

REPUBLIC OF SOUTH AFRICA

ASTRONOMY GEOGRAPHIC ADVANTAGE BILL

*(As amended by the Portfolio Committee on Science and Technology (National Assembly))
(The English text is the official text of the Bill)*

(MINISTER OF SCIENCE AND TECHNOLOGY)

[B 17D—2007]

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BILL

To provide for the preservation and protection of areas within the Republic that are uniquely suited for optical and radio astronomy; to provide for intergovernmental co-operation and public consultation on matters concerning nationally significant astronomy advantage areas; and to provide for matters connected therewith.

BE IT ENACTED by the Parliament of the Republic of South Africa, as follows:—

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CHAPTER 1**INTERPRETATION, OBJECTIVES AND APPLICATION OF ACT****Definitions**

- 1. In this Act, unless the context indicates otherwise— 30
 - “astronomy advantage area”** means—
 - (a) a core astronomy advantage area;
 - (b) a central astronomy advantage area; or
 - (c) a coordinated astronomy advantage area;
 - “astronomy advantage”** means features which make an area suitable for 35 astronomy and related scientific endeavours, and includes high atmospheric transparency, low levels of light pollution, low population density and minimal radio frequency interference;

- “astronomy and related scientific endeavours”** means—
- (a) the science involving the observation and explanation of events beyond the earth and its atmosphere, and includes optical astronomy, radio astronomy, gamma ray astronomy and cosmic ray astronomy;
 - (b) observations that assist in understanding the sun and the magnetosphere;
 - (c) deep space radio dishes, array networks for the management of space flight and the management of strategic scientific deep-space missions; and
 - (d) any other scientific endeavour declared as such by the Minister in terms of section 28;
- “astronomy device”** means any device, apparatus, equipment or instrument, declared as such by the Minister in terms of section 28, and includes all components, connections and electronic communications links thereof, whether such components, connections or electronic communications links are contiguous or not;
- “astronomy device management authority”** means a juristic person, public entity or organ of state designated under section 28(3)(b);
- “broadcasting service”** means the broadcasting service as defined in section 1 of the Electronic Communications Act, 2005;
- “broadcasting service license”** means the broadcasting service license as defined in section 1 of the Electronic Communications Act, 2005;
- “central astronomy advantage area”** means an area declared as such in terms of section 9(1);
- “competent authority”** means the Minister or a person designated by the Minister in terms of section 26;
- “coordinated astronomy advantage area”** means an area declared as such in terms of section 11(1);
- “core astronomy advantage area”** means an area declared as such in terms of section 7(1);
- “declare”** means declare by notice in the *Gazette*;
- “declared activity”** means an activity declared as such in terms of section 23 in respect of one or more core or central astronomy advantage area;
- “Department”** means the national Department of Science and Technology;
- “Director-General”** means the Director-General of the Department;
- “Electronic Communications Act”** means the Electronic Communications Act, 2005 (Act No. 36 of 2005);
- “fixed radio frequency interference source”** means any device transmitting radio waves from a fixed location;
- “ICASA”** means the Independent Communications Authority of South Africa established by section 3 of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000);
- “identified activity”** means an activity declared as such in terms of section 24;
- “interference source”** means any fixed or mobile device, instrument, component or equipment capable of emitting electromagnetic waves, and includes lasers, light sources, computers, signal processors, radio transmission equipment and cables, lighting equipment, electric-powered machinery and other electrical, optical and electronic equipment;
- “Intergovernmental Relations Framework Act”** means the Intergovernmental Relations Framework Act, 2005 (Act No. 13 of 2005);
- “light pollution”** means any effect from artificially created or harnessed light that is visible to the naked eye or can be detected with astronomical instrumentation at night, such as sky glow, glare, light trespass and light clutter, which impacts on astronomy, and includes the effect of street lighting, outdoor security lights, laser promotional lights or self-lit billboards;
- “management authority”** means the organ of state or other institution or juristic person in which the authority to manage a particular astronomy advantage area is vested in terms of section 15;
- “MEC”** means a Member of the Executive Council of a province;
- “Minister”** means the Minister responsible for science and technology;
- “mobile radio frequency interference source”** means any device, instrument, component or equipment capable of causing radio frequency interference which is easily transportable or of which transportability is an inherent feature, and includes cellular telephones, walkie-talkies, and mobile electronic communications units in vehicles;

“**Municipal Demarcation Act**” means the Local Government: Municipal Demarcation Act, 1998 (Act No. 27 of 1998);
 “**NRF**” means the National Research Foundation established by section 2 of the National Research Foundation Act, 1998 (Act No. 23 of 1998);
 “**optical astronomy**” means the collection and measurement of radiation, 5
 including electromagnetic near-ultraviolet, visible and infrared radiation, from astronomical sources by means of optical instruments;
 “**organ of state**” has the meaning assigned to it in section 239 of the Constitution;
 “**prescribe**” means prescribe by regulation;
 “**radio astronomy**” means astronomy based on the reception of radio waves of 10
 cosmic origin;
 “**radio frequency interference**” means the emission, transmission or reception of any radio frequency signals which have the ability to interfere with or inhibit radio astronomy or any device used to undertake radio astronomy;
 “**radio frequency spectrum**” means the electromagnetic frequency spectrum 15
 from 1 kiloHertz to 1 teraHertz;
 “**radio frequency spectrum license**” means radio frequency spectrum license as defined in section 1 of the Electronic Communications Act, 2005.
 “**short range device**” means any device or equipment capable of transmitting electromagnetic waves in the radio frequency spectrum over a short distance; 20
 “**the Constitution**” means the Constitution of the Republic of South Africa, 1996;
 “**this Act**” includes any subordinate legislation issued under or in terms of this Act.

Objects of Act

2. The objects of this Act are—
- (a) to provide measures to advance astronomy and related scientific endeavours 25
 in the Republic;
 - (b) to develop the skills, capabilities and expertise of those engaged in astronomy and related scientific endeavours in Southern Africa;
 - (c) to identify and protect areas in which astronomy projects of national strategic importance can be undertaken; 30
 - (d) to provide a framework for the establishment of a national system of astronomy advantage areas in the Republic, to ensure that the geographic areas in the Republic which are highly suitable for astronomy and related scientific endeavours due to, for example, high atmospheric transparency, low levels of light pollution, low population density or minimal radio frequency 35
 interference are protected, preserved and properly maintained;
 - (e) to regulate activities which cause or could cause light pollution or radio frequency interference or interfere in any other way with astronomy and related scientific endeavours in those areas;
 - (f) pursuant to section 5, to provide for the declaration and management of 40
 astronomy advantage areas; and
 - (g) to enable the Minister to participate in efforts to preserve the astronomy advantage of Southern Africa and to coordinate astronomy within this area.

Application of Act

3. This Act also applies to the exclusive economic zone and continental shelf of the 45
 Republic referred to in sections 7 and 8, respectively, of the Maritime Zones Act, 1994 (Act No. 15 of 1994).

Conflicts with other legislation

4. (1) At the commencement of this Act, in the event of any conflict between a provision of this Act and— 50
- (a) other national legislation, the relevant provision of this Act prevails if the conflict specifically concerns the management or development of an astronomy advantage area or the protection of such an area from light pollution, over-flight by aircraft, radio frequency interference or any other matter lawfully restricted or prohibited in respect of an astronomy advantage 55
 area in terms of this Act;

- (b) provincial legislation, the conflict must be resolved in terms of section 146 of the Constitution; and
 - (c) a municipal by-law, the relevant provision of this Act prevails.
- (2) A municipality that must adopt an integrated development plan in terms of the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000), must incorporate into its plan objectives with reference to any—
- (a) astronomy advantage area declared in terms of this Act within the area of jurisdiction of the municipality;
 - (b) declared activity which may not be undertaken in a core or central astronomy advantage area within the area of jurisdiction of the municipality; and
 - (c) identified activity that may be undertaken in a coordinated astronomy advantage area within the area of jurisdiction of the municipality only in accordance with the requirements of section 25 of this Act.
- (3) (a) Any identification and declaration, and any inclusion of astronomy advantage areas in the affected municipality's integrated development plan, in terms of this Act, must be done with the concurrence of that municipality.
- (b) The consultation process must be conducted in terms of Chapter 3 of the Intergovernmental Relations Framework Act.
- (4) Upon the identification, declaration, and inclusion as envisaged in this section, any land use management policies, plans and decisions in terms of the integrated development plan of the affected municipality must promote the objectives of this Act.

