Statutory Instrument 137 of 2016.

[CAP.12:05

Postal and Telecommunications (Infrastructure Sharing) Regulations, 2016

ARRANGEMENT OF SECTIONS

Section

FIFTH SCHEDULE: Considerations for sharing existing infrastructure.

IT is hereby notified that the Minister of Information Communication Technology, Postal and Courier Services has, in terms of section 99 of the Postal and Telecommunications Act [*Chapter 12:05*], after consultation with the Authority, made the following regulations:—

Title

1. These regulations may be cited as the Postal and Telecommunications (Infrastructure Sharing) Regulations, 2016.

Interpretation

2. In these regulations—

"active infrastructure" means infrastructure that is electronically involved in the transmission and reception of information which includes infrastructure referred to in the Second Schedule;

"business day" means any day which is not a Saturday, Sunday or Public Holiday;

"infrastructure" means the aggregate of equipment, physical sites, structures and facilities used for providing telecommunication services;

"infrastructure provider" means a telecommunication licence holder, utility entity, tower or dark fibre operator or local Authority who owns or is in control of infrastructure which is amenable to sharing;

"infrastructure seeker" means a telecommunication licence holder who seeks to share infrastructure owned or controlled by an infrastructure provider;

"infrastructure sharing" means the use of existing and future infrastructure by two or more telecommunication license holders subject to an agreement specifying relevant technical and commercial terms and conditions;

"Infrastructure sharing agreement" means an agreement entered into by and between the infrastructure provider

and infrastructure seeker to share telecommunication infrastructure in terms of section 9;

"infrastructure sharing arrangement" means any sharing arrangement or initiative between telecommunication licence holders prior to the promulgation of these regulations;

"network roll out plans" means plans submitted to the Authority from time to time in accordance with the telecommunication licence holder's licencing requirements;

"non-recurring cost" means once off costs incurred by the infrastructure provider in the course of installing or upgrading existing infrastructure for purposes of sharing;

"passive infrastructure" means infrastructure that is not involved in the electronic transmission and reception of information which includes infrastructure referred to in the First Schedule;

"recurring costs" means regular costs incurred by the infrastructure provider from time to time during the course of normal business of sharing infrastructure;

"sharing request" means a written request from the infrastructure seeker to the infrastructure provider made in terms of section 8;

"shelter" includes a facility such as a container and building to house telecommunication equipment owned or controlled by a telecommunication licence holder;

"site" means a place where single telecommunications network infrastructure or a group of such network infrastructure is located;

"spare capacity" means excess capability of a telecommunication infrastructure over and above the capacity designed for the telecommunication licence holder's planned use within a period approved by the Authority;

"telecommunication licence holder" means a holder of a telecommunication licence issued in terms of section 2(1) of the Postal and Telecommunications Act [*Chapter 12:05*].

Application

3. These regulations shall apply to all telecommunication licence holders.

Objective

4. The objective of these regulations is to provide for infrastructure sharing among telecommunication licence holders in order to—

(a) eliminate unnecessary duplication of telecommunication infrastructure; and

(b) maximise the use of existing and future telecommunication infrastructure; and

(c) minimise negative public health, safety and environmental impact caused by the proliferation of telecommunication infrastructure installations; and

(d) promote competition in the provision of telecommunication networks and services; and

(e) promote orderly and effective town and country planning in the provision of telecommunication services; and

(f) ensure provision of sufficient telecommunication infrastructure in the country.

Powers and functions of the Authority

5. In relation to these regulations, the Authority shall—

(a) exercise licensing and regulatory powers in respect of infrastructure sharing;

(b) carry out infrastructure audits and identify sharable infrastructure;

(c) determine categories and sites for telecommunication infrastructure sharing in the public interest as well as to review and monitor sharing arrangements;

(d) subject to section 6(3), direct telecommunication licence holders to share infrastructure;

(e) enforce technical and commercial standards for infrastructure sharing;

(f) enforce quality of service standards;

(g) promote transparent, non-discriminatory, competitive and cost effective sharing of infrastructure among telecommunication licence holders;

(h) encourage telecommunication licence holders to upgrade existing facilities amenable to sharing to increase capacity;

(i) review and approve infrastructure sharing agreements;

(j) develop and maintain a database on telecommunication infrastructure sharing and designate national backbone infrastructure operators; and

(k) promote open access to infrastructure.

