 23/05/2019

SCHEDULE 1**PROTECTION REGULATIONS TO BE APPLIED WITHIN THE SUTHERLAND
CENTRAL ASTRONOMY ADVANTAGE AREA DECLARED FOR OPTICAL
ASTRONOMY PURPOSES****Arrangement of the Regulations**

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1. Definitions

For the purposes of these Schedule 1 Regulations, unless the context indicates otherwise—

"Act" means the Astronomy Geographic Advantage Act, 2007 (Act No. 21, of 2007);

"airmass" means the path length that light from an astronomical source takes through the atmosphere relative to zenith, and it increases as the angle between zenith and the astronomical source increases;

"extinction" means the reduction in brightness from an astronomical source as a result of scattering and/or absorption of its light as it passes through dust and gas in the atmosphere before reaching the observer;

"fully shielded lighting" means a light fixture constructed and mounted in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the fixture, is projected below the horizontal;

"general area lighting" means outdoor lighting used for, but not limited to, illumination for walkways, roadways, equipment yards, parking lots and outdoor security where general illumination for visibility, safety or security is the primary concern;

"light pollution" means any kind of artificial light emission in the wavelength range from 300 to 5 000 nanometres that could be directly or indirectly detected by the optical telescopes located within the Sutherland Core Astronomy Advantage Area;

"narrowband amber (NBA) LED" means a light emitting diode (LED) with a peak wavelength between 585 and 595 nm and a full width at 50% radiant power no greater than 15 nm;

"nm" means nanometre, which is a unit of length equal to 10^{-9} metres;

"outdoor recreational lighting" means lighting used at sport fields, exhibition areas, cultural facilities or any other public or private facility where the public may attend events and participants may use the facility for practice, rehearsal or matches;

“phosphor-converted amber (PCA) LED” means a light emitting diode (LED) in which the LED blue light is converted to the yellow (amber) light, thereby having the highest efficiency at low wavelengths (around 600 nm);

“SAAO” means the South African Astronomical Observatory being the national centre for optical and infrared astronomy in the Republic of South Africa, operating as a facility of the National Research Foundation;

“Sutherland Central Astronomy Advantage Area” means the Sutherland Central Astronomy Advantage Area declared in *Government Gazette* No. 37434, under Notice No. 199, published on 12 March 2014; and

“Sutherland Core Astronomy Advantage Area” means the Sutherland Core Astronomy Advantage Area declared in *Government Gazette*, No. 33462, under Notice No. 723, published on 20 August 2010.

2. Scope of the regulations in this Schedule 1

- (1) These regulations apply to specified activities within the Sutherland Central Astronomy Advantage Area declared for optical astronomy purposes and related scientific endeavours.
- (2) The restriction of the specified activities within the Sutherland Central Astronomy Advantage Area is intended to protect the optical astronomy observations carried out within the Sutherland Core Astronomy Advantage Area from a detrimental impact.
- (3) The prohibition of any detrimental activity within the Sutherland Central Astronomy Advantage Area will be done in a declaration to be made for that purpose in terms of section 23(1) of the Act.
- (4) In case of inconsistency between the English and the Afrikaans texts of these regulations, the English text will take precedence.

3. Protection measures applicable within the Sutherland Central Astronomy Advantage Area

- (1) Monitoring and measurement of sky brightness and transparency shall be conducted within the Sutherland Core Astronomy Advantage Area.

- (2) The established average moonless night sky brightness levels within the Sutherland Core Astronomy Advantage Area of $U = 22.4$, $B = 22.7$, $V = 21.9$, $R = 21.1$ and $I = 19.8$ magnitude per arcsecond squared at zenith, must not be exceeded as a result of any artificial lighting located in the Sutherland Central Astronomy Advantage Area. Information on the determination of night sky brightness levels is provided in Annexure A to these Regulations.
- (3) The established natural atmospheric extinction values within the Sutherland Core Astronomy Advantage Area of $U = 0.54$, $B = 0.27$, $V = 0.15$, $R = 0.10$ and $I = 0.07$ magnitude per airmass, as set out in Annexure A must not be exceeded as a result of any activity capable of causing air pollution within the Sutherland Central Astronomy Advantage Area.
- (4) Any activity occurring within the Sutherland Central Astronomy Advantage Area that may detrimentally impact on optical astronomy and related scientific endeavours by affecting the sky brightness and/or sky transparency, as measured within the Sutherland Core Astronomy Advantage Area, shall be restricted as prescribed in Regulation 4 of these Regulations.
- (5) Any person who conducted any activity within the Sutherland Central Astronomy Advantage Area prior to the promulgation of these Regulations which may detrimentally impact on optical astronomy and related scientific endeavours within the Sutherland Core Astronomy Advantage Area, must comply with the prescribed conditions in Regulations 4, 5 and 6 of these Regulations within a period of one (1) year after these Regulations become effective.

4. Prescribed conditions for lighting activities

- (1) Unless authorised by the management authority, no person may allow any general area lighting and outdoor recreational lighting activities within the Sutherland Central Astronomy Advantage Area to cause the average night sky brightness stated in sub-regulation 3(2) to be exceeded within the Sutherland Core Astronomy Advantage Area.
- (2) Indoor lighting in buildings and dwellings are exempted from the restrictions

prescribed in sub-regulations 4(3) to 4(7) subject thereto that no person may allow any internal lighting to spill over to the outside of the building which causes the night sky brightness stated in sub-regulation 3(2) within the Sutherland Core Astronomy Advantage Area to be exceeded.

- (3) All persons who have existing light fittings and fixtures for general area lighting and outdoor recreational lighting in the Sutherland Central Astronomy Advantage Area must convert such light fitting and fixtures to fully shielded lighting in accordance with the requirements stated in sub-regulation 4(6) and (7) of these Regulations within one (1) year of the of these Regulations becoming effective.
- (4) All persons who wish to install new outdoor light fittings and fixtures within the Sutherland Central Astronomy Advantage Area must use fully shielded lighting and comply with the requirements stated in sub-regulation 4(6) and (7) of these Regulations.
- (5) The total permissible amount of outdoor lighting for general area lighting and outdoor recreational lighting within any premises, shall be determined by the management authority on a case by case basis and the total amount so determined, shall not be exceeded.
- (6) All installations within the Sutherland Central Astronomy Advantage Area must consist of the following types of general area lighting:
 - (a) low pressure sodium (LPS) or narrowband amber (NBA) LEDs as the preferred option; or
 - (b) high pressure sodium (HPS) or phosphor-converted amber (PCA) LED lighting if it is not feasible to use the lighting prescribed in sub-regulation (a) above.
- (7) Light emission shall be limited to above 500 nanometres.
- (8) The management authority may require that installations within the Sutherland Central Astronomy Advantage Area include proximity switches, such as motion sensors, and time dimming or switch offs to prevent the night sky brightness, stated in sub-regulation 3(2) within the Sutherland Core Astronomy Advantage Area, to be exceeded.

5. Activities creating air pollution

- (1) Any person who intends to conduct any activity within the Sutherland Central Astronomy Advantage Area that may involve any earth works creating dust, must submit an application on the prescribed form (Annexure B), a copy of which can be obtained from the management authority, for approval by the management authority prior to commencing such activities.
- (2) The management authority will communicate the outcome of any application(s) contemplated in this Regulation 5 within 60 (sixty) working days from the date of receipt of the fully completed application.