CHAPTER 2

DECLARATION OF ASTRONOMY ADVANTAGE AREAS

Areas which may be declared astronomy advantage areas

5. (1) The Minister may—
- (a) declare any area or part of an area in the Province of the Northern Cape as an astronomy advantage area: Provided that no such declaration may be made in respect of any area demarcated in terms of the Municipal Demarcation Act as falling within the boundaries of the Municipality Sol Plaatje;
 - (b) declare any area or part of an area in the Republic;
 - (c) by notice in the *Gazette* designate any other area as an area which may be declared an astronomy advantage area: Provided that no such designation may be made in respect of any area which has been demarcated in terms of the Municipal Demarcation Act as falling within the boundaries of a Category A municipality; and
 - (d) declare any area designated under paragraph (c) as an astronomy advantage area.
- (2) Any designation under subsection (1)(c) must be made with the concurrence of the Minister responsible for local government, the Premier of the Province concerned and any affected municipality.

Purpose of astronomy advantage areas

6. The purposes of the declaration of areas as astronomy advantage areas are to—
- (a) ensure that the geographic areas in the Republic which are suitable for astronomy and related scientific endeavours due to, among other things, atmospheric transparency, low levels of light pollution, low population density or minimal radio frequency interference are protected, preserved and properly maintained;
 - (b) enhance the existing geographic advantage of those areas highly suitable for astronomy and related scientific endeavours through the restriction of activities that cause or could cause light pollution or radio frequency interference or interfere in any other way with astronomy and related scientific endeavours or astronomy advantage in those areas; and
 - (c) provide for the management of those areas in the public interest and in accordance with good national and international practices.

Part 1

Core astronomy advantage areas

Declaration of core astronomy advantage area

7. (1) The Minister may—
- (a) declare a specified area as— 5
 - (i) a core astronomy advantage area; or
 - (ii) part of an existing core astronomy advantage area;
 - (b) assign a name to such core astronomy advantage area; and
 - (c) designate the area as a core astronomy advantage area in respect of astronomy and related scientific endeavours. 10
- (2) A declaration under subsection (1)(a) may only be issued—
- (a) in respect of an area declared under section 5(1) or designated under section 5(2);
 - (b) to provide protection from light pollution, radio frequency interference and other activities which may affect astronomy and related scientific endeavours or astronomy advantage to an area in which radio or optical astronomy is conducted or will be conducted; 15
 - (c) to protect an area in which part or all of an astronomy device is situated or may in future be situated; or
 - (d) to make an area primarily available for scientific research. 20
- (3) In addition to subsection (2), a declaration under subsection (1)(a) may only be issued if the Minister has, prior to the declaration—
- (a) conducted a public participation process in terms of section 42 and the Minister has in conducting this process compiled a permanent register of interested and affected parties for the core astronomy advantage area; 25
 - (b) sent any relevant private land owner within the proposed core astronomy advantage area a copy of the proposed declaration, prior to the commencement of the public participation process, by registered post to the last known postal address of the land owner; and
 - (c) where possible informed in an appropriate manner any other lawful occupier of the land within the proposed core astronomy advantage area of the proposed declaration and the public participation process. 30
- (4) In making a declaration under subsection (1)(a), the Minister may identify the land that is subject to the declaration through the use of coordinates, a map, a property description, or a combination of these. 35

Withdrawal of declaration of, or exclusion of part from, core astronomy advantage area

8. (1) The Minister may, by notice in the *Gazette*—
- (a) withdraw the declaration, issued under section 7, of an area as a core astronomy advantage area or as part of an existing core astronomy advantage area; or 40
 - (b) exclude any part of an existing core astronomy advantage area from the area.
- (2) The withdrawal or exclusion can only be done where the purpose of the declaration as provided for in section 7(2)(b), (c) or (d) is no longer necessary.

Part 2

45

Central astronomy advantage areas

Declaration of central astronomy advantage area

9. (1) The Minister may—
- (a) declare a specified area as— 50
 - (i) a central astronomy advantage area; or
 - (ii) part of an existing central astronomy advantage area;
 - (b) assign a name to the central astronomy advantage area; or
 - (c) designate the area as a central astronomy advantage area in respect of astronomy and related scientific endeavours.

- (2) A declaration under subsection (1)(a) may only be issued—
- (a) in respect of an area declared under section 5(1) or designated under section 5(2);
 - (b) so that activities which may affect astronomy and related scientific endeavours, or astronomy advantage, such as light pollution or radio frequency interference, may be restricted or prohibited in the area to ensure or facilitate the protection of a core astronomy advantage area from such activities; or
 - (c) to ensure that development in the area does not negatively impact on the astronomy advantage of the area.
- (3) In addition to subsection (2), a declaration under subsection (1)(a) may only be issued if the Minister has, prior to the declaration—
- (a) conducted a public participation process in terms of section 42 and in conducting this process the Minister has compiled a permanent register of interested and affected parties for the central astronomy advantage area;
 - (b) sent any relevant private land owner within the proposed central astronomy advantage area a copy of the proposed declaration, prior to the commencement of the public participation process, by registered post to the last known postal address of the land owner; and
 - (c) where possible, informed in an appropriate manner any other lawful occupier of the land within the proposed central astronomy advantage area of the proposed declaration and the public participation process.
- (4) More than one central astronomy advantage area may be declared in respect of a particular area.
- (5) In making a declaration in terms of subsection (1)(a) the Minister may identify the land that is subject to the declaration through the use of coordinates, a map, a property description or a combination of these.

Withdrawal of declaration of, or exclusion of part from, central astronomy advantage area

10. (1) The Minister may by notice in the *Gazette*—
- (a) withdraw the declaration, issued under section 9, of an area as a central astronomy advantage area or as part of an existing central astronomy advantage area; or
 - (b) exclude any part of an existing central astronomy advantage area from the area.
- (2) The withdrawal or exclusion can only be done where the purpose of the declaration as provided for in section 9(2)(b) or (c) is no longer necessary.

Part 3

Coordinated astronomy advantage areas

Declaration of coordinated astronomy advantage area

11. (1) The Minister may—
- (a) declare a specified area as—
 - (i) a coordinated astronomy advantage area; or
 - (ii) part of an existing coordinated astronomy advantage area;
 - (b) assign a name to the coordinated astronomy advantage area; and
 - (c) designate the area as a coordinated astronomy advantage area in respect of astronomy and related scientific endeavours.
- (2) More than one coordinated astronomy advantage area may be declared in respect of a particular area.
- (3) A declaration under subsection (1)(a) may only be issued—
- (a) in respect of an area declared under section 5(1) or designated under section 5(2);
 - (b) to regulate the area as a buffer zone or as one of the buffer zones for the protection of a core or central astronomy advantage area;
 - (c) to protect the area if it is sensitive to development due to its astronomy advantage and proximity to a core astronomy advantage area;

- (d) to protect a specific astronomy advantage outside of a core or central astronomy advantage area;
 - (e) to ensure that development in the area does not negatively impact on the astronomy advantage of the area; or
 - (f) to control developments and changes in land use in the area if the area is earmarked for declaration as, or inclusion in, a core or central astronomy advantage area. 5
- (4) In addition to subsection (2), a declaration under subsection (1)(a) may only be issued if the Minister—
- (a) conducted a public participation process in terms of section 42 prior to the declaration; and 10
 - (b) in conducting the public participation process has compiled a permanent register of interested and affected parties for the coordinated astronomy advantage area.
- (5) In making a declaration under subsection (1)(a) the Minister— 15
- (a) may identify the land that is subject to the declaration through the use of coordinates, a map, a property description or a combination of these; and
 - (b) must seek, where possible, to make the declaration in respect of the whole, rather than part, of a municipal area designated in terms of the Municipal Demarcation Act. 20

Withdrawal of declaration if, or exclusion of part from, coordinated astronomy advantage area

12. (1) The Minister may, by notice in the *Gazette*—
- (a) withdraw the declaration, issued under section 11, of an area as a coordinated astronomy advantage area or as part of an existing coordinated astronomy advantage area; or 25
 - (b) exclude any part of an existing coordinated astronomy advantage area from the area.
- (2) The withdrawal or exclusion can only be done where the purpose of the declaration as provided for in terms of section 11(3)(b), (c), (d), (e) or (f) is no longer necessary. 30

Part 4

General

Initiation of declaration

13. (1) The process for the declaration of private land as an astronomy advantage area, or as part thereof, may be initiated by the Minister, or by any private land owner or the NRF making a request for such declaration to the Minister. 35
- (2) Any request by the NRF or any private land owner in terms of subsection (1) must be considered by the Minister.