Infrastructure sharing arrangements

6. (1) No telecommunication licence holders shall share infrastructure without an approved infrastructure sharing agreement.

(2) A telecommunication licence holder shall submit the infrastructure sharing agreement referred to in section 9(2) to the Authority for approval.

(3) No telecommunication licence holder shall be required to share infrastructure where the Authority—

(a) determines that the infrastructure is not sharable for reasons which include that—

(i) it is not technically feasible; or

(ii) it is not in the interest of national security; or

(iii) it is likely to cause damage to the nature or function of such infrastructure;

or

(b) in the case of existing infrastructure, has approved reserve capacity for the telecommunication licence holder.

(4) Telecommunication licence holders may—

(a) as determined by the Authority, share existing infrastructure subject to considerations in the Fifth Schedule; or

(7) Telecommunication infrastructure seekers may access infrastructure from infrastructure provider who are not telecommunication licensees or operators including power utility companies and other utility providers including local authorities:

Provided that no telecommunication infrastructure seeker shall enter into an exclusive infrastructure agreement with a utility or Local Authority infrastructure holder, which prevents access by other telecommunication operators to the same infrastructure and other infrastructure or which precludes the utility entity or Local Authority from entering into infrastructure sharing arrangements with the other parties.

Procedure and requests for infrastructure sharing

8. (1) The infrastructure seeker shall submit a request to the infrastructure provider in terms of subsection (2).

(2) A request for infrastructure sharing in terms of subsection (1) shall be in writing and includes the following—

(a) the date of the request;

(b) date when the infrastructure is required;

(c) the telecommunication licence number of the infrastructure seeker;

(d) the type of infrastructure required for sharing;

(e) the technical and physical requirements of infrastructure to be shared; and

(f) the location of the infrastructure so requested, where applicable (including Global Positioning System coordinates).

(3) The infrastructure seeker shall be responsible for the reasonable costs of processing the request submitted in terms of subsection (1).

(4) An infrastructure provider shall respond to a request submitted in terms of subsection (1) within fourteen business days of the request stating minimum requirements for sharing or the reasons for any refusal.

(5) The minimum requirements referred to in subsection (4) shall include—

Infrastructure sharing negotiations and agreements

9. (1) No telecommunication licence holder shall—

(a) obstruct or delay negotiations; or

(b) refuse to designate proper representative to take part in negotiations; or

(c) refuse to provide relevant information; or

(d) misrepresent facts.

(2) In drafting infrastructure sharing agreements telecommunication licence holders shall include the Model Terms and Conditions outlined in the Third Schedule.

(3) The parties shall finalise the infrastructure sharing agreement within three months from the date of receipt of the request for infrastructure sharing.

(4) All draft infrastructure sharing agreements shall be submitted to the Authority for approval within fifteen business days from the date of finalising negotiations.

(5) The Authority shall approve or disapprove agreements referred to in sub-section (2) within fourteen business days.

(6) Any amendments to the infrastructure sharing agreements shall be approved by the Authority within five business days from the date of submission.

(7) Parties to an infrastructure sharing agreement shall file a copy of the agreement, with the Authority within fourteen business days of signing the agreement.

(8) At any stage of the negotiations, any aggrieved telecommunication licence holder may refer the matter to the Authority for resolution.

Approval of infrastructure sharing agreements

10. (1) The Authority shall not approve an infrastructure sharing agreement that—

(a) is not consistent with the law, scope, terms and conditions of telecommunication licences, applicable regulations, regulatory decisions, directives or standards and other guidelines as prescribed by the Authority; and

(5) Costs that vary with usage shall be recovered through usage based charges.

(6) The charges shall be sufficiently detailed to enable the infrastructure seeker to pay the infrastructure provider only for the network elements or infrastructure sharing services that it requires.

(7) The charge to the infrastructure seeker for sharing shall not be more than the cost of owning and operating similar infrastructure.

(8) Infrastructure sharing charges shall not include compensation for loss of business as a result of providing infrastructure sharing services to the infrastructure seeker.

(9) The Authority may, in consultation with telecommunication licence holders, revise the costing model for infrastructure sharing.

Rights of telecommunication licence holders to reserve spare capacity

12. (1) Notwithstanding section 6, telecommunication licence holders shall have the right to reserve capacity for future use based on future network roll out plans which shall be approved by the Authority.

