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## Section 2 Scope of Works

## 2.0 Scope of Works

### 2.1 General Requirements

The works associated with this contract involve the complete strip out of existing lighting and existing mechanical heating services existing boiler plant, heating pipework, circulating pumps, temps stats/sensors and radiators throughout the school.

It shall include for the supply & installation of a new general and emergency lighting and electrics associated with the new heating system consisting of 1No. air source heat pump (ASHP) as the new primary source of heat. The ASHPs shall serve a minimum 90% of the annual heating demand and shall include all associated pipework, valves, circulating pumps, low water content radiators and controls to ensure a new fully operational system. The existing oil fired boiler shall be stripped out and replaced with high efficiency LPG fired boiler to provide the final 10% of the annual heating demand and act as 100% backup in the event of ASHP downtime and/or failure.

### 2.2 Extent of Electrical Services

The electrical installation works shall comprise the installation of the complete and fully functioning electrical services installation in complete accordance with the pre-performance parameters and technical specification contained herein.

The installation works shall include for the supply of all labour, supervision, transportation, materials and supply of equipment necessary to install, test and commission the complete works.

The scope of the electrical works services include the complete strip out and safe disposal of existing redundant electrical installations within the refurbishment areas and as identified in the contract documents

### 2.3 Description of the Electrical Services Works

The Electrical installation works shall include, but shall not be limited to the following:

|             |                                           |
|-------------|-------------------------------------------|
| Element 61: | Electricity Centre & Distribution Systems |
| Element 62: | Power Distribution Services               |
| Element 63: | Lighting Installation                     |
| Element 67: | Fire Alarm Systems                        |

It is proposed that all works shall be completed over the summer months when the school is closed. However, if works extend beyond the summer months it is important to note that the school/classrooms **cannot** be left without heat during any period of the heating season (Oct-May).

Summary of the main items are as follows (list not exhaustive):

- Isolation and strip out of existing electrical services contained within the 8No. Science Rooms

- Safe disconnection and handing over to the client of existing interactive whiteboards and projectors and PA speakers
- Safe disconnection storage and re-installation of existing WiFi Access points
- Modification to the existing main switch board to accommodate alterations as required for the replacement of existing sub-distribution boards
- Installation of new lighting and emergency lighting including daylight dimming controls to classrooms and prep rooms and pir controls to stores
- Installation of general small power including 3-compartment trunking at teachers desk areas to accommodate power and data to interactive whiteboard
- Installation of new fire detection and alarm devices to connect to the existing fire alarm systems to be fully commissioned by the incumbent fire alarm specialist as part of the electrical contract
- Installation of new structured cabling outlets to extend to existing local floor mounted comms cabinet
- Installation of new P.A. Speakers to connect to the existing system to be fully commissioned by the incumbent specialist as part of the electrical contract
- Installation of hdmi and usb cables for connection to new interactive white boards

## Regulations

The Design Criteria, Standards and General Requirements relating to the Mechanical and Electrical Services Installations shall generally be in accordance with this Specification read in conjunction with the relevant clauses of the current editions of the following Standards, Regulations, Guides, etc.

It shall be a requirement that the entire electrical services installation as installed by the Contractor shall conform to the requirements of the following regulations:

- a. Requirements for Electrical Installations (5th Edition with all amendments) issued by the NSAI – I.S. 10101 2020 - together with all associated Guidance Notes
- b. Safe, Health & welfare at Work Act 2005
- c. Safety Health & Welfare at Work (General Application) Regulations
- d. All Health and Safety Authority Legislation (H&SW Acts) and recommendations of the Health and Safety Executive.
- e. All relevant prevailing Irish Standards, European Standards and Directives and Irish Standards in that order as appropriate.
- f. All relevant Irish Standards Codes of Practice.
- g. All DoES TGD Technical Guidance Documents
- h. All CIBSE Lighting Guides and Technical Memoranda and Reports.
- i. Engineering Recommendations and Reports of the Electricity Association (formerly Electricity Council).
- j. Regulations and Requirements of the Regional Electricity Supply Company.
- k. Equipment and plant manufacturer's stipulations and recommendations for installation and testing.
- l. Requirements of the Local Fire Authority.
- m. BISRA Commissioning Code for BEMS systems.
- n. Current edition of the Building Regulations.
- o. Local Authority Byelaws and Regulations.
- p. Building Insurers requirements and LPC recommendations.
- q. The requirements of good installation practices and sound engineering principles.

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## 2.5 Contractual Information

The Main Contractor shall provide all contractual information.

Where conflict arises between any drawings or specifications these shall be relayed in writing to the Main Contractor.

Information precedence shall follow the following order:

- Main Contractors Documentation
- Ipsum Consulting Engineers Drawings
- Ipsum Consulting Engineers Specification

The Main Contractor is responsible for on-site co-ordination of M&E services.

The Electrical Contractor shall include for all required marking out, to facilitate all chases and drilling/coring of penetrations by the Main Contractor.

The Main Contractor shall include for fire stopping all service penetrations, by an accredited specialist. A copy of the fire stopping certificate shall be provided by the Main Contractor to the M&E Contractors for inclusion within their O&M documentation