Endorsement by Registrar of Deeds 40

14. (1) The Minister must in writing notify the Registrar of Deeds whenever an area is declared as a core or central astronomy advantage area, or as part thereof, or whenever a declaration in respect thereof is withdrawn or altered.
- (2) Such notification must include a description of the land involved and the terms and conditions of any notarial deed referred to in section 18(6). 45
- (3) On receipt of such notification, the Registrar of Deeds must record any such declaration, withdrawal or alteration in the relevant registers and documents in terms of section 3(1)(w) of the Deeds Registries Act, 1937 (Act No. 47 of 1937).

CHAPTER 3

MANAGEMENT AND CONTROL OF ASTRONOMY ADVANTAGE AREAS

Part 1

Management authorities and management plans

Management authorities

5

15. (1) The Minister must, by declaration, assign the management of a core astronomy advantage area or a central or coordinated astronomy advantage area to a public entity or organ of state.

(2) For the purposes of this Act, the juristic person, public entity, institution or organ of state to whom the management of an astronomy advantage area has been assigned in terms of subsection (1) is the management authority of that area. 10

(3) The management authority to whom the management of an astronomy advantage area has been assigned in terms of subsection (1) is the custodian of the permanent register of interested and affected parties for the astronomy advantage area.

(4) Any person may, upon request and during office hours of the relevant management authority— 15

(a) inspect the permanent register of interested and affected parties for an astronomy advantage area; and

(b) request the management authority to add his or her name and contact details to the register. 20

(5) Any person whose details appears on the permanent register of interested and affected parties for an astronomy advantage area is responsible for updating his or her contact details as may be necessary.

Preparation of management plan

16. (1) The management authority assigned to an astronomy advantage area in terms of section 15 must, if requested in writing by the Minister, submit a management plan, in accordance with the criteria specified by the Minister, for that astronomy advantage area to the Minister for approval. 25

(2) When preparing a management plan for an astronomy advantage area, the management authority concerned must consult— 30

(a) private land owners within the astronomy advantage area;

(b) all persons listed in the permanent register of interested and affected parties for the relevant astronomy advantage area; and

(c) municipalities, other organs of state, local communities and other affected parties which have an interest in the area. 35

Internal rules

17. (1) The management authority of a core astronomy advantage area may, after the consultation contemplated in section 16(2), make rules for the proper administration and protection of the area.

(2) Rules made under subsection (1)— 40

(a) must be consistent with this Act and any management plan for the core astronomy advantage area;

(b) must be communicated or made available to land owners, visitors and other affected persons within the core astronomy advantage area;

(c) may include prohibitions or restrictions on persons entering, residing or passing through such area who have in their possession any specified device, equipment or instrument which may cause light pollution or radio frequency interference or have other detrimental impacts on astronomy and related scientific endeavours or astronomy advantage in the area unless the source or device has been turned off and, when in such state, is incapable of causing any form of radio frequency interference or light pollution; 45 50

(d) bind all persons in the area, including visitors; and

(e) may, as a condition for entry to the area, provide for the imposition of fines for breaches of the rules as may be determined by the Minister.

Co-management of core or central astronomy advantage area

- 18.** (1) The management authority of a core or central astronomy advantage area may enter into an agreement with an organ of state, a local community, an individual or other party for the—
- (a) co-management of the area by the parties; or 5
 - (b) regulation of human activities that affect astronomy and related scientific endeavours or astronomy advantage in the area.
- (2) A co-management agreement may provide for—
- (a) occupation of the area or portions thereof;
 - (b) prohibitions or restrictions on the use of any interference source, mobile radio frequency interference source or short range device or any other device, equipment or instrument which may cause light pollution or radio frequency interference or have other detrimental impacts on astronomy and related scientific endeavours or astronomy advantage in the area; 10
 - (c) prohibitions or restrictions on activities which may cause light pollution, radio frequency interference or have other detrimental impacts on astronomy and related scientific endeavours or astronomy advantage in the area; 15
 - (d) access to the area and procedures for the admittance of visitors to the area;
 - (e) financial and other support to ensure effective administration and implementation of the co-management agreement; and 20
 - (f) any other relevant matter.
- (3) A co-management agreement must be consistent with this Act and should not divest the management authority of ultimate responsibility for the proper management of the area concerned.
- (4) The management authority may cancel a co-management agreement after giving reasonable notice to the parties if the— 25
- (a) co-management agreement is not effective or is inhibiting the attainment of any of the management objectives of the astronomy advantage area; or
 - (b) other party to the agreement remains in breach of any obligation or undertaking made in the co-management agreement after having been given a reasonable opportunity to rectify the breach. 30
- (5) The terms of any co-management agreement entered into in terms of subsection (1) between the management authority and the owner of private land are binding on the successors-in-title of such owner.
- (6) The terms of any co-management agreement must be recorded in a notarial deed and registered against the title deeds of the property. 35
- (7) The management authority is liable for the costs of the notarial deed and the registration of the title deed.

Termination of mandate to manage astronomy advantage area

- 19.** (1) If the management authority of an astronomy advantage area is not properly performing its duties in terms of the management plan for the area, or is underperforming with regard to the management of the area, the Minister must— 40
- (a) notify the management authority in writing of the failure to perform its duties or of the underperformance; and
 - (b) direct the management authority to take corrective steps set out in the notice within a specified time. 45
- (2) If the management authority fails to take the required steps, the Minister may—
- (a) terminate that management authority's mandate to manage the area; and
 - (b) assign a public entity or organ of state as the management authority of the area. 50

Part 2

Access to core and central astronomy advantage areas

Access to core astronomy advantage areas

- 20.** (1) No person may, without the written permission of the management authority—
- (a) enter any core astronomy advantage area; 55
 - (b) reside in a core astronomy advantage area;

- (c) have in their possession, within a core astronomy advantage area designated by the Minister in terms of section 7(1)(c) for radio astronomy, any interference source, mobile radio frequency interference source or short range device, unless the source or device has been turned off and, when in that state, is incapable of causing any form of radio frequency interference; and 5
- (d) perform any other activity in a core astronomy advantage area that might be harmful to astronomy and related scientific endeavours or to the preservation of the area's astronomical advantage.
- (2) Subsection (1) does not apply to—
 - (a) an official of the Department, the NRF or another organ of state designated by the Minister in writing to monitor any scientific observation, experiment or research activity conducted in the area; 10
 - (b) any police, customs or excise officer entering the area in the performance of official duties; or
 - (c) any other person acting in response to an emergency; 15
 - (d) the owner or lawful occupier of any private land within any core astronomy advantage area who may—
 - (i) enter and reside on such private land; and
 - (ii) in accordance with the provisions of any co-management agreement entered into between the owner or lawful occupier and the management authority, conduct any other activities listed in subsection (1) on such private land. 20
- (3) Any person listed in subsection (2)(a), (b) or (c) who enters any core astronomy advantage area must report this fact to the management authority before entering the core astronomy advantage area or as soon as possible following entry. 25
- (4) The written permission granted by the management authority in terms of subsection (1) may include conditions which must be adhered to by the holder of such permit to mitigate any harmful impact the holder may have on astronomy and related scientific endeavours or to the preservation of the area's astronomical advantage.