(2) The right of a telecommunication licence holder to reserve capacity for which it has made long term investments shall at all times be recognised and balanced against the need to promote the network roll-out or expansion plans of new market entrants or other telecommunication licence holder.

(3) Where a telecommunication licence holder exercises the option to reserve some rights in circumstances of spare capacity—

(a) the reserve period shall not exceed two years or period prescribed by the Authority from time to time after which the right will cease from being operational.

(b) not more than fifty *per centum* of spare capacity shall be reserved.

(4) Information and documentary evidence of the reservation and extent thereof shall be held by telecommunication licence holder and made available to the Authority upon request.

Technical standards for infrastructure sharing

13. (1) All telecommunication licence holders shall ensure that standardised equipment and unified technical interfaces are used when sharing infrastructure.

(2) Telecommunication licence holders shall ensure that the quality of service provided to an infrastructure seeker shall not differ from that within the infrastructure provider's own infrastructure network.

(3) Telecommunication licence holders shall ensure network security of all shared infrastructure.

Provision of information on infrastructure sharing

14. (1) Telecommunication licence holders shall submit information on infrastructure sharing as requested by the Authority from time to time.

(2) The Authority shall maintain an up to date data base of information regarding infrastructure sharing.

(3) The Authority shall maintain a data base of all infrastructure sharing agreements.

Resolution of disputes

15. (1) The Authority shall resolve any dispute pertaining to infrastructure sharing at the request of either party using an appropriate dispute resolution mechanism.

(2) Either party to a dispute shall submit a written complaint to the Authority with documentation stating—

(a) the dispute; and

(b) the position of the parties with respect to the dispute; and

(c) the remedy sought.

(3) On receipt of a dispute report, the Authority shall within five business days, requests the respondent to make representations to the Authority within fourteen business days from the date of receipt of the complaint.

(4) Where necessary, the Authority may—

(a) ask for additional information related to unresolved issues from the parties;

(b) invite the parties to make oral or written representations in relation to the documents lodged.

(5) The Authority shall issue a determination within a period of twenty-one business days from the date of receipt of the last submissions from the parties.

(6) Where either party fails to respond within the period prescribed in subsection (3), the Authority may, within fourteen business days, resolve each issue set forth in the complaint.

(7) Where the Authority fails to act in terms of this section, the aggrieved party may seek recourse in a competent court of law to compel the Authority to make a decision.

Appeals

16. Any party aggrieved by the determination or decision of the Authority may appeal in accordance with section 96 of the Act.

Offences and penalties

17. Any telecommunication licence holder who contravenes sections 6, 8, 9, 11, 12, 13 and 14 shall be guilty of an offence and liable to a penalty in accordance with the Postal and Telecommunications (Penalties) Regulations, 2008, under Statutory Instrument 162 of 2008.

Transitional provisions

18. (1) All telecommunication licence holders shall submit existing infrastructure sharing arrangements for approval within three months from the effective date of these regulations.

(2) Prior to submission of an existing infrastructure sharing arrangements to the Authority in terms of subsection (1), the parties shall review the infrastructure sharing arrangements, as may be required, to ensure compliance with these regulations.

(3) All telecommunication licence holders with infrastructure projects under installation prior to the commencement of these

regulations shall apply for approval from the Authority for the remaining portion of the installation.

Repeals

19. Section 11 of the Postal and Telecommunications (Interconnection Guidelines) Regulations, 2001, published in Statutory Instrument 28 of 2001, is hereby repealed.

FIRST SCHEDULE (*Section 7(1) and (2)*)

PASSIVE INFRASTRUCTURE AMENABLE TO SHARING

The following passive infrastructure shall be sharable—

1. Site sharing/co-location
   (a) Space;
   (b) Tower;
   (c) Power;
   (d) Shelter;
   (e) Security.
2. Transmission (backbone/backhaul/metro)
   (a) Optic Fibre Cable;
   (b) Copper cable;
   (c) Trenches/troughs;
   (d) Manholes;
   (e) Ducts;
   (f) Poles.