6. Wind turbines generating electricity

- (1) No person may operate a wind turbine with an electricity output potential of more than 100 Kw which is located within 20 km of the centre of the Southern African Large Telescope dome located at latitude 32° 22' 33" S and longitude 20° 48' 38"E.
- (2) Any person utilising obstacle lighting for aviation on wind turbine towers located beyond 20 km of the centre of the Southern African Large Telescope dome but within the Sutherland Central Astronomy Advantage Area, must comply with the variation permitted by the Civil Aviation Authority of South Africa in order to avoid light pollution within the Sutherland Core Astronomy Advantage Area.
- (3) The pilot activated lighting method determined by the Civil Aviation Authority of South Africa, shall be used as the method of switching on the obstacle lighting on wind farms.
- (4) No installation may cause direct visibility of obstacle lighting for aviation on wind turbine towers located beyond 20 km of the Sutherland Core Astronomy Advantage Area and within the Sutherland Central Astronomy Advantage Area.
- (5) Any general area lighting at the wind turbine sites, for operational, security or any other purpose, shall comply with the conditions prescribed in regulation 4 of these Regulations.

7. Assessment of light pollution

- (1) When the management authority becomes aware of new outdoor lighting installations or when new outdoor lighting sources are observed by the SAAO, located within the Sutherland Central Astronomy Advantage Area, the management authority may arrange that an assessment is carried out of the light pollution impact on the average moonless night sky brightness levels within the Sutherland Core Astronomy Advantage Area.
- (2) The cost for the assessment may be recovered from the owner of the lighting installation that caused the pollution, if it is determined by the management authority that these Regulations have been contravened.
- (3) Any person who intends to install new outdoor lighting must submit a request to the management authority before the installation is done and provide full details of the light fittings to be installed and exactly where the light fittings will be installed in order that an assessment may be carried out on the installation to determine whether the average moonless night sky brightness levels within the Sutherland Core Astronomy Advantage Area are exceeded.

8. Extension of the one-year period

The Minister may, by notice in the *Gazette*, extend the one (1) year period contemplated in sub-regulations 3(5) and 4(3) of these Regulations.

9. Financial Compensation

Any financial compensation contemplated in terms of section 23(3)(a) of the Act with respect to a restriction on activities that were lawful within the Sutherland Central Astronomy Advantage Area before the promulgation of these Regulations shall be subject to the Regulations on Financial Compensation for the Sutherland Central Astronomy Advantage Area.

10. Contraventions and penalties

- (1) Contraventions, for which a prosecution may be instituted in a Court of Law, will include the failure to comply with the conditions prescribed in any of the

sub-regulations 4(1), 4(3), 4(4), 5(1), 6(1) and 6(2) of these Regulations.

- (2) The maximum fine for an intentional contravention in terms of sub-regulation 10(1) of these Regulations is R200 000 and for a negligent contravention is R100 000.
- (3) The fines referred to in sub-regulation 10(2) of these Regulations may be suspended as a whole or in part subject to a condition that the person convicted is not found guilty of the same offence within a maximum period of three years.

11. Short title

These regulations are called the Regulations for the Protection of the Sutherland Central Astronomy Advantage Area declared for optical astronomy purposes, 2019 and will come into operation on the date of the publication of these Regulations in the Government Gazette.

Annexure A to Schedule 1 Regulations

1. The purpose of the Annexure is to provide information on how the moonless night sky brightness levels and extinction values specified in sub-regulations 3(2) and 3(3) of these Regulations, as the protection levels for optical astronomy, are determined by means of measurements. Artificial outdoor lighting and dust generated within the Sutherland Central Astronomy Advantage Area may have a negative impact on the night sky brightness and atmospheric extinction at the Sutherland Core Astronomy Advantage Area. An increase in the night sky brightness levels by artificial lighting causing light pollution will decrease the ability to observe faint astronomical objects. An increase in the extinction values caused by air pollution will reduce the luminosity emitted by an astronomical object.
2. Astronomers make use of filters to control the particular range of wavelengths over which the brightness is measured. A filter is simply a (precisely manufactured) piece of coloured glass that is placed in the light beam path between the telescope and the detector. The percentages of each wavelength that are allowed to pass are carefully designed to collect particular pieces of astronomical information.
3. The Sutherland Core Astronomy Advantage Area site is a unique location for astronomy in the southern hemisphere in terms of very low night sky brightness, and also low and stable atmospheric extinction.
4. The natural sky quality conditions at Sutherland have been established from astronomical observations acquired *in situ* over the past 35 years. The average values are listed in the Table below, expressed in the units traditionally used by astronomers, and also in other physical units.

Filter passband	U	B	V	R	I
Effective wavelength, λ_{eff} (nm)	365	433	550	640	790
Night Sky Brightness (magnitude/arcsec ²)	22.4	22.7	21.9	21.1	19.8
Night skybrightness (microJy/arcsec ²)	2.08	3.55	6.67	11.2	30.7
Night Sky Brightness (10 ⁻¹⁷ Watts/m ² /arcsec ²)	1.71	2.46	3.63	5.24	11.6
Extinction (magnitude/airmass)	0.54	0.27	0.15	0.10	0.07

Notes

1. λ_{eff} , the *effective wavelength*, is the central wavelength in nanometres (10⁻⁹ metres) of the pass-band, weighted by intensity as a function of wavelength.
2. U – stands for ultra-violet (in the near ultra-violet region of the electromagnetic spectrum).
3. B – stands for blue (in the visible region of the electromagnetic spectrum).
4. V – stands for visual (in the visible region of the electromagnetic spectrum).
5. R – stands for red (in the visible region of the electromagnetic spectrum).
6. I – stands for infrared (in the near-infrared region).

Annexure B to Schedule 1 Regulations

science
& technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

This form is to be submitted in terms of Sub-regulation 5(1) of the Schedule 1 Regulations to seek approval for an activity involving any earth works creating dust capable of causing air pollution with a detrimental impact on optical astronomy conducted at the South African Astronomical Observatory near Sutherland, Northern Cape. The information requested in the following items is required to assess the possible detrimental impact.

Item	Requirements	Details of information required	Response to requirements (For additional space, please add an attachment)
1.	Name and details of the enterprise and representative		
	Name of entity		
	Registration number		
	Representative		
	Phone number		
	Email address		
	Postal address		
2.	Location	(a) Central geographical location of the activity (longitude & latitude in degrees, minutes & seconds or in degrees with 4 decimals); (b) Elevation of the highest point at the relevant site above sea level; and	

		(c) Distance from the Southern African Large Telescope (SALT) located at 32° 22' 33" S and 20° 48' 38" E.	
3.	Activity	Description of the scope of the operations and the methods to be employed.	
4.	Impact of wind	Direction of prevailing wind that will affect dust pollution.	
5.	Determination of possible dust pollution	(a) Describe and quantify the dust pollution to be caused by the operations; and (b) Describe the methods that will be employed on an ongoing basis to minimise dust pollution.	
6.	Comments	Provide any information that may be useful in carrying out the impact assessment for possible dust pollution.	
7.	Signature	In signing this document, I declare that the information provided herein is to the best of my knowledge truthful and correct. Signature Date	

SCHEDULE 2
REGULATIONS ON FINANCIAL COMPENSATION FOR THE SUTHERLAND
CENTRAL ASTRONOMY ADVANTAGE AREA

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1. Definitions

In these Regulations, unless the context indicates otherwise –

"Act" means the Astronomy Geographic Advantage Act, 2007 (Act No. 21 of 2007);

"affected person" means a person who –

- (a) lawfully conducted an activity in the Sutherland Central Astronomy Advantage Area prior to the restriction of that activity by virtue of Schedule 1 of these Regulations read with the Act; and
- (b) is required by the Minister in terms of Schedule 1 of these Regulations to cease that activity or to comply with conditions prescribed in terms of Schedule 1 of these Regulations;

"financial loss" means the proven monetary loss incurred by an affected person as a result of having to comply with a restriction or implement a requirement or a condition imposed in terms of section 23 of the Act read with Schedule 1 of these Regulations;

"GPS" means a global positioning system;

"Schedule 1 Regulations" means the regulations to prohibit and restrict certain declared activities in terms of section 23 of the Act within the Sutherland Central Astronomy Advantage Area, which is Schedule 1 of these Regulations.