Use of aircraft in astronomy advantage areas 30

- 21. (1) A core and central astronomy advantage area includes the airspace above the area to a level of 18 500 metres above the highest point in the area, or such greater height as the Minister may declare.
- (2) The Minister may, with the concurrence of the Civil Aviation Authority by notice in the *Gazette* prohibit or restrict the over-flight by any aircraft of any core or central astronomy advantage area or impose conditions on any such over-flight. 35
- (3) Subsection (2) does not apply—
 - (a) in an emergency; or
 - (b) to a person acting on the instructions of the management authority.
- (4) Any person who, pursuant to subsection (3), enters the airspace of any core or central astronomy advantage area in respect of which a notice has been published in terms of subsection (2) must report this fact to the management authority before entering the core or central astronomy advantage area or as soon as possible following entry. 40
- (5) The Minister may, subject to subsection (6), prescribe further reasonable restrictions on over-flight of any core, central or coordinated astronomy advantage areas. 45
- (6) Before publishing a notice under subsection (2) or making a regulation under subsection (5) the Minister must—
 - (a) obtain the concurrence of the Minister responsible for transport and the Minister responsible for national defence for the publication of the notice or the making of the regulation; 50
 - (b) conduct a public participation process in terms of section 42; and
 - (c) subject to subsection (7), notify all persons listed in the permanent register of interested and affected parties for the relevant astronomy advantage area whose existing rights are likely to be directly affected by any such notice or regulation. 55
- (7) The notification contemplated in subsection (6)(c) must be in writing and must be—
 - (a) made prior to commencing the public participation process contemplated in subsection (6)(b); 60

- (b) sent by registered post or such other method as the relevant person may have agreed to; and
- (c) sent to the address given by such person or as indicated in the permanent register of interested and affected parties.

(8) Following the publication of any notice or making of any regulation under subsections (2) and (5), the Civil Aviation Authority and the Commissioner for Civil Aviation established and appointed in terms of the Aviation Act 1962 (Act No. 74 of 1962), and the South African Civil Aviation Authority Act, 1998 (Act No. 40 of 1998), respectively, must indicate the restrictions and prohibitions on all aeronautical maps prepared for the Republic.

Part 3

Restrictions

Restrictions on use of radio frequency spectrum in astronomy advantage areas

22. (1) Notwithstanding any other legislation or any rights that any person may have been granted in terms of any other legislation, the Minister has the authority subject to subsection (2) within a core or central astronomy advantage area to protect the use of the radio frequency spectrum for astronomy observations.

(2) Pursuant to the authority granted in subsection (1) and with the concurrence of ICASA, in so far as the Minister's action is likely to affect broadcasting service license or broadcasting service, the Minister may, by notice in the *Gazette*—

- (a) prohibit completely or restrict in any way the use of specific frequencies within the radio frequency spectrum or the radio frequency spectrum in general within a core or central astronomy advantage area;
- (b) require the conversion, within a reasonable time period, of analogue transmissions in the radio frequency spectrum within a core or central astronomy advantage area, to digital transmissions;
- (c) require any user of the radio frequency spectrum which transmits or broadcasts into a core or central astronomy advantage area to migrate onto a radio frequency or utilise alternative technology that more effectively protects radio astronomy observations; or
- (d) exempt from the provisions of such notice any person or organ of state who has entered into an agreement with the management authority of the core or central astronomy advantage area to mitigate their impact on the radio frequency spectrum within the relevant astronomy advantage area.

(3) Before publishing a notice under subsection (2) the Minister must—

- (a) conduct a public participation process in terms of section 42; and
- (b) subject to subsection (4), notify all persons listed in the permanent register of interested and affected parties for the relevant astronomy advantage area whose existing rights are likely to be directly affected by any such notice.

(4) The notification contemplated in subsection (3)(b) must be in writing and must be—

- (a) made prior to commencing the public participation process contemplated in subsection (3)(a);
- (b) sent by registered post or such other method as the relevant person may have agreed to; and
- (c) sent at the address given by such person or as indicated in the permanent register of interested and affected parties.

(5) The Minister may in a notice published under subsection (2) differentiate between—

- (a) different areas or categories of areas;
- (b) different activities or categories of activities; or
- (c) persons or categories of persons.

(6) Notwithstanding anything contained in any other law, ICASA must not issue a broadcasting service license or a radio frequency spectrum license after the coming into force of this Act where the service to be licensed would cause radio frequency interference in a core or central astronomy advantage area, unless the conditions set out in the license make provision for the protection of such areas.

Declared activities in core or central astronomy advantage area

23. (1) Notwithstanding any other national or provincial legislation or local by-law, the Minister may, with the concurrence of ICASA where his or her action is likely to affect broadcasting service license or broadcasting service, declare that no person may, in a core or central astronomy advantage area, conduct any activity in any of the following categories: 5

- (a) Prospecting or mining activities;
- (b) the construction, expansion or operation of any fixed radio frequency interference source;
- (c) harmful industrial processes; 10
- (d) the construction and development of new business or residential areas or recreational facilities;
- (e) the construction or expansion of road or rail transport networks or parts thereof;
- (f) the construction or expansion of any airfield or airport; 15
- (g) the operation, construction or expansion of facilities for the generation, transmission or distribution of electricity;
- (h) activities capable of causing light pollution, including the installation or operation of street lighting, outdoor security lights, laser promotional lights or self-lit billboards; 20
- (i) activities capable of causing radio frequency interference, including bringing into the area or operating any interference source, mobile radio frequency interference source or short range device;
- (j) activities capable of causing air pollution; and
- (k) any other activity which may detrimentally impact on astronomy and related scientific endeavours, or the astronomy advantage of any core or central astronomy advantage area, 25

or may direct that such activities may only be conducted in a core or central astronomy advantage area in accordance with standards or conditions prescribed by the Minister.

(2) Following publication of a declaration under subsection (1), the Minister must review all declared activities which were lawfully conducted in any affected core or central astronomy advantage area immediately before a declaration in terms of subsection (1) was published. 30

(3) The Minister may, in relation to the activities contemplated in subsections (1) and (2)— 35

- (a) require that any activity cease, subject to the payment of compensation, if required by section 25 of the Constitution; or
- (b) prescribe conditions under which any activity may continue in order to reduce or eliminate the impact of the activity on astronomy and related scientific endeavours or astronomy advantage in the relevant area. 40

(4) Before setting a requirement or prescribing a condition under subsection (3) the Minister must—

- (a) conduct a public participation process in terms of section 42; and
- (b) subject to subsection (5), notify all persons listed in the permanent register of interested and affected parties for the relevant astronomy advantage area whose existing rights are likely to be directly affected by any such requirement or condition. 45

(5) The notification contemplated in subsection (4)(b) must be in writing and must be—

- (a) made prior to commencing the public participation process contemplated in subsection (4)(a); 50
- (b) sent by registered post or such other method as the relevant person may have agreed to; and
- (c) sent at the address given by such person or as indicated in the permanent register of interested and affected parties. 55

(6) A declaration and directive made under subsection (1) may—

- (a) be made in respect of core and central astronomy advantage areas generally;
- (b) distinguish between core and central astronomy advantage areas designated in respect of astronomy and related scientific endeavours including; or
- (c) be made in respect of a specific core or central astronomy advantage area or specified core or central astronomy advantage areas. 60

Identified activities in coordinated astronomy advantage area

24. (1) The Minister may declare identified activities which, if undertaken in a coordinated astronomy advantage area may have a detrimental effect on astronomy and related scientific endeavours within any astronomy advantage area.
- (2) Activities which are declared under subsection (1) may include any activity in any of the following categories: 5
- (a) The construction, expansion or operation of any fixed radio frequency interference source;
 - (b) activities capable of causing light pollution, including the installation or operation of street lighting, outdoor security lights, laser promotional lights or self-lit billboards; and 10
 - (c) other activities capable of causing radio frequency interference.
- (3) The Minister may only declare an identified activity in terms of subsection (1) after consultation with the Minister responsible for the execution, approval or control of such activity. 15
- (4) Before making a declaration under subsection (1) the Minister must—
- (a) conduct a public participation process in terms of section 42; and
 - (b) subject to subsection (5), notify all persons listed in the permanent register of interested and affected parties for the relevant astronomy advantage area whose existing rights are likely to be directly affected by any such notice. 20
- (5) The notification contemplated in subsection (4)(b) must be in writing and must be—
- (a) made prior to commencing the public participation process contemplated in subsection (4)(a);
 - (b) sent by registered post or such other method as the relevant person may have agreed to; and 25
 - (c) sent at the address given by such person or as indicated in the register of permanent interested and affected parties.
- (6) A declaration made under subsection (1) may—
- (a) be made in respect of coordinated astronomy advantage areas generally; 30
 - (b) distinguish between coordinated astronomy advantage areas designated for radio or optical astronomy or a combination of these; or
 - (c) be made in respect of a specific coordinated astronomy advantage area or specified coordinated astronomy advantage areas.