SECOND SCHEDULE (*Section 7(3)*)

ACTIVE INFRASTRUCTURE AMENABLE TO SHARING

1. The following active infrastructure may be shared—
   (a) Access network infrastructure—
      (1) Base Transceiver Stations (BTS);
      (2) Base Station Controllers (BSC);
      (3) NodeBs;
      (4) eNodeBs;
      (5) Radio Network Controller (RNC);
      (6) Multi-service access gateways (MSAG);

(7) Multi-service access networks (MSAN);
(8) Wireless Local Loop (WLL).

(b) Core Network Infrastructure—
(1) Mobile Services Switching Centre (MSCs);
(2) Soft switches;
(3) IP Multi-media sub-systems;
(4) Gateway GPRS Serving Node;
(5) Serving Gateway Support Node;
(6) Short Message Service Centre;
(7) Multi-media gateways;
(8) Mobile Money Transfer platforms;
(9) Network management systems (NMS).

THIRD SCHEDULE (*Section 9(2)*)

MODEL TERMS AND CONDITIONS FOR INFRASTRUCTURE SHARING

1. An infrastructure sharing agreement shall deal with the following matters, except where a matter is not relevant to the shared services in question—

(a) definitions of terms and abbreviations;
(b) the technical scope of infrastructure sharing which includes:
(i) a description of the purpose of the infrastructure sharing;
(ii) a description of the infrastructure to be shared;
(iii) a description of the technical specifications of the infrastructure to be shared;
(iv) mechanisms for changes to the purpose, technical scope and specifications of the infrastructure being shared;
(v) a description of the location of infrastructure.
(c) infrastructure sharing and co-location requirements which include—
(i) availability of infrastructure;
(ii) infrastructure sharing and co-location procedures;
(iii) security procedures and requirements;
(iv) supplementary services required, such as power supply;
(v) physical access to the infrastructure;
(d) billing and settlement arrangements which include—

(i) billing procedures;

(ii) payment terms and conditions;

(iii) billing dispute resolution procedures;

(e) charges, setting out–to come before billing

(i) detailed charges per infrastructure shared;

(ii) mechanisms for review of charges;

(f) quality of service and service levels, covering—

(i) service levels and quality of service obligations;

(ii) penalties;

(iii) testing and maintenance procedures;

(iv) fault reporting and repair;

(v) service level dispute resolution;

(vi) infrastructure protection and safety measures;

(g) compliance with laws (approvals from relevant authorities);

(h) effective date;

(i) duration;

(j) termination of agreement covering—

(i) grounds for termination;

(ii) termination procedures;

(k) dispute resolution and arbitration procedures;

(l) Other standard clauses

FOURTH SCHEDULE (*Section 6(4)*)

TECHNICAL REQUIREMENTS FOR INFRASTRUCTURE SHARING

Minimum tower sharing requirements

1. (1) These minimum requirements shall apply to future infrastructure sharing arrangement.

(2) Minimum tower requirements—

(a) towers shall be designed to accommodate antennae and other material loading for a minimum of *four* telecommunications licence holders.

(b) the tower structure shall be in accordance with International and local standards and best practice.

(c) the tower shall stand on *four* legs with angular/tubular tower members.

(d) the tower foundation shall withstand equipment and wind loading parameters with maximum sway of 1.° .

(e) the specific sway and loading are given in Table 1 below.

TABLE 1

Parameter	30m Tower	45m Tower	60m Tower	70m Tower
Basic wind speed	130km/h	130km/h	130km/h	130km/h
Survival wind speed	140km/h	140km/h	140km/h	140km/h
Maximum Sway	<1.°	<1 .°	<1 .°	<1.°

(3) The tower foundation shall take into account the following design conditions—

(a) wind, seismic and other loading at each specific site giving full consideration to the following—

(i) location, terrain type and category;

(ii) topographical effects and vortex shedding;

(iii) potential seismic loading;

(iv) fatigue effects on the tower, including the base flange and the connection between the spine and the tower in the case of monopole towers.

(b) return period to be used (50 years minimum);

(c) tower structural design;

(d) foundation design allowing for soil conditions;

(e) certification that the construction of all aspects of the tower and foundation has been erected in accordance with the design and specifications;

(4) The minimum standard foundation shall be designed for soil strength of a minimum of 100 kilo Pascals (kPa).

(5) Unless otherwise specified, 25 Mega Pascals (MPa) concrete strength shall be the minimum used in the design and construction of the foundations.