2. Scope of the regulations in this Schedule 2

- (1) These Regulations apply to the Sutherland Central Astronomy Advantage Area declared for optical astronomy purposes and related scientific endeavours.
- (2) These Regulations are applicable only to person(s) whom at the date of promulgation of these Regulations conduct any activities which may impact on optical astronomy and related endeavours within the declared Sutherland Central Astronomy Advantage Areas.
- (3) Persons who commence such activities after the date of promulgation of these regulations are not eligible to apply for any financial compensation in terms of these Regulations.

- (4) In case of inconsistency between the English and the Afrikaans texts of these regulations, the English text will take precedence.

3. Procedures and criteria to apply for financial compensation

- (1) An affected person who has suffered proven financial loss solely as a direct result of that person's compliance with a requirement or a condition imposed in terms of Schedule 1 of these Regulations may apply to the Minister for compensation in terms of this regulation.
- (2) The application for compensation contemplated in sub-regulation (1) must be submitted on the prescribed form which may be obtained from the management authority, or the website of the management authority, and submitted to the management authority within two (2) years of the implementation of the relevant requirement or condition.
- (3) If an applicant applies for compensation in relation to different activities, the applicant must submit a separate application for each activity.

4. Processing of the application by the management authority

- (1) Upon receipt of the application, the management authority may request further information from the applicant in writing, and, if deemed necessary, the applicant may by way of a sworn statement provide such further information to the management authority for consideration of the application, and the applicant must respond to the request for further information within thirty (30) days from the date that the request was sent.
- (2) The management authority must, within sixty (60) days from the date that the last information required was received, refer the application, all relevant documentation and any further particulars submitted by the applicant, with a recommendation to the Minister for a decision: provided that the Minister may extend the period of sixty (60) days on good cause shown, by the management authority, with notice to the applicant.
- (3) The management authority must, within thirty (30) days of the date of receipt of the Minister's decision inform the applicant in writing of the Minister's decision and provide the applicant with written reasons for the decision,

including an offer of compensation as determined in accordance with Regulation 5 of these Regulations.

5. Determination of compensation by the Minister

If the Minister approves that the applicant should receive compensation, the Minister must determine the amount of compensation having regard to all the relevant information contained in the application and the recommendation made by the management authority, including –

- (a) the nature and extent of the activity lawfully conducted by the applicant immediately before the implementation of the relevant requirement or condition;
- (b) the extent to which the applicant ceased the relevant activity, the nature and extent to which the applicant modified its conduct of the relevant activity, solely as a direct result of compliance with the requirement or conditions imposed in terms of Schedule 1 of these Regulations;
- (c) the property or equipment which was owned or used by the applicant to conduct the relevant activity and the extent to which the use thereof had been adversely affected solely as a direct result of compliance with the requirement or conditions imposed in terms of Schedule 1 of these Regulations; and
- (d) the proven financial loss suffered by the applicant solely as a direct result of compliance with the requirement or conditions imposed in terms of Schedule 1 of these Regulations.

6. Acceptance or rejection of the offer by the applicant

- (1) Within thirty (30) days of receipt of the offer in sub-regulation 4(3), the applicant must inform the management authority in writing of their acceptance or rejection of the offer.

- (2) If the applicant accepts the offer made in terms of sub-regulation 4(3), the management authority must pay the applicant the amount in a manner and within the period agreed upon by the applicant and the management authority, which period may not be more than sixty (60) days after receipt of notice of acceptance of the offer from the applicant.
- (3) If the applicant rejects the offer made in terms of sub regulation 4(3), then the provisions of the Promotion of Administrative Justice Act, 2000 (Act No.3 of 2000) will apply.

7. Short title

These Regulations are called the Regulations on Financial Compensation Procedures for the Sutherland Central Astronomy Advantage Area, 2019 and will come into operation on the date of the publication of these Regulations in the Government Gazette.

DEPARTEMENT VAN WETENSKAP EN TEGNOLOGIE

NO. 805

29 MEI 2019

KENNISGEWING VAN EFFEKTIEWE DATUM VIR DIE REGULASIES VIR ASTRONOMIEBESKERMING INSAKE SEKERE AKTIWITEITE BINNE DIE SUTHERLAND SENTRALE ASTRONOMIEVOORDEELGEBIED KRAGTENS DIE WET OP GEOGRAFIESE ASTRONOMIEVOORDEEL, 2007

Ek, Mmamoloko Kubayi-Ngubane, Minister van Wetenskap en Tegnologie, kragtens artikels 50 en 51 van die Wet op Geografiese Astronomievoordeel, 2007 (Wet No. 21 van 2007) (hierna hierin verwys as "die Wet"), en nadat ek die instemming van die Minister van Finansies verkry het (tot die mate dat hierdie Regulasies finansiële implikasies het), gee hiermee kennis dat die Regulasies vir astronomiebeskerming insake sekere aktiwiteite binne die Sutherland Sentrale Astronomievoordeelgebied effektief sal word op die publikasie datum van hierdie Regulasies in die Staatskoerant.

Die genoemde Regulasies word uiteengesit in die aangehegte Skedules, hieronder gelys:

Skedule 1 – Beskermingsregulasies om binne die Sutherland Sentrale Astronomievoordeelgebied, verklaar vir optiese astronomie doeleindes, toegepas te word; en

Skedule 2 – Regulasies oor finansiële kompensasië prosedures vir die Sutherland Sentrale Astronomievoordeelgebied.

Hierdie Regulasies is van toepassing op die Sutherland Sentrale Astronomievoordeelgebied verklaar vir die doeleindes van optiese astronomie en verwante wetenskaplike ondernemings kragtens artikels 9(1) en (2) van die Wet, gepubliseer op 12 Maart 2014 in Staatskoerant No. 37434, onder Kennisgewing No. 199.



MS M T KUBAYI-NGUBANE, LP
MINISTER VAN WETENSKAP EN TEGNOLOGIE

DATUM: 23/05/2019

SKEDULE 1**BESKERMINGSREGULASIES OM BINNE DIE SUTHERLAND SENTRALE
ASTRONOMIEVOORDEELGEBIED, VERKLAAR VIR OPTIESE ASTRONOMIE
DOELEINDES, TOEGEPAS TE WORD****Indeling van die Regulasies**

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1. Woordomsrywings

In hierdie Skedule 1 Regulasies, tensy dit uit die samehang anders blyk, beteken–

“algemene-area-beligting” beligting gebruik vir, maar nie uitsluitlik nie, die beligting van paadjies, paaie, toerustingwerwe, parkeerterreine en buitelug sekuriteit waar algemene beligting vir sigbaarheid, veiligheid en sekuriteit die hoofdoel is;

“buitemuurse ontspanningsbeligting” beligting gebruik by sportvelde, uitstalareas, kultuurfasiliteite of enige ander openbare- of privaataffasiliteit waar die publiek byeenkomste mag bywoon en die deelnemers die fasiliteit mag gebruik vir oefening, inoefenings of wedstryde;