Authorisation to undertake identified activities 35

25. (1) The Minister may prescribe standards or conditions regarding the manner in which an identified activity may be undertaken in an astronomy advantage area so as not to cause a detrimental impact on astronomy or related scientific endeavours.
- (2) No person may undertake an identified activity or cause such an activity to be undertaken except— 40
- (a) in accordance with any prescribed conditions or standards set under subsection (1);
 - (b) by virtue of a written exemption issued in terms of subsection (4)(b);
 - (c) by virtue of a deemed exemption contemplated in subsection (7); or
 - (d) by virtue of a written authorisation granted by the relevant competent authority in terms of subsection (8). 45
- (3) Any person who intends to undertake an identified activity other than in accordance with any standards or conditions prescribed in terms of subsection (1) must, prior to commencing such an activity, notify the relevant competent authority and furnish it with details regarding the location, nature and extent of the proposed activity. 50
- (4) The competent authority must, within 60 days of receipt of a notification in terms of subsection (3)—
- (a) if there is reason to believe that the astronomy advantage of any core astronomy advantage area or the operation of any astronomy device will be adversely affected by the undertaking of such identified activity, in writing 55
- notify the person who intends to undertake the identified activity to submit an impact assessment report; or

- (b) issue an exemption to the person concerned from the condition or standard contemplated in subsection (2)(a), provided that any such exemption may be issued subject to such terms and conditions as the competent authority may determine.
- (5) (a) A report contemplated in subsection (4)(a) must be compiled by a person approved by the competent authority at the expense of the person who intends to undertake the identified activity. 5
- (b) The Minister must prescribe the criteria for the approval of the person referred to in paragraph (a).
- (6) The competent authority must specify the information to be provided in a report required in terms of subsection (4)(a), provided that any such report must include— 10
 - (a) the proposed alternatives to the identified activity if it is likely to—
 - (i) cause light pollution in any core astronomy advantage area designated for optical astronomy;
 - (ii) cause radio frequency interference in any core astronomy advantage area designated for radio astronomy; 15
 - (iii) interfere with the operation of any astronomy device; or
 - (iv) cause any other relevant detrimental impact on astronomy in any core astronomy advantage area; and
 - (b) plans for mitigation of any such adverse impacts on the relevant core astronomy advantage area or the operation of the relevant astronomy device during and after the completion of the identified activity. 20
- (7) (a) If the competent authority fails to act within the period and in the manner specified in subsection (4) the person who made the notification must resubmit the notification. 25
- (b) If the competent authority once again fails to respond to the notification within the period and in the manner specified in subsection (4) the competent authority is regarded as having issued an exemption in terms of subsection (4)(b).
- (8) Upon receipt of the report contemplated in subsection (4)(a) and any additional, explanatory information required by the competent authority, the competent authority may refuse or grant the authorisation for the proposed identified activity or an alternative proposed activity on such conditions, if any, as it may consider necessary. 30
- (9) Before refusing any authorisation, the competent authority must consult with the applicant in an effort to reach an agreement on the manner in which any adverse impact on the relevant core astronomy advantage area or the operation of the relevant astronomy device may be avoided. 35
- (10) (a) If a condition imposed under subsections (4)(b) or (8) is not being complied with, the Minister or any competent authority must in writing notify the person concerned of the non-compliance and direct that person to comply.
- (b) If the person concerned fails to comply with the condition within 30 days after having received the direction contemplated in paragraph (a), the Minister or any competent authority may withdraw the exemption or authorisation. 40
- (11) Authorisations or permits obtained under any other law for the commencement or continuation of an identified activity do not absolve the holder of such authorisation or permit from obtaining an exemption or authorisation contemplated in subsection (2). 45
- (12) Where the identified activity in a coordinated astronomy advantage area is part of a broadcasting service license or broadcasting service, ICASA must be the competent authority.

Competent authority

- 26. (1) When making a declaration under section 24, the Minister may identify the competent authority responsible for granting authorisations in respect of the activities concerned. 50
- (2) The Minister may designate any management authority, municipality or organ of state to be a competent authority for the purposes of subsection (1).

Review of identified activities

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- 27. (1) The Minister may declare his or her intention to review any specified identified activities which were lawfully conducted immediately before a declaration in terms of section 24(1) of this Act was published.

- (2) Following the review contemplated in subsection (1), and subject to subsections (3) and (5), the Minister may prescribe conditions under which specified identified activities may continue in order to reduce or eliminate the impact of those activities on existing or proposed astronomy in the relevant area or on the astronomy advantage of the area. 5
- (3) Before prescribing any conditions under subsection (2) the Minister must—
- (a) conduct a public participation process in terms of section 42; and
 - (b) subject to subsection (4), notify all persons listed in the permanent register of interested and affected parties for the relevant astronomy advantage area whose existing rights are likely to be directly affected by any such notice. 10
- (4) The notification contemplated in subsection (3)(b) must be in writing and must be—
- (a) made prior to commencing the public participation process contemplated in subsection (3)(a);
 - (b) sent by registered post or such other method as the relevant person may have agreed to; and 15
 - (c) sent at the address given by such person or as indicated in the register of permanent interested and affected parties.
- (5) Where the identified activity, in a coordinated astronomy advantage area, is part of a broadcasting service license or broadcasting service, and after carrying out the review contemplated in subsection (1), the Minister must notify ICASA in writing of such review and conditions contemplated in subsection (2). 20
- (6) Upon receipt of the notice contemplated in subsection (5), ICASA must instruct the licensee to take steps, within 60 days, to reduce or eliminate the impact of the identified activity on existing or proposed astronomy or related scientific endeavours in any astronomy advantage area. 25

CHAPTER 4

GENERAL MEASURES TO PROMOTE ASTRONOMY

Astronomy and astronomy devices

- 28.** (1) The Minister may declare any existing or proposed scientific endeavour to be astronomy and related scientific endeavours for the purposes of this Act. 30
- (2) The Minister may, with the concurrence of ICASA, in so far as the Minister's action is likely to affect broadcasting service license or broadcasting service, declare any existing or proposed stand-alone or inter-connected device, apparatus, equipment or instrument, and which is used directly or indirectly for astronomy and related scientific endeavours, to be an astronomy device for the purposes of this Act. 35
- (3) In making such a declaration the Minister must—
- (a) specify whether an astronomy device is used for radio or optical astronomy or astronomy and related scientific endeavours; and
 - (b) designate a juristic person, public entity or organ of state as an astronomy device management authority who has the authority for the operation, development, maintenance and management of the astronomy device. 40
- (4) The Electronic Communications Act does not apply to—
- (a) any astronomy device;
 - (b) any device management authority designated in respect of any astronomy device; and 45
 - (c) any person to whom authority in respect of an astronomy device has been delegated by the device management authority.
- (5) Before making a declaration as contemplated in subsection (2) where members of the public are likely to be affected thereby, the Minister must conduct a public participation process in terms of section 42. 50

Entry upon and construction of lines across land and waterways

- 29.** (1) The management authority of an astronomy device may, for the purpose of performing its functions—
- (a) enter upon any land, including any street, road, footpath or land reserved for public purposes, any railway and any waterway in the Republic; 55

- (b) construct and maintain an astronomy device upon, under, over, along or across any land, including any street, road, footpath or land reserved for public purposes, any railway and any waterway in the Republic; and
 - (c) alter or remove its astronomy device, and may for that purpose attach wires, stays or any other kind of support to any building or other structure, 5
- provided that in the performance of its functions under this subsection the management authority must at all times comply with the safety and other reasonable requirements of the private land owner or the affected persons.
- (2) In taking any action in terms of subsection (1), due regard must be had to the environmental laws of the Republic. 10

Pipes under streets

- 30.** (1) An astronomy device management authority may, after providing 30 days written notice to the local authority or person owning or responsible for the care and maintenance of any street, road or footpath—
- (a) construct and maintain in the manner specified in that notice any pipes, tunnels or tubes required for an astronomy device under any such street, road or footpath; 15
 - (b) alter or remove any pipes, tunnels or tubes required for an astronomy device under any such street, road or footpath and may for such purposes break or open up any street, road or footpath; and 20
 - (c) alter the position of any pipe, not being a sewer drain or main, for the supply of water, gas or electricity.
- (2) The local authority or person to whom any such pipe belongs or by whom it is used is entitled, at all times while any work in connection with the alteration in the position of that pipe is in progress, to supervise that work. 25
- (3) The astronomy device management authority must pay all reasonable expenses incurred by any such local authority or person in connection with any alteration or removal under this section or any supervision of work relating to such alteration.