(6) The tower shall be designed to carry all types of antennae stacked one above the other and side by side and the clearance between antennae shall depend on type of technology.

(7) The parameters of the antennae referred to in subsection (4) shall be obtained from the infrastructure provider at design stage.

(8) The infrastructure provider shall have the right to select the appropriate position of his or her antennae and the other telecommunication licence holders shall be stacked in order of application.

(9) Solid parabolic microwave antennae/dishes may be placed on the tower according to the line of sight (LOS) and shall not obstruct other antennas for different services.

(10) Other types of antennae (for other technologies) may be installed as required provided the total weight can be accommodated by the tower and the position shall not affect other installed equipment.

(11) All tower members and accessories must be hot-dip galvanised (minimum thickness: 60 microns).

(12) The towers shall be painted with alternating colour fringes and adhere to anti-corrosion standards in accordance with statutory requirements and civil aviation standards.

(13) The tower shall be provided with obstruction lighting in accordance with civil aviation standards.

(14) The towers shall be equipped with continued straight ladder fixed inside the tower structure.

(15) The ladder shall be protected by hoops and anti-fall devices and shall have resting platforms every 15m.

(16) The towers shall be equipped with cable ladders which shall be fixed inside the tower structure.

(17) The tower and site equipment shall be protected against lightning. Stainless steel lightning spikes must be installed at the top of the tower and must extend 1.5m in length above the tower in order to ensure the theoretical protection cone (peak angle 120°).

(18) The tower shall be properly grounded and the ground resistance shall not exceed 3 Ohms. All earths on the site shall be bonded or communed.

(19) An Anti-Climbing System may be installed on the tower legs and on the ladder (as door or cage).

Minimum site requirements

2. (1) A site shall have the following minimum specifications—

(a) a self-contained weather proof and equipment room where this is required for indoor equipment;

(b) suitable sanitary facilities shall be provided to meet Local Authority requirements;

(c) a guard room, if required, shall be provided as part of the complete site, together with an appropriate slab. The inside dimensions of the Guardroom shall not be less than 2m x 1.2m;

(d) all sites shall be adequately secured by a steel palisade fence with a minimum height (excluding razor wire) shall be 2400 mm above ground level with 100 mm concrete lining to embed palisades or heavy duty fencing;

(e) the minimum specifications for the palisade fencing shall be—

(i) the poles shall be mild steel channel iron of 75 mm x 40 mm x 6 mm welded together. The poles are then installed 2m apart in concrete. The concrete is made with a ratio of cement: sand: 3/4 stones shall be 1:2:2. The depth of the pole into the ground shall be 300 mm;

(ii) the spikes shall be made from 16 mm round bar 2600 mm long and installed at a spacing of 100 mm;

(iii) the top flat bar shall be 40 mm x 10 mm;

(iv) the middle bar shall be 40 mm x 6 mm;

(v) the bottom bar shall be 40 mm x 10 mm and installed 50 mm above ground;

(vi) the distance between the top and bottom bars shall be 2.5m.

(f) the Palisade shall be neatly constructed from new materials and all steelwork shall be hot-dip galvanised to a minimum of 60 microns;

(g) a suitable opening gate of 4 metres adequate for vehicle entry shall be provided. These gates shall be of steel palisade construction and shall be securely mounted onto the fence structure;

(h) the locking system shall be agreed upon by all telecommunication licence holders at each site;

(i) the fence shall be fitted with "flat wrap" razor wire, securely mounted so that at least 50% of the diameter is above the top of the fence;

(j) in order to retain the gravel used to cover the site, appropriate ground beams shall be provided. These shall have suitable and adequate weep holes to allow water to drain from the site. If the site is not level, these weep holes shall only be on the downward facing sides of the site and must be indicated on the site diagrams;

(k) the steel palisade shall be earthed with the earthing extended to each corner of the fence. The fence structure shall be connected through into the hinged gates by way of flexible connecting leads or a suitable sliding connection for non-hinged gates. The earthing shall be extended to the Site Earth System/Ground.

Minimum site access requirements

3. (1) All sites shall be accessible.

(2) The minimum for access road shall be gravel or paving or both where necessary. The access road shall be all weather with adequate erosion prevention.

(3) Site access roads shall have a minimum carriageway of gravel not less than 3m wide with 0.5m shoulder on either side and shall be constructed so that the entrance onto any major rural, town or private road is consistent with the local authority requirements for safety and proper drainage.

