# ANNEXURE A (A.A)
# ESTABLISHED CENTRES AND INTEREST GROUPS

A.A1 The established Centres are:-

A.A1.1 Western Cape Centre based in Cape Town (established in 1953).

A.A1.2 KwaZulu-Natal Centre based in Durban (established in 1957).

A.A1.3 Southern Cape Centre based in George (established in 2007).

A.A1.4 Vaal Centre based in Vanderbijlpark (established in 2008 and re-established in 2013).

A.A1.5 Mpumalanga Centre based in Secunda (established in 2007).

A.A1.6 Eastern Cape Centre based in Port Elizabeth (established in 2009).

A.A1.7 Central Centre based in Bloemfontein (established in 2013).

A.A1.8 Central Gauteng Centre based in Johannesburg (established in 2015).

A.A1.9 Northern Cape Centre based in Kimberley (established in 2018).

A.A2 The established Interest Groups are:

A.A2.1

# ANNEXURE B (A.B)
# ESTABLISHED SECTIONS AND CHAPTERS

**A.B1** **The established Sections are: -**

**A.B1.1** **Power and Energy Section (PES)**

A.B1.1.1 The mandates of this Section are to: -

A.B1.1.1.1 promote membership and involve members at an early age in the activities of the institution;

A.B1.1.1.2 promote the electrical engineering field and associated sciences and their applications in high schools, universities and society at large;

A.B1.1.1.3 lead, direct and influence policies in electrical engineering fields and associated matters in the public, private and educational sectors;

A.B1.1.1.4 promote and uphold the professional standing of members of the Institute and to provide career guidance for younger members;

A.B1.1.1.5 promote and advance education and training in electrical engineering and associated sciences in Southern Africa; and

A.B1.1.1.6 liaise with Centres to encourage national involvement and co-ordination in these activities.

A.B1.1.2 The established Chapters falling under this Section are: -

A.B1.1.2.1 Lightning Protection

A.B1.1.2.2 Load Research

A.B1.1.3 The following is a list (non-exhaustive) of Chapters that <u>are not</u> yet established and <u>may</u> fall under this Section: -

A.B1.1.3.1 Power System Design

A.B1.1.3.2 Smart Metering

A.B1.1.3.3 Power System Studies

A.B1.1.3.4 High Voltage Engineering

A.B1.1.3.5 Maintenance

A.B1.1.3.6 Renewable Energy

A.B1.1.3.7 Battery Electric Storage

A.B1.1.3.8 Nuclear Energy

A.B1.1.3.9 Energy Efficiency

**A.B1.2** **Electronics and Software Section (E&S)**

A.B1.2.1 The mandates of this Section are to: -

A.B1.2.1.1 promote the interests of electronics and software engineering;

A.B1.2.1.2 this includes, but is not limited to fields such as telecommunications, control, automation, software development and broadcasting.

A.B1.2.2 The established Chapters falling under this Section are: -
A.B1.2.2.1 (none as at 3 September 2019)

A.B1.2.3 The following is a list (non-exhaustive) of Chapters that are not yet established and may fall under this Section: -
A.B1.2.3.1 Computing
A.B1.2.3.2 Electronics
A.B1.2.3.3 Control and Automation
A.B1.2.3.4 Electromagnetics
A.B1.2.3.5 Biomedical
A.B1.2.3.6 Robotics
A.B1.2.3.7 Cyber Security
A.B1.2.3.8 Power Electronics

**A.B1.3 Historical Section (HS)**

A.B1.3.1 The mandate of this Section is to: -
A.B1.3.1.1 collect and preserve items (e.g. artefacts, manuscripts, book) of historical significance/ importance in the development of electrical engineering, with particular emphasis to South Africa and the contribution of South Africans;
A.B1.3.1.2 arrange displays of such items in an appropriate format (e.g. subject, historical...) in a manner/ format such that the evolution of the said items is recorded for posterity and accessible for viewing by Institute members and the general public;
A.B1.3.1.3 set up and operate an inter-active display of electrical engineering items in a manner and venue that will allow for visitors to better understand the relative engineering principles and features shown. Such displays will include an active amateur radio station and associated equipment;
A.B1.3.1.4 take whatever steps are practical and economical to repair, restore and /or replace damaged items (e.g. artefacts. manuscripts, books, etc.). Ensure that items not necessarily appropriate for public display is properly stored, identified and registered in a suitable data recording system; and
A.B1.3.1.5 prepare a marked-up map of South Africa showing the location of historical sites and identify some with plaques where appropriate.