Removal of astronomy device

- 31.** (1) If an astronomy device management authority finds it necessary to move any facility, pipe, tunnel or tube associated with an astronomy device constructed upon, in, over, along, across or under any land, railway, street, road, footpath or waterway, owing to any alteration of alignment or level or any other work on the part of any local authority or person, the cost of the alteration or removal must be borne by an astronomy device management authority. 30
- (2) (a) Where any astronomy device passes over any private property or interferes with any building about to be erected on that property, the astronomy device management authority must, on receiving satisfactory proof that the device prevents or is likely to prevent the proper use of the property, at its own cost, deviate or alter the positioning of the astronomy device in such manner as to remove all obstacles. 35
- (b) The owner of the property must, in writing, give notice that any such deviation or alteration is required, to the astronomy device management authority, not less than 28 days before the alteration or deviation is to be effected. 40
- (3) Where a dispute arises between any owner of private property and an astronomy device management authority in respect of any decision made by that astronomy device management authority, such dispute must be referred to the Minister for a decision. 45

Fences

- 32.** (1) If any fence erected or to be erected on land over which an astronomy device, or associated pipe, tunnel or tube is constructed or is to be constructed by an astronomy device management authority, renders or would render entry to that land impossible or inconvenient, the astronomy device management authority may at its own expense— 50
- (a) erect and maintain gates in that fence; and
 - (b) provide duplicate keys for such gates, one set of which must be handed to the owner or occupier of the land.
- (2) Any person intending to erect any such fence must give the astronomy device management authority notice in writing of not less than six weeks of his or her intention to erect such fence. 55

Trees obstructing astronomy devices

33. (1) Any tree or vegetation which—

- (a) obstructs or interferes; or
- (b) is likely to obstruct or interfere, with the working or maintenance of any of the astronomy device or associated pipes, tunnels or tubes, whether growing upon—
 - (i) state-owned land;
 - (ii) any roadside; or
 - (iii) private land,must, after reasonable notice to the owner or occupier of the land, be cut down or trimmed by the authority responsible for the care and the management of such state-owned land, road or private land in accordance with its requirements or by the owner or occupier of such private land, as the case may be, at the expense of the astronomy device management authority.

(2) In the event of failure to comply with a notice referred to in subsection (1)(b), the astronomy device management authority may cause the said tree or vegetation to be cut down or trimmed to the extent it may consider necessary.

(3) In taking any action in terms of subsection (1) or (2), due regard must be had to the environmental law of the Republic.

Height or depth of astronomy devices

34. (1) If the owner of any private land proves to the satisfaction of an astronomy device management authority that he or she is obstructed in the free use of his or her land because any astronomy device or associated pipe, tunnel or tube constructed by the astronomy device management authority, the astronomy device management authority may take such steps as it may consider necessary to give relief to that owner.
- (2) In taking any action in terms of this section, due regard must be had to the environmental laws of the Republic.

Railways and certain electrical works

35. (1) Any person who constructs, equips or carries on any railway or any works for the supply of light, heat or power by means of electricity in an astronomy advantage area or area through which an astronomy device runs must, in addition to any other requirement imposed in terms of this Act—

- (a) conform to the requirements of an astronomy device management authority for the prevention of damage to an astronomy device by such construction;
- (b) before commencing the construction of any such railway or works, give 30 days prior written notice to any relevant astronomy device management authority of his or her intention to commence the construction; and
- (c) before commencing the construction of any such railway or works, furnish the astronomy device management authority with—
 - (i) a plan of the proposed railway or works;
 - (ii) particulars showing the manner and position in which the railway or works are intended to be constructed, executed and carried on; and
 - (iii) such further information related to the proposed railway or works as the astronomy device management authority may require.

(2) The astronomy device management authority must give reasonable notice of the requirements contained in this Act to the person concerned if—

- (a) it appears to the astronomy device management authority that the construction, equipment or operation of any such railway or works is likely to damage its astronomy device; or
- (b) any such astronomy device is damaged by the construction, equipment or operation of any such railway or works.

(3) Any person who, after receiving the notice referred to in subsection (2), proceeds with or causes to be proceeded with any such construction or operation or uses the equipment in contravention of the said requirements, may be liable to the astronomy device management authority for damages sustained by the astronomy device management authority as a result of a contravention of subsection (1).

International agreements regarding astronomy and related scientific endeavours

36. (1) The Minister may enter into any agreement with any country in which part of an astronomy device declared under section 28(2) is located, to—

- (a) manage and coordinate the operation of any astronomy device;
- (b) coordinate and advance the preservation of astronomy advantage within such country; 5
- (c) coordinate, promote and advance astronomy and related scientific endeavours on a regional basis; or
- (d) advance any other objective of this Act.

National standards for control of activities, equipment or devices 10

37. (1) The Minister may, with the concurrence of ICASA, in so far as the Minister's action is likely to affect broadcasting service license or broadcasting service in the core or central astronomy advantage area and in relation to actions which may detrimentally impact on astronomy and related scientific endeavours, prescribe national standards or measures for the control or minimisation of— 15

- (a) light pollution;
- (b) radio frequency interference; or
- (c) any other activity.

(2) The Minister may by notice in the *Gazette* incorporate into law any standard set by the Council for the South African Bureau of Standards in terms of section 16 of the Standards Act, 1993 (Act No. 29 of 1993), dealing with any matter related to the elimination, prevention or mitigation of light pollution or radio frequency interference without stating the text thereof, by mere reference to the number, title and year of issue of that standard or to any other particulars by which that standard is sufficiently identified. 20 25

(3) The national standards and measures which may be prescribed in terms of subsection (1) in respect of light pollution may include measures regarding—

- (a) shielding of light by physical barriers;
- (b) mounting height limits;
- (c) maximum lumen or wattage limits; 30
- (d) curfews requiring light users to extinguish lights after a certain time at night;
- (e) the prohibition of or restrictions on the sale or use of certain types of light fixtures;
- (f) the use of Low Pressure Sodium lighting or other types of low impact lighting;
- (g) the type of lighting that is permissible on billboards; and 35
- (h) the imposition of permitting and inspection requirements.

(4) Before publishing any standards in terms of subsection (1), the Minister must conduct a public participation process in accordance with section 42.

(5) The Minister may declare that any national standards or measures prescribed in terms of subsection (1) apply— 40

- (a) to declared astronomy advantage areas, or only in a specified area or category of areas;
- (b) generally, to all persons or only a specified category of persons;
- (c) within one or more astronomy advantage areas declared in terms of this Act; or 45
- (d) to specific activities wherever undertaken within the Republic.

(6) Where the actions contemplated in subsection (1)(b) are part of a broadcasting service license or broadcasting service in a coordinated astronomy advantage area or anywhere in the Republic, the Minister must notify ICASA in writing of such actions.