“fosfor-omgeskakelde amber (PCA) LED” ’n liggewende diode (LED) waar die LED blou lig na geel (amber) lig omgeskakel is, ten einde die meeste effektief te wees by lae golflengtes (rondom 600 nm);

“ligbesoedeling” enige tipe kunsmatige liguitstraling in die 300 tot 5 000 nanometer golflengtebestek wat direk of indirek deur die teleskope in die Sutherland Kern Astronomievoordeelgebied geleë, waargeneem kan word;

“lugmassa” die padlengte wat lig neem vanaf ’n astronomiese bron, deur die atmosfeer relatief tot die senit en toeneem soos die hoek tussen die senit en die astronomiese bron toeneem;

“nouband amber (NBA) LED” ’n liggewende diode (LED) waarvan die hoogste uitsetgolflengte tussen 585 en 595 nm is en die volle wydte teen 50% uitstraalkrag nie 15 nm oorskry nie;

“nm” nanometer, wat ’n eenheid vir lengte is, gelyk aan 10^{-9} meter;

“SAAO” die “South African Astronomical Observatory”, wat die Suid-Afrikaanse Astronomiese Sterrewag is, as die nasionale sentrum vir optiese en infrarooi astronomie in die Republiek van Suid-Afrika en as ’n fasiliteit van die Nasionale Navorsingstigting bedryf word;

“Sutherland Sentrale Astronomievoordeelgebied” die Sutherland Sentrale Astronomievoordeelgebied verklaar in *Staatskoerant* Nr. 37434, onder Kennisgewing Nr. 199, gepubliseer op 12 Maart 2014;

“Sutherland Kern Astronomievoordeelgebied” die Sutherland Kern Astronomievoordeelgebied verklaar in *Staatskoerant* Nr. 33462, onder Kennisgewing Nr. 723, gepubliseer op 20 Augustus 2010;

“uitdowing” die vermindering in helderheid van ’n astronomiese bron as gevolg van die verspreiding en/of absorpsie van sy lig wanneer dit deur stof en gas in die atmosfeer gaan voordat dit die waarnemer bereik;

“volafsnbybeligting” beligtingsuitrusting wat sodanig vervaardig en gemonteer is dat alle lig wat deur die toerusting uitgestraal word, hetsy direk vanaf die ligelement of ’n verstrooier element of indirek deur middel van weerkaatsing of ligbuiging vanaf enige deel van die beligtingsuitrusting, laer as die horisontaal geprojekteer word; en

"Wet" die "Astronomy Geographic Advantage Act, 2007 (Act No. 21, van 2007)".

2. Toepassing van die regulasies in hierdie Skedule 1

- (1) Hierdie regulasies is van toepassing op gespesifiseerde aktiwiteite binne die Sutherland Sentrale Astronomievoordeelgebied verklaar vir optiese astronomie doeleindes en verwante wetenskaplike ondernemings.
- (2) Die beperking van die gespesifiseerde aktiwiteite binne die Sutherland Sentrale Astronomievoordeelgebied is bedoel om die optiese astronomie waarnemings binne die Sutherland Kern Astronomievoordeelgebied uitgevoer, te beskerm teen nadelige effekte.
- (3) Die verbod van enige nadelige aktiwiteite binne die Sutherland Sentrale Astronomievoordeelgebied sal gedoen word deur ’n verklaring vir daardie doel kragtens artikel 23(1) van die Wet te maak.
- (4) In die geval van teenstrydigheid tussen die Engelse en Afrikaanse weergawes van hierdie regulasies, sal die Engelse weergawe voorrang geniet.

3. Beskermingsmaatreëls van toegepassing binne die Sutherland Sentrale Astronomievoordeelgebied

- (1) Monitering en meting van die helderheid en deursigtigheid van die naghemel sal binne die Sutherland Kern Astronomievoordeelgebied uitgevoer word.
- (2) Die gevestigde gemiddelde maanlosenaghemelderheid binne die Sutherland Kern Astronomievoordeelgebied van $U = 22.4$, $B = 22.7$, $V = 21.9$, $R = 21.1$ en $I = 19.8$ magnitudes per boogseconde kwadraat op die senit, mag nie oorskry word nie as gevolg van enige kunsmatige beligting geleë binne die Sutherland Sentrale Astronomievoordeelgebied nie. Inligting oor die bepaling van naghemelderheidsvlakke is beskikbaar in Bylae A tot hierdie Regulasies.

- (3) Die gevestigde natuurlike atmosferiese uitdowingswaardes binne die Sutherland Kern Astronomievoordeelgebied van $U = 0.54$, $B = 0.27$, $V = 0.15$, $R = 0.10$ en $I = 0.07$ magnitude per lugmassa, soos in Bylae A uiteengesit, moet nie oorskry word nie as gevolg van enige aktiwiteit binne die Sutherland Sentrale Astronomievoordeelgebied wat in staat is om lugbesoedeling te veroorsaak nie.
- (4) Enige aktiwiteit wat binne die Sutherland Sentrale Astronomie-voordeelgebied plaasvind, en 'n nadelige impak op optiese astronomie en verwante wetenskaplike ondernemings mag hê, deur die helderheid en/of deursigtigheid van die naghemel te affekteer, soos binne die Sutherland Kern Astronomievoordeelgebied gemeet, sal beperk word soos voorgeskryf in regulasie 4 van hierdie Regulasies.
- (5) Enige persoon wat 'n aktiwiteit binne die Sutherland Sentrale Astronomievoordeelgebied voor die uitvaardiging van hierdie regulasies uitgevoer het, wat 'n nadelige impak op optiese astronomie en verwante wetenskaplike ondernemings binne die Sutherland Kern Astronomievoordeelgebied mag hê, moet voldoen aan die voorgeskrewe voorwaardes in Regulasies 4, 5 en 6 van hierdie Regulasies binne 'n tydperk van een (1) jaar nadat hierdie regulasies effektief geword het.

4. Voorgeskrewe voorwaardes vir beligtingsaktiwiteite

- (1) Tensy dit deur die bestuursgesag gemagtig is, mag geen persoon toelaat dat enige algemene-area-beligting en buitemuurse ontspanningsbeligting aktiwiteite binne die Sutherland Sentrale Astronomievoordeelgebied veroorsaak dat die gemiddelde naghemelderheid binne die Sutherland Kern Astronomievoordeelgebied, soos in sub-regulasie 3(2) bepaal, oorskry word nie.
- (2) Binnenshuise beligting in geboue en wonings is vrygestel van die beperkings in sub-regulasies 4(3) tot 4(7) voorgeskryf, onderhewig daaraan dat geen persoon sal toelaat dat enige interne beligting na buite die gebou sal oorspoel nie wat sal veroorsaak dat die naghemelderheid soos in sub-regulasie 3(2) bepaal, binne die Sutherland Kern Astronomievoordeelgebied oorskry word nie.
- (3) Alle persone wat bestaande beligtingstoebehore en uitrusting vir algemene-area-beligting en buitemuurse ontspanningsbeligting binne die Sutherland Sentrale Astronomievoordeelgebied het, moet sulke beligtingstoebehore en uitrusting omskakel na volafsnybeligting volgens die vereistes gestel in subregulasies 4(6) en