Minimum power requirements

4. (1) Each site shall be supplied with primary power of 3 phase 50Hz commercial power or alternative green power adequate for a minimum of *four* telecommunications licence holder.

(2) The commercial power shall be drawn to the site and the rating is given below—

(a) 22 kVA;

(b) 220 Volts Alternating Current (AC)–Phase/Ground Voltage;

(c) 380 Volts Alternating Current (AC)–3 Phase Voltage;

(d) 50 Hertz (Hz) or cycles per second (+/- 5% variation).

(3) Telecommunication licence holders shall be responsible for the application and connection to the commercial power supply from the power utility and individual commercial power meters at the site.

(4)All sites may be supplied with alternative power adequate for a minimum of four telecommunication licence holders and back up batteries shall work autonomously for a minimum of two hours before the standby power supply can start.

(5) A secondary 3 Phase 50Hz standby power shall be provided on each site as back-up power system in the event of non-availability of primary power. The standby power shall be dimensioned to match the requirement for commercial power at the site.

(6) All terminations to the standby power supply shall be easily accessible. AC distribution shall have a common earth to be connected to the Site common Earthling System.

(7) The specific requirements for a standby generator shall be as follows—

(a) the generator unit shall be capable of satisfactory operation with fully unbalanced loads (maximum on one phase and zero on the other) for an unlimited period. The unit shall have an automatic voltage

regulator and be capable of running extended periods of light load for a minimum of 8 hours without severe glazing;

(b) the unit shall have a soundproof canopy of better than 65 decibel (dB) at 7 metres and weather-proof (Ingress Protection (IP) 44 minimum). The enclosure shall be securely lockable. The soundproofing material shall be fire-resistant;

(c) the unit should be capable of self-starting from Automatic Transfer Switch (ATS) or manually with a 12V battery system with charger located in the generator, which shall be chargeable by both mains and alternator. The default setting shall be automatic starting;

(d) where a diesel generator is used, the exhaust shall be silenced and adequately protected against corrosion (externally and internally). Ingress of rain water shall be prevented. It shall be routed so that no discolouring or soot deposits are caused against any other part of the site or surroundings. The generator shall comply with stage 3 emission standards;

(e) the entire unit shall be earthed to the common site earth system. A clear and marked earthing point shall be provided on the body of the unit;

(f) the ATS panel shall be an outdoor weather unit with mechanical by-pass facility. All alarms shall be fully displayed and adequate instrumentation shall be supplied to enable the safe and effective operation of the unit.

(g) the ATS shall operate under the following conditions—

(i) total mains failure;

(ii) phasing where one or two phases are lost, or a serious imbalance between the voltages on each phase is experienced;

(iii) high (245 V ac) or low (195 V ac) voltage conditions on any phase;

(iv) frequency deviations from standard;

(v) the ATS unit shall be designed so that the load is disconnected from the mains supply when the ATS is operated. The ATS unit shall be designed to include class 1 hybrid surge arrestors and shall also be designed to include Ethernet and Modbus communication ports;

(vi) all terminations to the generator set must be easily accessible;

(vii) all external interconnection piping to be approved before use. Only flexible piping shall be used for connecting to the unit. No external plastic or Poly vinyl Chloride (PVC) piping or ducting may be used;

(viii) AC distribution common earth to be connected to the Site common Earthing System;

(ix) all labels to be engraved and non-adhesive type must be riveted to the unit;

(x) shall conform to AC safety in the work environment.

(8) Each telecommunication licence holder shall be responsible for their batteries. The battery bank shall provide back-up power autonomously for at least *two* hours before the standby power starts.

(9) All sites shall be provided with adequate security for *twenty-four* hours every day.

Minimum requirements trenches and troughs

5. (1) The minimum specifications for trenches and troughs are given in table 2.

(2) Telecommunication licence holders that require additional or special duct types may install their own infrastructure at the time of trenching.

(3) Telecommunication licence holders that require additional or special duct types may enter into an infrastructure sharing agreement with the infrastructure provider prior to the trenching so that additional ducts are installed at the time of trenching.

(4) An infrastructure seeker that requires handholes may request the infrastructure provider to install such handholes. A maximum of two handholes should be constructed per site and these should be changed to a manhole.