(7) Upon receipt of a notice contemplated in subsection (6) ICASA must, in terms of the procedure contemplated in section 4 of the Electronic Communication Act, 2005, prescribe national standards or measures for the control or minimisation of radio frequency interference. 50

CHAPTER 5**ACQUISITION OF RIGHTS IN OR TO LAND****Acquisition of private land by state**

38. The Minister, acting with the concurrence of the Minister responsible for public works, may acquire land or property, or any right in or to land or property, which has been or is proposed to be declared as or included in any astronomy advantage area, by— 5

- (a) purchasing the land, property or right;
- (b) exchanging the land, property or right for other land, property or rights; or
- (c) expropriating the land, property or right in accordance with the Expropriation Act, 1975 (Act No. 63 of 1975), subject to section 25 of the Constitution, if no agreement is reached with the owner or the holder of the right. 10

Cancellation of servitude on, or privately held right in or to, state land

39. (1) The Minister, acting with the concurrence of the minister responsible for public works, may take any steps necessary to cancel a servitude on state land, or a privately held right in or to state land, which has been or is proposed to be declared as or included in any astronomy advantage area. 15

(2) If the Minister fails to reach an agreement with the owner of the property in whose favour the servitude is registered or with the person holding the right, the Minister may expropriate the servitude in accordance with the Expropriation Act, 1975 (Act No. 63 of 1975), subject to section 25 of the Constitution. 20

Financing

40. The Minister may finance the acquisition of private land or property or a right in or to private land or property in terms of section 38 or 39, or the cancellation of a servitude on, or a privately held right in or to, state land in terms of section 38 or 39, from money appropriated for this purpose by Parliament. 25

CHAPTER 6**CONSULTATION AND PUBLIC PARTICIPATION****Consultation by Minister**

41. Subject to section 42, before issuing a notice under sections 5, 7(1), 9(1) and 11(1), the Minister may follow such consultative process as may be appropriate in the circumstances, but the Minister must consult— 30

- (a) all organs of state affected by the proposed notice; and
- (b) (i) the relevant Ministers;
- (ii) the MEC for local government, transport and economic affairs of the province concerned; and 35
- (iii) the municipality in which the area concerned is situated, which consultation must include a discussion of the implications of the proposed notice on the Integrated Development Plan of the municipality.

Public participation

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42. (1) (a) Where the Minister is required by this Act or where the Minister elects to conduct a public participation process prior to taking any action or publishing any notice, the Minister must publish a notice of his or her intended action or notice in the *Gazette* and in at least two national newspapers distributed in the area in which the relevant proposed or existing astronomy advantage area is situated or where the effect of the action will be felt. 45

(b) Paragraph (a) also applies where the Minister intends taking any action or publishing any notice which would affect the rights or legitimate expectations of any person.

- (2) The notice contemplated in subsection (1) must—
- (a) invite interested or affected parties to submit to the Minister written representations on or objections to the proposed action or notice within 60 days from the date of publication in the *Gazette*;
 - (b) contain sufficient information to enable interested or affected parties to submit meaningful representations or objections; and
 - (c) include a clear indication of the area or activity that will be affected.
- (3) The Minister may in appropriate circumstances allow any interested or affected parties to present oral representations or objections to the Minister or to a person designated by the Minister.
- (4) The Minister may combine any two or more public participation processes which must be conducted in terms of this Act and hold one consolidated process, provided that any notice published in terms of subsection (1) clearly states the contemplated notices or actions in respect of which the consolidated process is conducted.
- (5) (a) The Minister must give due consideration to all representations or objections received or presented before taking the relevant action or publishing the relevant notice.
- (b) The Minister must, within 60 days, notify all those who made written or oral representations of the Minister's decision and provide reasons for the decision should any interested or affected party request this.
- (6) (a) If an interested or affected party believes the action proposed by the Minister will result in an expropriation of property or a right in property held by that party, that party may make a written request to the Minister to act in terms of section 38.
- (b) Such a request must be accompanied by such supporting information as is necessary for the Minister to consider the request.
- (7) (a) The Minister must consider the request contemplated in subsection (6) and must decide whether or not to proceed to acquire the property in terms of section 38.
- (b) The Minister must, within 60 days of receipt of the request, notify the person making the request in writing of his or her decision and provide reasons for the decision.

Affected organs of state, communities and beneficiaries

43. If it is proposed to make a declaration in terms of sections 7(1) or 9(1) in respect of an area that consists of or includes land—
- (a) owned by the state, the Minister may make that declaration only after consultation with the Minister responsible for public enterprises and the Minister responsible for the administration of that land, if that land is administered by the national executive, or after consultation with the provincial executive, if that land is administered by that provincial executive; or
 - (b) which is held in trust by the state or an organ of state for a community or other beneficiary, the Minister may declare that area only after consultation with the trustee and the community involved.

CHAPTER 7

ADMINISTRATION OF ACT

Power to issue compliance notice

44. (1) A management authority may, within its mandate in terms of section 15(2), issue a compliance notice in the prescribed form and following a prescribed procedure if there are reasonable grounds for believing that a person has not complied with a—
- (a) provision of this Act for which that management authority has been designated in terms of section 15(2); or
 - (b) term or condition of a permit, authorisation or other instrument issued in terms of this Act.
- (2) A compliance notice must set out—
- (a) details of the conduct constituting non-compliance;
 - (b) any steps the person must take and the period within which those steps must be taken, including removal of any building or structure constructed without authorisation;
 - (c) any thing which the person may not do, and the period during which the person may not do; and

- (d) the procedure to be followed in lodging an objection to the compliance notice with the Minister.
- (3) A management authority may, on good cause shown, vary a compliance notice and extend the period within which the person must comply with the notice.
- (4) A person who receives a compliance notice must comply with that notice within the time period stated in the notice unless the Minister has agreed to suspend the operation of the compliance notice in terms of subsection (5). 5
- (5) A person who receives a compliance notice and who wishes to lodge an objection may make representations to the Minister to suspend the operation of the compliance notice pending finalisation of the objection. 10
- (6) Where a management authority has reasonable grounds to believe that a person has not complied with conditions, standards or other instruments prescribed by ICASA in terms of section 37(7), the management authority must refer the matter to ICASA to enforce compliance.

Objection to compliance notice

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- 45. (1) Any person who receives a compliance notice contemplated in section 44 may object to the notice by making representations, in writing, to the Minister within 30 days of receipt of the notice, or within such longer period as the Minister may determine.
- (2) After considering any representations made in terms of subsection (1) and any other relevant information, the Minister— 20
 - (a) may confirm, modify or cancel a notice or any part of a notice; and
 - (b) must specify the period within which the person who received the notice must comply with any part of the notice that is confirmed or modified.

Failure to comply with compliance notice

- 46. (1) A person who fails to comply with a compliance notice contemplated in section 44 commits an offence. 25
- (2) If a person fails to comply with a compliance notice, the management authority must report the non-compliance to the Minister, and the Minister may—
 - (a) revoke or vary the relevant permit, authorisation or other instrument which is the subject of the compliance notice; 30
 - (b) take any necessary steps and recover the costs of doing so from the person who failed to comply; and
 - (c) report the matter to the Director of Public Prosecutions.

Powers and functions of NRF

- 47. (1) In addition to any powers and functions that the NRF may be given under this Act or any other legislation, for the purposes of promoting astronomy, preserving the Republic of South Africa's astronomy advantage and achieving the other related objectives of this Act, the NRF— 35
 - (a) must monitor and report regularly to the Minister on—
 - (i) the status of all areas declared in terms of this Act; 40
 - (ii) general encroachments into the Republic's astronomy advantage from light pollution, radio frequency interference and related matters;
 - (iii) devices which require designation or protection in terms of section 28;
 - (iv) areas that require protection in terms of sections 5, 7, 9 and 11 to preserve, protect or promote the Republic's astronomy advantage; and 45
 - (v) activities which should be declared or identified in terms of sections 24 and 25 to preserve, protect or promote the Republic's astronomy advantage.
 - (b) may develop strategies, alone or after consultation with academic and technical institutions and the relevant skills development agencies, for the enhancement of the skills, capabilities and expertise of those interested in and engaged in astronomy and related scientific endeavours in Southern Africa and to encourage and facilitate the participation of previously disadvantaged groups in astronomy and related scientific endeavours; 50
 - (c) may advise the Minister on any other matter in respect of which the Minister is empowered to act in terms of this Act and any other matter related to astronomy and the preservation of the Republic's astronomy advantage; 55

- (d) may act as an advisory and consultative body on matters relating to astronomy and the Republic's astronomy advantage to organs of state and other stakeholders;
 - (e) must coordinate and promote the advancement of astronomy and related scientific endeavours; 5
 - (f) may undertake and promote research on astronomy, the preservation of the Republic's astronomy advantage and encroachments onto any aspect of the Republic's astronomy advantage and related matters;
 - (g) on the Minister's request, must assist the Minister in the performance of the duties and the exercise of the powers granted to the Minister in terms of this Act; and 10
 - (h) must perform any other duties—
 - (i) assigned to it in terms of this Act; or
 - (ii) as may be prescribed by the Minister.
- (2) When the NRF gives advice in terms of subsection (1) on a scientific matter, it may consult any appropriate organ of state or other institution which has expertise in that matter. 15

Delegations

- 48.** (1) In addition to the delegations and assignments which the Minister is specifically authorised by this Act to make, the Minister may delegate any power or duty vested in him or her in terms of this Act excluding the power to declare areas referred to in sections 5, 7, 9 and 11 and the power to make regulations, to— 20
- (a) an official of the Department;
 - (b) the holder of an office of any other national department, provincial administration or municipality after consultation with the relevant Minister or MEC; or 25
 - (c) an official of the NRF.
- (2) A delegation contemplated in subsection (1)—
- (a) must be in writing;
 - (b) may be made subject to conditions; 30
 - (c) does not prevent the exercise of the power or duty by the Minister himself or herself; and
 - (d) may be withdrawn by the Minister.