- (7) van hierdie Regulasies binne een (1) jaar nadat hierdie Regulasies effektief geword het.
- (4) Alle persone wat nuwe buitenshuise beligtingstoebehore en uitrusting binne die Sutherland Sentrale Astronomievoordeelgebied wil installeer, moet volafsnrybeligting gebruik en voldoen aan die vereistes gestel in subregulasies 4(6) en (7) van hierdie Regulasies.
- (5) Die totale toegelate hoeveelheid buitenshuise beligting vir algemene-area-beligting en buitemuurse ontspanningsbeligting binne enige perseel, sal deur die bestuursgesag bepaal word vir elke geval en die totale hoeveelheid so bepaal, mag nie oorskry word nie.
- (6) Alle installasies binne die Sutherland Sentrale Astronomievoordeelgebied moet uit die volgende tipes algemene-area-beligting bestaan:
- (a) laedruk-natrium (LPS) of nouband amber (NBA) LEDs as die voorkeupsie; of
 - (b) hoëdruk-natrium (HPS) of fosfor-omgeskakelde amber (PCA) LED beligting, indien dit nie haalbaar is om die beligting voorgeskryf in subregulasie (a) hierbo, te gebruik nie.
- (7) Lig-emissie moet beperk word tot bo 500 nanometer.
- (8) Die bestuursgesag mag vereis dat installasies binne die Sutherland Sentrale Astronomievoordeelgebied nabyheidskakelaars, soos bewegingsensors en tyd-dompskakeling of afskakeling insluit, om te verhoed dat die naghemelhelderheid in sub-regulasie 3(2) bepaal, binne die Sutherland Kern Astronomievoordeelgebied oorskry word.

5. Aktiwiteite wat lugbesoedeling veroorsaak

- (1) Enige persoon wat van voorneme is om 'n aktiwiteit binne die Sutherland Sentrale Astronomievoordeelgebied te onderneem wat grondwerk met die veroorsaking van stof behels, moet 'n aansoek op die voorgeskrewe vorm (Bylae B) waarvan 'n afskrif by die bestuursgesag verkry kan word, vir goedkeuring indien voordat sulke aktiwiteite 'n aanvang neem.
- (2) Die bestuursgesag sal die uitslag van enige aansoek(e) in hierdie Regulasie 5 beoog, binne 60 (sestig) werksdae kommunikeer vanaf die datum van ontvangs van die ten volle voltooide aansoek.

6. Windturbines vir die opwekking van elektrisiteit

- (1) Geen persoon mag 'n windturbine met 'n potensiële elektriese kraglewering van meer as 100 kW binne 20 km vanaf die middelpunt van die koepel van die Suider-Afrikaanse Groot Teleskoop (SALT), geleë op breedtegraad 32° 22' 33" S en lengtegraad 20° 48' 38" O, bedryf nie.
- (2) Enige persoon wat hindernisbeligting gebruik vir lugvaart op windturbine torings, geleë verder as 20 km vanaf die middelpunt van die Suider-Afrikaanse Groot Teleskoop koepel, maar binne die Sutherland Sentrale Astronomievoordeelgebied, moet voldoen aan die variasie toegelaat deur die Burgerlugvaart-owerheid van Suid-Afrika ten einde ligbesoedeling binne die Sutherland Kern Astronomievoordeelgebied te verhoed.
- (3) Die metode vir die aktivering van die hindernisbeligting op windturbine torings deur die vliegtuigloods, soos bepaal deur die Burgerlugvaart-owerheid van Suid-Afrika, sal gebruik word.
- (4) Geen installasie mag direkte sigbaarheid van hindernisbeligting vir lugvaart op windturbine torings, wat verder as 20 km vanaf die Sutherland Kern Astronomievoordeelgebied, maar binne die Sutherland Sentrale Astronomievoordeelgebied geleë is, veroorsaak nie.
- (5) Enige algemene-area-beligting op die windturbine-terreine vir operasionele, sekuriteit of enige ander doel, moet voldoen aan die voorwaardes voorgeskryf in regulasie 4 van hierdie Regulasies.

7. Waardebepaling van ligbesoedeling

- (1) Wanneer die bestuursgesag bewus word van nuwe buitenshuise beligtingsinstallasies, of wanneer nuwe buitenshuise beligtingsbronne deur die SAAO waargeneem word, wat binne die Sutherland Sentrale Astronomievoordeelgebied geleë is, mag die bestuursowerheid reël dat 'n waardebepaling uitgevoer word van die ligbesoedelingsimpak op die gemiddelde maanlosenaghemelhelderheidsvlakke binne die Sutherland Kern Astronomievoordeelgebied.
- (2) Die koste vir die waardebepaling mag verhaal word van die eienaar van die beligtingsinstallasie wat die besoedeling veroorsaak het, indien dit deur die bestuursowerheid bepaal word dat daar 'n oortreding van hierdie Regulasies was.

(3) Enige persoon wat van voorneme is om nuwe buitenshuisse beligting te installeer, moet vooraf 'n versoek by die bestuursowerheid indien en volle besonderhede verskaf van die beligtingstoebehore om geïnstalleer te word en presies waar die beligtingstoebehore geïnstalleer sal word sodat 'n waardebeplating op die installasie uitgevoer mag word om te bepaal of die gemiddelde maanlosenaghemelhelderheidsvlakke binne die Sutherland Kern Astronomievoordeelgebied oorskry word.

8. Verlenging van die een jaar tydperk

Die Minister mag, deur middel van 'n kennisgewing in die *Staatskoerant*, die een-jaar-tydperke in sub-regulasies 3(5) en 4(3) van hierdie Regulasies beoog, verleng.

9. Finansiële vergoeding

Enige finansiële vergoeding beoog kragtens artikel 23(3)(a) van die Wet in verband met 'n beperking op aktiwiteite wat wettig uitgevoer is binne die Sutherland Sentrale Astronomievoordeelgebied voordat hierdie Regulasies uitgevaardig is, sal onderworpe wees aan die Regulasies oor Finansiële Vergoeding vir die Sutherland Sentrale Astronomievoordeelgebied.

10. Oortredings en boetes

- (1) Oortredings waarvoor 'n vervolging in 'n Hof ingestel mag word, sluit in die versuim om te voldoen aan die voorwaardes voorgeskryf in enige van die sub-regulasies 4(1), 4(3), 4(4), 5(1), 6(1) en 6(2) van hierdie Regulasies.
- (2) Die maksimum boete vir die opsetlike oortreding vin terme van subregulasie 10(1) van hierdie Regulasies is R200 000 en R100 000 vir 'n nalatige oortreding.
- (3) Die boetes waarna subregulasie 10(2) van hierdie Regulasies verwys is, mag in die geheel, of gedeeltelik, opgeskort word, onderworpe aan die voorwaarde dat die veroordeelde persoon nie skuldig bevind word aan dieselfde oortreding binne 'n maksimum periode van drie jaar nie.

11. Kort titel

Hierdie regulasies word die Regulasies vir die beskerming van die Sutherland Sentrale Astronomievoordeelgebied, verklaar vir optiese astronomie doeleindes, 2019, genoem en sal in werking tree op die publikasie datum van hierdie Regulasies in die Staatskoerant.