A.B1.3.2 The established Chapter(s) falling under this Section are: -
A.B1.3.2.1 (none as at 3 September 2019)

**A.B1.4 Rotating Machines Section (RMS)**

A.B1.4.1 The mandate of this Section is to: -
A.B1.4.1.1 be concerned with all matters related to the requirements, research, skill- and product- development, application, design, construction, operation, or supervision of developments in technology and standardisation pertaining to rotating electrical

machines – including their mechanical interfaces and power supplies;

A.B1.4.1.2 consists of engineering decision makers from utility, industrial, petrochemical industry, mining, consulting and tertiary institutions in Southern Africa (both private and public sector); and

A.B1.4.1.3 members of the RMS could be involved in the research, design, manufacture, supply, repair, condition assessment and application of electrical rotating machines.

A.B1.4.2 The established Chapter(s) falling under this Section are: -

A.B1.4.2.1 (none as at 3 September 2019)

A.B1.4.3 The following is a list (non-exhaustive) of Chapters that are not yet established and may fall under this Section: -

A.B1.4.3.1 Motors, Generators and Drives

**A.B1.5 Transportation Section (TranS)**

A.B1.5.1 The mandate of this Section is to: -

A.B1.5.1.1 be concerned with electrical, telecommunications and control technologies applied in surface, sub-surface and air transportation for part or all of the motive power of vehicles, in an endeavour to reduce air pollution.

Included herein are: -

A.B1.5.1.1.1 battery electric, hybrid electric, plug-in hybrid electric, fuel cell, plug-in fuel cell buses, trucks, cars and diesel-electric, railway electric trains and railway electrification systems;

A.B1.5.1.1.2 high speed trains;

A.B1.5.1.1.3 futuristic transportation modes and peripheral technologies such as self-driving technologies;

A.B1.5.1.1.4 the scope will include planning, modelling, design, operating and maintenance of vehicles and systems; and

A.B1.5.1.1.5 role players could be OEM's, employees of electric transportation companies, regulators, universities, research institutions and any other interested persons.

A.B1.5.2 The established Chapters falling under this Section are: -

A.B1.5.2.1 (none as at 3 September 2019)

A.B1.5.3 The following is a list (non-exhaustive) of Chapters that are not yet established and may fall under this Section: -

A.B1.5.3.1 Railway Electrification

A.B1.5.3.2 Railway Signalling

A.B1.5.3.3 Electric Vehicles

A.B1.5.3.4 Autonomous Vehicles

A.B1.5.3.5 Integrated Fee Management Systems

**A.B1.6 Building Services Section (BSS)**

A.B1.6.1 The mandates of this Section are to: -

A.B1.6.1.1 cover the electrical engineering competencies that apply to buildings, such as power, lighting, heating, ventilation and air-conditioning (HVAC), communication, data services, lifts and escalators, fire protection, security and alarm systems, energy efficiency and relevant smart technologies that take the environment into account; and

A.B1.6.1.2 role players will be PEMs, consulting engineering firms, suppliers of building design and management software, regulators, universities, research institutions and other interested persons.

A.B1.6.2 The established Chapters falling under this Section are: -

A.B1.6.2.1 (none as at 3 September 2019)

A.B1.6.3 The following is a list (non-exhaustive) of Chapters that are not yet established and may fall under this Section: -

A.B1.6.3.1 Lighting

A.B1.6.3.2 Smart Buildings

A.B1.6.3.3 Security and Access

A.B1.6.3.4 Building Energy Efficiency

**A.B1.7 Systems Section (SS)**

A.B1.7.1 The mandates of this Section are to: -

A.B1.7.1.1 cover the core concept of systems thinking and systems modelling and simulation that is used to manage complexity in interfacing elements.

A.B1.7.1.2 cover other cross-cutting topics such as safety, health environmental risk, quality and asset management.

A.B1.7.2 The established Chapters falling under this Section are: -

A.B1.7.2.1 (none as at 3 September 2019)

A.B1.7.3 The following is a list (non-exhaustive) of Chapters that are not yet established and may fall under this Section: -

A.B1.7.3.1 Smart Grids

A.B1.7.3.2 Smart Cities

A.B1.7.3.3 Asset Management

A.B1.7.3.4 Electricity and Energy Modelling

A.B1.7.3.5 Women in Engineering

A.B1.7.3.6 Robotics

**A.B1.8 Telecommunications Section (TeleS)**

A.B1.8.1 The mandates of this Section are to: -

A.B1.8.1.1 (none as at 3 September 2019)

A.B1.8.2 The established Chapters falling under this Section are: -

A.B1.8.2.1 (none as at 3 September 2019)

A.B1.8.3 The following is a list (non-exhaustive) of Chapters that are not yet established and may fall under this Section: -

A.B1.8.3.1 Utility Telecommunications

A.B1.8.3.2 Broadcasting