Register of astronomy advantage areas

- 49.** (1) The Minister must maintain a register called the Register of astronomy advantage areas. 35
- (2) The Register must—
- (a) contain a list of all astronomy advantage areas;
 - (b) indicate whether the astronomy advantage area was declared as an area for optical or radio astronomy or a combination of these; and 40
 - (c) contain any other information determined by the Minister.

Regulations by Minister

- 50.** (1) The Minister may make regulations that are not in conflict with this Act—
- (a) regarding any matter that may or must be prescribed in terms of this Act;
 - (b) conferring additional powers or assigning additional duties to management authorities; 45
 - (c) regulating—
 - (i) management and protection of astronomy advantage areas;
 - (ii) access to astronomy advantage areas;
 - (iii) scientific use of astronomy advantage areas; 50
 - (iv) activities that may be carried out in astronomy advantage areas;
 - (v) the use of the frequency spectrum in astronomy advantage areas; or
 - (vi) consultation activities which are required in terms of this Act;
 - (d) prohibiting or restricting—
 - (i) activities that have an adverse effect on astronomy and related scientific endeavours; 55

- (ii) the use of any interference source, mobile and portable radio frequency interference source or short-range device or any other device, equipment or instrument which may cause light pollution, radio frequency interference or have other detrimental impacts on astronomy and related scientific endeavours, or astronomy advantage in an astronomy advantage area; or 5
 - (iii) land uses in astronomy advantage areas that are harmful to the astronomical advantage;
 - (e) providing for the establishment of advisory committees for astronomy advantage areas, the appointment of members and the functions of such committees; 10
 - (f) setting norms and standards for the proper performance of any function contemplated in this Act, and the monitoring and enforcing of such norms and standards; and
 - (g) regarding requirements and procedures for the appointment of management authorities in terms of this Act, as well as the core competencies of such management authorities; or 15
 - (h) regarding any other ancillary or administrative matter that it is necessary to prescribe for the proper implementation or administration of this Act.
- (2) When making regulations contemplated in subsection (1) where such regulations are likely to affect broadcasting service license or broadcasting service outside the core or central astronomy advantage area, the Minister must do so with the concurrence of ICASA. 20

General

51. (1) Any regulation with financial implications must be made with the concurrence of the Minister responsible for finance. 25
- (2) Before publishing any regulation contemplated in subsection (1), the Minister must publish the draft regulations in the *Gazette* for public comment.
- (3) Any notice published by the Minister pursuant to this Act and any regulations made under section 50 may— 30
- (a) restrict or prohibit any act either absolutely or conditionally;
 - (b) apply—
 - (i) generally throughout the Republic or a province, as the case may be, or only in a specified area or category of areas; or
 - (ii) generally to all persons or to only a specified category of persons; or 35
 - (c) differentiate between—
 - (i) different areas or categories of areas; or
 - (ii) persons or categories of persons.
- (4) Regulations made under section 50 may provide that any person who contravenes or fails to comply with a provision thereof is guilty of an offence and liable on conviction to a fine not exceeding R1 000 000 or to imprisonment for a period not exceeding five years or to both a fine and such imprisonment. 40

CHAPTER 8

OFFENCES AND PENALTIES

General offences and penalties 45

52. (1) A person is guilty of an offence if that person—
- (a) contravenes or fails to comply with section 20(1);
 - (b) undertakes a declared activity in contravention of a notice published by the Minister in terms of section 23(1) or a decision taken in terms of section 23(3);
 - (c) contravenes or fails to comply with a condition prescribed in terms of section 27(2); 50
 - (d) contravenes or fails to comply with a national standard or measure prescribed in terms of section 37(1) or any standard incorporated into law in terms of section 37(2);
 - (e) contravenes any condition imposed in any authorisation or exemption issued in terms of this Act or prescribed in terms of this Act; 55

- (f) hinders or interferes with a management authority or an official, member or staff member of a management authority in the performance of official duties; or
 - (g) knowingly supplies false information as part of any public participation process conducted in terms of section 42, or in any report submitted in terms of section 25(4)(a); or 5
 - (h) falsely professes to be an official, member or staff member of a management authority or the interpreter or assistant of such an official.
- (2) A person convicted of an offence in terms of subsection (1) is liable on conviction to a fine not exceeding R1 000 000 or to imprisonment for a period not exceeding five years or to both a fine and such imprisonment. 10

CHAPTER 9

MISCELLANEOUS

Short title and commencement

53. This Act is called the Astronomy Geographic Advantage Act, 2007, and takes effect on a date determined by the President by proclamation in the *Gazette*. 15

MEMORANDUM ON THE OBJECTS OF THE ASTRONOMY GEOGRAPHIC ADVANTAGE BILL, 2007

1. PURPOSE OF BILL

The Astronomy Geographic Advantage (AGA) Bill gives the Minister of Science and Technology the power to declare astronomy advantage areas in order to ensure that large-scale and globally important astronomy facilities are protected from uncontrolled development and potential interferences with research activities in this field.

2. OBJECTS OF BILL

The Bill seeks to provide measures to advance astronomy and related scientific endeavours by:

- 2.1 developing the skills, capabilities and expertise of those engaged in astronomy and related scientific endeavours in Southern Africa;
- 2.2 advancing astronomy and related scientific endeavours in the Republic through the identification and protection of areas in which astronomy projects of national strategic importance can be undertaken;
- 2.3 providing a framework for the establishment of a national system of astronomy advantage areas in the Republic, to ensure that the geographic areas in the Republic which are highly suitable for astronomy and related scientific endeavours – due to, for example, high atmospheric transparency, low levels of light pollution, low population density or minimal radio frequency interference – are protected, preserved and properly maintained;
- 2.4 enhancing the geographic advantage which the Republic has in areas that are highly suitable for astronomy and related scientific endeavours through restrictions on activities which cause or could cause light pollution or radio frequency interference or interfere in any other way with astronomy and related scientific endeavours in those areas; and
- 2.5 providing for the declaration and management of astronomy advantage areas.

3. DEPARTMENTS/BODIES/PERSONS CONSULTED

- Air Traffic and Navigation Services
- Astronomy research community
- Civil Aviation Authority
- Department of Communications
- Department of Provincial and Local Government (DPLG)
- Independent Communications Authority of South Africa (ICASA)
- National Research Foundation (NRF) and the Innovation Fund
- Northern Cape Provincial Government
- Second National Operator
- Sentech
- Telkom
- Transtel

4. FINANCIAL IMPLICATIONS FOR STATE

The Department of Science and Technology has assigned a budget for the Astronomy Geographic Advantage Bill.

5. PARLIAMENTARY PROCEDURE

- 5.1 The State Law Advisers and the Department of Science and Technology are of the opinion that this Bill must be dealt with in accordance with the procedure established by section 75 of the Constitution since it contains no provision to which the procedure set out in section 74 or 76 of the Constitution applies.
- 5.2 The State Law Advisers are of the opinion that it is not necessary to refer this Bill to the National House of Traditional Leaders in terms of section 18(1)(a) of the Traditional Leadership and Governance Framework Act, 2003 (Act No. 41 of 2003), since it does not contain provisions pertaining to customary law or customs of traditional communities.