Bylae A tot die Skedule 1 Regulasies

1. Die doel van hierdie Bylae is om inligting te verskaf oor hoe die maanlose-naghemelhelderheidsvlakke en uitdowingswaardes in subregulasies 3(2) en 3(3) van hierdie Regulasies gespesifiseer as die beskermingsvlakke vir optiese astronomie bepaal word deur middel van metings. Kunsmatige buitenshuise beligting en stof wat binne die Sutherland Sentrale Astronomievoordeelgebied ontstaan, mag 'n negatiewe impak op die naghemelhelderheid en atmosferiese uitdowing binne die Sutherland Kern Astronomievoordeelgebied hê. 'n Vermeerdering van die naghemelhelderheidsvlakke deur kunsmatige beligting wat ligbesoedeling veroorsaak, sal die vermoë om dowwe astronomiese voorwerpe waar te neem, verminder. 'n Toename van die uitdowingswaardes veroorsaak deur lugbesoedeling sal die ligsterkte deur 'n astronomiese voorwerp uitgestraal, verminder.
2. Sterrekundiges maak van filters gebruik om die spesifieke reeks golflengtes waarvoor helderheid gemeet word, te beheer. 'n Filter is eenvoudig 'n stuk gekleurde glas (presies gemaak) wat in die ligstraalpad tussen die teleskoop en die detektor geplaas word. Die persentasies van elke golflengte wat deurgelaat word, is versigtig ontwerp om spesifieke dele van astronomiese inligting te versamel.
3. Die Sutherland Kern Astronomievoordeelgebied perseel is 'n unieke ligging vir astronomie in die suidelike halfmond, in terme van baie lae naghemelhelderheid en ook lae en stabiele atmosferiese uitdowing.
4. Die natuurlike naglug kwaliteit toestande by Sutherland is bepaal deur astronomiese waarnemings ter plaatse bekom oor die afgelope 35 jaar. Die gemiddelde waardes in die tabel hieronder gelys is uitgedruk in eenhede wat tradisioneel deur sterrekundiges gebruik is, en ook in ander fisiese eenhede.

Filter deurlaatband	U	B	V	R	I
Effektiewe golflengte, λ_{eff} (nm)	365	433	550	640	790
Naghemelhelderheid (magnitude/arcsec ²)	22.4	22.7	21.9	21.1	19.8
Naghemelhelderheid (mikroJy/arcsec ²)	2.08	3.55	6.67	11.2	30.7
Naghemelhelderheid (10 ⁻¹⁷ Wat/m ² /arcsec ²)	1.71	2.46	3.63	5.24	11.6
Uitdowing (magnitude/lugmassa)	0.54	0.27	0.15	0.10	0.07

Notas

1. λ_{eff} , die effektiewe golflengte, is die sentrale golflengte in nanometers (10^{-9} meters) van die deurlaat band, aangepas deur intensiteit as 'n funksie van golflengte.
2. U – beteken ultraviolet (in die nabye ultraviolet area van die elektromagnetiese spektrum).
3. B – beteken blou (in die sigbare deel van die elektromagnetiese spektrum).
4. V – beteken sigbare (in die sigbare deel van die elektromagnetiese spektrum).
5. R – beteken rooi (in die sigbare deel van die elektromagnetiese spektrum).
6. I – beteken infrarooi (in die nabye infrarooi area).

Bylae B tot Skedule 1 Regulasies

science
& technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

Hierdie vorm moet ingedien word kragtens Sub-regulasie 5(1) van die Skedule 1 Regulasies om goedkeuring te verkry vir 'n aktiwiteit wat enige grondwerk behels met die veroorsaking van stof in staat tot lugbesoedeling wat 'n nadelige impak het op optiese astronomie uitgevoer by die Suid-Afrikaanse Astronomiese Sterrewag naby Sutherland, Noordkaap. Die inligting versoek in die volgende items word benodig om die moontlike nadelige impak te beoordeel.

Item	Benodigdhede	Besonderhede vir inligting benodig	Reaksie tot die benodigdhede (Vir meer spasie, voeg asb. 'n bylae by)
1.	Naam en besonderhede van die onderneming en verteenwoordiger		
	Naam van entiteit		
	Registrasie nommer		
	Verteenwoordiger		
	Telefoonnommer		
	E-posadres		
	Posadres		
2.	Ligging	<p>(a) Sentrale geografiese ligging van die aktiwiteit (lengtegraad & breedtegraad in grade, minute & sekondes of in grade met 4 desimale);</p> <p>(b) Hoogte van die hoogste punt by die betrokke perseel bo seevlak; en</p>	

		(c) Afstand vanaf die Suid-Afrikaanse Groot Teleskoop (SALT) geleë by 32° 22' 33" S en 20° 48' 38" O.	
3.	Aktiwiteit	Beskrywing van die omvang van die bedrywighede en die metodes om gebruik te word.	
4.	Impak van wind	Rigting van die heersende wind wat stofbesoedeling sal affekteer.	
5.	Bepaling van moontlike stofbesoedeling	(a) Beskryf en kwantifiseer die stofbesoedeling wat deur die bedryf veroorsaak sal word; en (b) Beskryf die metodes wat op 'n aaneenlopende basis gebruik sal word om stofbesoedeling te minimaliseer.	
6.	Kommentaar	Verskaf enige inligting wat bruikbaar sal wees in die uitvoering van die impakbeoordeling vir moontlike stofbesoedeling.	
7.	Naamtekening	In die ondertekening van hierdie dokument, verklaar ek dat die inligting hierin verstrek tot die beste van my wete waar en korrek is. Naamtekening Datum	

SKEDULE 2**REGULASIES OOR FINANSIËLE VERGOEDING VIR DIE SUTHERLAND
SENTRALE ASTRONOMIEVOORDEELGEBIED****INDELING VAN DIE REGULASIES**

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1. Woordomsrywings

In hierdie Skedule 2 Regulasies, tensy dit uit die samehang anders blyk, beteken–
"finansiële verlies" die bewysbare geldelike verlies gely deur 'n geaffekteerde persoon as gevolg van die voldoening aan 'n beperking of die implementering van 'n vereiste of 'n voorwaarde voorgeskryf kragtens artikel 23 van die Wet, gelees met Skedule 1 van hierdie Regulasies;

"geaffekteerde persoon" 'n persoon wat –

- (a) wettiglik 'n aktiwiteit binne die Sutherland Sentrale Astronomievoordeelgebied uitgevoer het voor die beperking van daardie aktiwiteit as gevolg van Skedule 1 van hierdie Regulasies, gelees met die Wet; en
- (b) deur die Minister vereis word om kragtens Skedule 1 van hierdie Regulasies daardie aktiwiteit te staak of om aan voorwaardes te implementeer wat voorgeskryf is kragtens Skedule 1 van hierdie Regulasies;

"GPS" die "global positioning system";

"Skedule 1 Regulasies" die regulasies om sekere verklaarde aktiwiteite kragtens artikel 23 van die Wet binne die Sutherland sentrale astronomievoordeelgebied, te verbied of te beperk, wat Skedule 1 van hierdie Regulasies is; en

"Wet" die "Astronomy Geographic Advantage Act, 2007 (Act No. 21 of 2007)".

2. Toepassing van die regulasies in hierdie Skedule 2

- (1) Die regulasies is van toepassing op die Sutherland Sentrale Astronomievoordeelgebied verklaar vir optiese astronomie doeleindes en verwante wetenskaplike ondernemings.
- (2) Hierdie Regulasies is slegs van toepassing op 'n persoon of persone wie op die datum van uitvaardiging van die Regulasies aktiwiteite binne die

Sutherland Sentrale Astronomievoordeelgebied bedryf het wat 'n impak op optiese astronomie en verwante wetenskaplike ondernemings mag hê.

- (3) Persone wat sulke aktiwiteite na die datum van uitvaardiging van hierdie regulasies begin, kwalifiseer nie om aansoek te doen vir enige finansiële vergoeding kragtens hierdie Regulasies nie.
- (4) In die geval van teenstrydigheid tussen die Engelse en Afrikaanse weergawes van hierdie regulasies, sal die Engelse weergawe voorrang geniet.