(5) For any variation to a shared trench/trough the IS shall approach the IP with a request.

(6) The infrastructure provider shall comply with all statutory requirements and specifications of Local Authorities, Power Utilities and road owners. Ownership of the additional or special duct/cable/handholes shall remain with the infrastructure provider.

(7) The completed trench shall provide a clear and unobstructed bed for the ducting cables to accomodate the ducting and fibre optic cable or copper cable.

(8) The trenching or trough operations shall be planned and executed in accordance with the Way leave conditions and telecommunication licence holder standards and procedures.

(9) The infrastructure provider shall have the responsibility for maintenance of the trench and all security issues.

Minimum requirements for ducts, cables, backbone and metro

6. (1) The minimum specifications for backhaul/metro/ducts are given in table 2 below. A minimum of 48 core optical fibre shall be provided with a minimum of 50% spare capacity otherwise they have to put more cores in multiples of 12.

(2) All every telecommunications licence holder shall have their own network monitoring management system and diagnostic tools for dark optic fibre cables.

TABLE 2

MINIMUM SPECIFICATIONS FOR BACKHAUL/METRO/DUCTS

Network element/parameter	Minimum Requirements
Trench size	0.3m wide 1.0m deep (sharable at trenching stage)
Duct sizes and configuration	1x 7way 14/10 HDPE
Handhole (HH) size and configuration	1000x1000 mm lockable (with slack management and dome box holder) according to SANS 50124 (SABS EN124)
Man Hole (MH) size and configuration	3000 mm length 1000 mm width Comprising 1 lockable manhole cover withstanding 30 ton live load.
Metro/Backhaul Optical Cable type and size	48 core Single Mode (SM) (24 cores reserved for sharing)
Copper cable type and size	10% spare capacity of cable size

Minimum requirements for access network

7. (1) For copper cables any new installations shall have an additional 10% capacity reserved for sharing.

(2) A maximum of four telecommunication licence holders shall share a manhole.

(3) The minimum specifications for manhole are given in Table 3.

(4) The minimum specification for poles shall have a structural strength to accommodate a maximum of *two* cables and associated accessories.

(5) Way leaves shall be shared subject to statutory requirements of the local authorities.

(6) Spectrum sharing shall be done with the approval of Authority.

TABLE 3

Equipment	Specifications	Minimum Requirements for sharing
Backhaul poles	**Non Highways:** *7.5m length with diameter 90-120 mm Tops.* **Highways:** *10m length with 110-130 mm Tops Creosote treated re-enforced by gain nailing and steel belted on both ends*	Minimum ground clearance 4.5
Metro poles	**Non Highways:** *7.5m length with diameter 90-120 mm Tops.* **Highways:** *10m length with 110-130mm Tops Creosote treated re-enforced by gain nailing and steel belted on both ends*	Minimum ground clearance 4.5
Last Mile poles	**Non Highways:** *7.5m length with diameter 90-120 mm Tops.* **Highways:** *10m length with 110-130 mm Tops Creosote treated re-enforced by gain nailing and steel belted on both ends*	Minimum ground clearance 4.5

FIFTH SCHEDULE (*Sections 5 and 7*)

CONSIDERATIONS FOR SHARING EXISTING INFRASTRUCTURE

1. The existing infrastructure was designed to accommodate individual telecommunication licence holder, but some may still have capacity for sharing.

2. The Authority shall at its own cost carry out an Audit in consultation with telecommunication licence holders to determine existing infrastructure that can be shared and create a database of all sharable and non-sharable infrastructure.

3. For sites with multiple infrastructures (towers) the Authority shall determine structures to be strengthened and decommissioned.

4. Subject to the provisions of subsection 3, the decommissioned infrastructure may be relocated to underserved areas and funded by the Universal Services Fund.

5. An infrastructure seeker who wishes to share an existing site, shall submit a request in terms of section 8 and enter into an agreement with the infrastructure provider in terms of section 9.

6. If the identified site cannot be shared in its current state but can be strengthened or enhanced, the Infrastructure Seeker shall advertise the site for infrastructure sharing and other telecommunication licence holders who wish to share will express their interest.

7. The strengthening or upgrading of the existing infrastructure shall be carried out by the infrastructure seeker(s) and shall be done to accommodate the minimum requirements or specifications for four telecommunication licence holders.