3. Prosedures en kriteria om vir finansiële vergoeding aansoek te doen

- (1) 'n Geaffekteerde persoon wat 'n bewysbare finansiële verlies gely het, alleenlik as 'n direkte oorsaak van daardie persoon se voldoening aan 'n vereiste of voorwaarde voorgeskryf kragtens Skedule 1 van hierdie Regulasies, mag by die Minister, kragtens hierdie regulasie, aansoek om vergoeding doen.
- (2) Die aansoek om vergoeding in sub-regulasie (1) beoog, moet op 'n voorgeskrewe vorm gedoen word, wat by die bestuursgesag verkry kan word, of van die webwerf van die bestuursgesag, en ingedien word by die bestuursgesag binne twee (2) jaar na die implementering van die betrokke vereiste of voorwaarde.
- (3) Indien 'n aansoeker vir vergoeding in verband met verskillende aktiwiteite aansoek doen, moet die aansoeker 'n afsonderlike aansoek met betrekking tot elke aktiwiteit indien.

4. Verwerking van die aansoek deur die bestuursgesag

- (1) Op ontvangs van die aansoek, mag die bestuursgesag skriftelik verdere besonderhede van die aansoeker versoek, en, as dit nodig geag word, mag die aansoeker sulke verdere inligting aan die bestuursgesag verskaf deur middel van 'n beëdigde verklaring vir oorweging van die aansoek en die aansoeker moet binne dertig (30) dae na die versoek gestuur is, op die versoek vir verdere inligting reageer.
- (2) Die bestuursgesag moet, binne sestig (60) dae na die datum wanneer die laaste inligting nodig, ontvang is, die aansoek en al die betrokke dokumentasie en enige verdere besonderhede deur die aansoeker ingedien, met 'n aanbeveling na die Minister verwys vir 'n besluit: onderworpe daaraan dat die

Minister die tydperk van sestig (60) dae mag verleng met goeie redes deur die bestuursgesag verstrekk en met kennisgewing aan die aansoeker.

- (3) Die bestuursgesag moet binne dertig (30) dae na die ontvangs van die Minister se besluit, die aansoeker skriftelik van die Minister se besluit in kennis stel en die aansoeker met geskrewe redes vir die besluit voorsien, insluitend 'n aanbod vir vergoeding bepaal volgens Regulasie 5 van hierdie Regulasies.

5. Bepaling van vergoeding deur die Minister

Indien die Minister goedkeur dat 'n aansoeker vergoeding behoort te ontvang, moet die Minister die bedrag van die vergoeding bepaal met inagneming van al die toepaslike inligting ingesluit in die aansoek en die aanbeveling deur bestuursgesag gemaak, insluitend -

- (a) die aard en omvang van die aktiwiteit wettig uitgevoer deur die aansoeker onmiddellik voor die inwerkingstelling van die betrokke vereiste of voorwaarde;
- (b) die mate waartoe die aansoeker die betrokke aktiwiteit gestaak het, die aard en omvang waartoe die aansoeker sy/haar uitvoering van die betrokke aktiwiteit verander het, alleenlik as 'n direkte resultaat van voldoening aan die vereiste of voorwaardes voorgeskryf kragtens Skedule 1 van hierdie Regulasies;
- (c) die eiendom of toerusting wat deur die aansoeker besit of gebruik was om die betrokke aktiwiteit uit te voer en die mate waartoe die gebruik daarvan nadelig geaffekteer is, alleenlik as 'n direkte resultaat van voldoening aan die vereiste of voorwaardes voorgeskryf kragtens Skedule 1 van hierdie Regulasies; en
- (d) die bewysbare finansiële verlies deur die aansoeker gely, alleenlik as 'n direkte resultaat van voldoening aan die vereiste of voorwaardes voorgeskryf kragtens Skedule 1 van hierdie Regulasies.

6. Aanvaarding van die aanbod deur die aansoeker

- (1) Binne dertig (30) dae na ontvangs van die aanbod in subregulasie 4(3), moet die aansoeker die bestuursgesag skriftelik in kennis stel of die aanbod aanvaar of verwerp word.

- (2) Indien die aansoeker die aanbod kragtens subregulasie 4(3) gemaak, aanvaar, moet die bestuursgesag die aansoeker die bedrag betaal op 'n manier en binne die tydperk waarop daar tussen die aansoeker en die bestuursgesag ooreengekom is, welke tydperk nie meer as sestig (60) dae na die ontvangs van die kennisgewing van aanvaarding van die aanbod deur die aansoeker mag wees nie.
- (3) Indien die aansoeker die aanbod kragtens subregulasie 4(3) gemaak, verwerp, dan sal die maatreëls in die Wet op die Bevordering van Administratiewe Geregtigheid, 2000 (Wet No 3 van 2000) van toepassing wees.

7. Kort titel

Hierdie Regulasies word die Regulasies oor Finansiële Vergoedingsprosedures vir die Sutherland Sentrale Astronomievoordeelgebied, 2019, genoem en sal in werking tree op die publikasie datum van hierdie Regulasies in die Staatskoerant.

DEPARTMENT OF SCIENCE AND TECHNOLOGY

NO. 806

29 MAY 2019

DECLARATION TO PROHIBIT CERTAIN MINING ACTIVITIES WITHIN THE SUTHERLAND CENTRAL ASTRONOMY ADVANTAGE AREA IN TERMS OF THE ASTRONOMY GEOGRAPHIC ADVANTAGE ACT, 2007.

This declaration applies to the Sutherland Central Astronomy Advantage Area declared for the purpose of optical astronomy and related scientific endeavours in terms of section 9(1) and (2) of the Astronomy Geographic Advantage Act, 2007 (Act No. 21 of 2007) (hereinafter referred to as "the Act") on 12 March 2014, in Government Gazette No. 37434, under Notice No. 199. The declared area is described in the Schedule hereto.

As provided for in the Act, the declared Sutherland Central Astronomy Advantage Area is to be protected, preserved and properly maintained in respect of light pollution, dust pollution, earth tremors or interference in any other way.

I, Mmamoloko Kubayi-Ngubane, Minister of Science and Technology, in accordance with section 23 of the Act, hereby declare that certain mining activities, as detailed hereunder:

- (a) Open cast mining and mining dumps at ground level; and
- (b) Hydraulic fracturing (or fracking).

be prohibited within the Sutherland Central Astronomy Advantage Area.



MS MT KUBAYI-NGUBANE, MP
MINISTER OF SCIENCE AND TECHNOLOGY

DATE: 23/05/2019

SCHEDULE

DESCRIPTION OF THE SUTHERLAND CENTRAL ASTRONOMY ADVANTAGE AREA

The Sutherland Central Astronomy Advantage Area (Figure 1) consists of all land in the Northern Cape Province within an annulus of inner radius 3 kilometres and outer radius 75 kilometres centred on the dome of the Southern African Large Telescope (SALT) located at 32° 22' 33" S and 20° 48' 38" E.

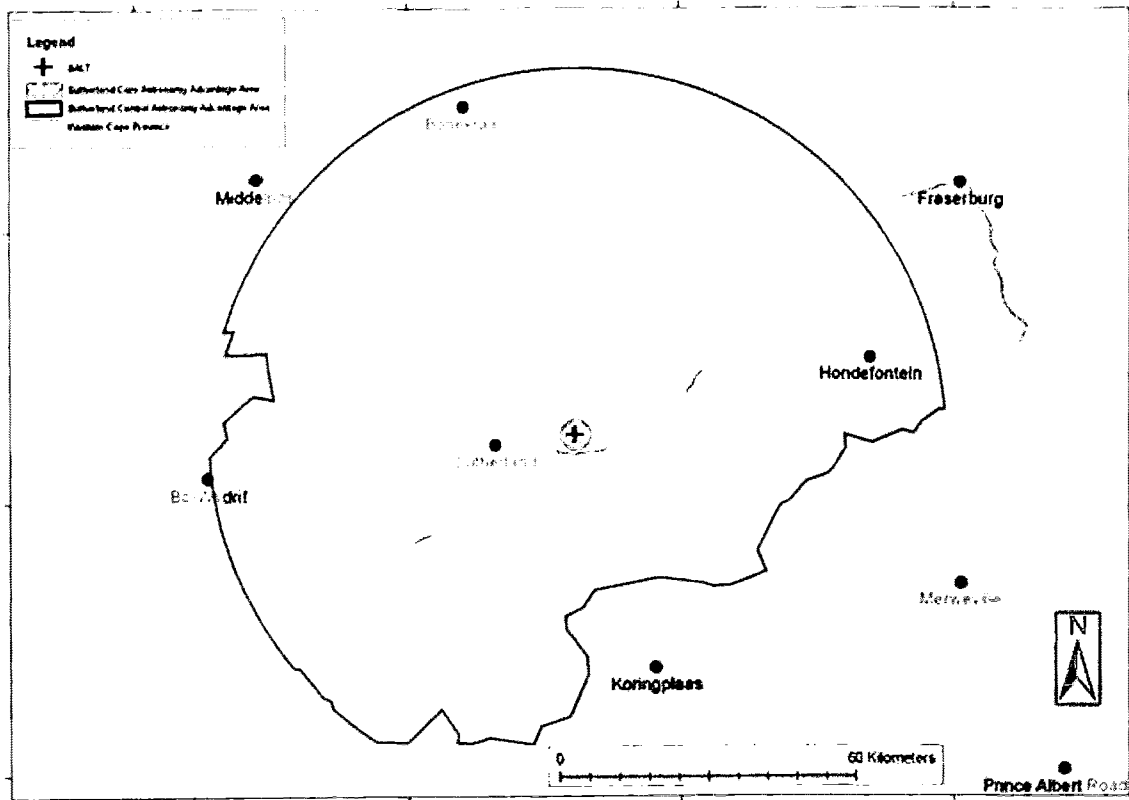


Figure 1: Map of the Sutherland Central Astronomy Advantage Area.

DEPARTEMENT VAN WETENSKAP EN TEGNOLOGIE

NO. 806

29 MEI 2019

VERKLARING OM SEKERE MYNBOU AKTIWITEITE TE VERBIED BINNE DIE SUTHERLAND SENTRALE ASTRONOMIEVOORDEELGEBIED KRAGTENS DIE WET OP GEOGRAFIESE ASTRONOMIEVOORDEEL, 2007

Hierdie verklaring is van toepassing op die Sutherland Sentrale Astronomievoordeelgebied verklaar vir die doeleindes van optiese astronomie en verwante wetenskaplike ondernemings kragtens artikel 9(1) en (2) van die Wet op Geografiese Astronomievoordeel, 2007 (Wet no. 21 van 2007)(hierna hierin verwys as "die Wet") op 12 Maart 2014, in Staatskoerant No. 37434, onder Kennisgewing No. 199. Die verklaarde gebied word beskryf in die Skedule hieraan.

Soos voorgeskryf in die Wet, moet die verklaarde Sutherland Sentrale Astronomievoordeelgebied beskerm, bewaar en behoorlik onderhou word betreffende ligbesoedeling, stofbesoedeling, aardbewings of versteuring op enige ander manier.

Ek, Mmamoloko Kubayai-Ngubane, Minister van Wetenskap en Tegnologie, kragtens artikel 23 van Wet, verklaar hiermee dat sekere mynbou aktiwiteite, soos hieronder uiteengesit, verbied word binne die Sutherland Sentrale Astronomievoordeelgebied.

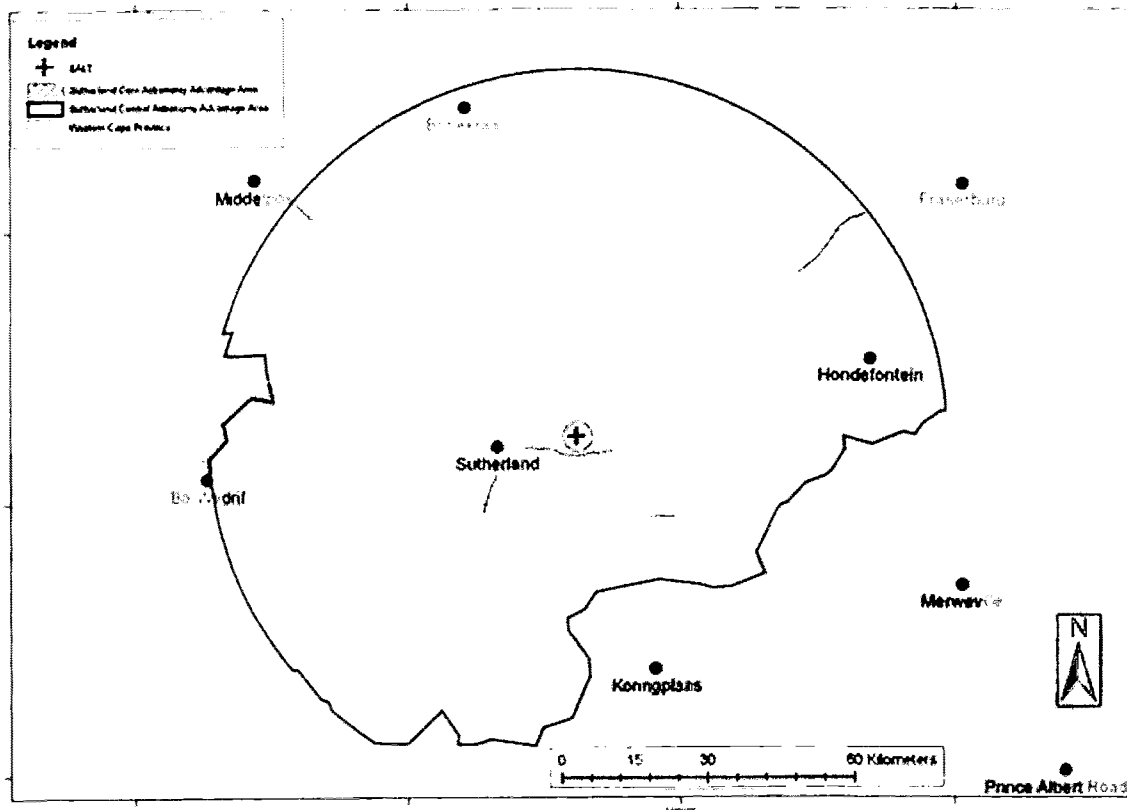
- (a) Oopgroefmynbou en mynhope op grondvlak; en
- (b) Hidroliese breking (fracking).



MS M T KUBAYI-NGUBANE, LP
MINISTER VAN WETENSKAP EN TEGNOLOGIE

SKEDULE
BESKRYWING VAN DIE SUTHERLAND SENTRALE
ASTRONOMIEVOORDEELGEBIED

Die Sutherland Sentrale Astronomievoordeelgebied (Figuur 1) bestaan uit die hele grondgebied binne die Noordkaap Provinsie en binne 'n annulus met binne straal van 3 km en 'n buite straal van 75 km, beide gesentreer op die koepel van die Suider-Afrikaanse Groot Teleskoop (SALT) geleë by 32° 22' 33" S en 20° 48' 38" E.



Figuur 1: Kaart van die Sutherland Sentrale Astronomievoordeelgebied.