



Mechanical + Electrical Design Brief

Enterprise House

O'Brien Road

Carlow



SCOPE OF MECHANICAL WORKS

Enterprise House are currently remodelling a section of the ground floor area. The works generally consist of the following

The mechanical works generally consist of the following - (Drawings CCC M02 / M03)

- Heat Recovery Ventilation to Existing internal Meeting space

The electrical works generally consist of the following – (Drawings CCC E01 – E02)

- Additional LV power for general use
- New Radiator Installation
- ELV / Cat6a for data transfer
- Internal / External and Emergency Lighting
- Extending the current fire alarm system

WORKS REGULATIONS

All systems and equipment shall be designed, manufactured, installed, tested and commissioned in accordance with the latest version and amendments of all Irish, British, European and International Standards, Regulations, Rules, Codes of Practice, Chartered Institute of Building Services Engineers (CIBSE) Guides, Legislation and Directives applicable to this specification

The Contractor shall ensure that the completed installations comply strictly but not limited to the latest revisions of the following -

- Current Building Regulations
- Local Authority Requirements
- European, British and Irish Standard Specifications and Codes of Practice
- CIBSE Guides, Technical Memorandum and Codes, including TM13
- HVAC Publications notably DW144 + DW172
- BSRIA Publications
- Applicable Fire Brigade and Fire Officer Requirements
- Clean Air Act
- Institute of Plumbing Engineers, Guides, codes and Engineers Handbook
- Safety, Health and Welfare at Work Act + Regulations
- National Electricity Board Regulations and Codes of Practice.
- Gas Networks Ireland Regulations and Codes of Practice.
- Relevant IGE documents from the Institute of Gas Engineers & Managers IGEM
- Construction (Design & Management) Regulations.
- Health and Safety Authority Regulations and Publications.
- HSE Requirements
- Noise at Work Regulations.
- Provision and use of work equipment Regulations.
- I.S. EN 50160:2010 'Voltage characteristics of electricity supplied by public electricity networks'
- Utility Suppliers requirements

- I.S. 10101:2020/AC1:2020 'National Rules for Electrical Installations' latest edition and including all current amendments.
- NSAI rules, codes of practice and guides.
- Fire Services Act 1981 & 2003, and the national benchmark standard I.S. 3218
- ISO/IEC 11801

MECHANICAL WORKS

Internal Meeting Room / Tea Station Heat Recovery Installation

Contractors to supply and install the 1no MVHR ventilation system generally as per the drawings. Contractor to supply and install all ductwork generally as shown, fire smoke dampers generally as shown, VCDs generally as shown, supply and extract grills generally as shown. All ductwork to be low pressure C/W 30mm sectional foil lagging and banding to all of the ductwork.

All controllers for MVHR to be in back of house areas and agreed with Architects prior to completion.

Contractors are responsible for coordinating with all other trades on site

MECHANICAL BUILDING SERVICES INSTALLATION TENDER SUMMARY

Toilet Mechanical Ventilation Heat Recovery Systems

Supply and Install MVHR + controller and per specifications	€
Supply and install plenum boxes + external louvers as per specifications	€
Supply and Install ductwork, insulations, attenuators as per specification	€
Supply and Install Supply and Extract grills as per specification	€
Test + Commission all above	€
Mechanical Total Price	€

ELECTRICAL WORKS

Extend the LV distribution system

Contractors to supply and install additional RCBO protected 20A circuits to accommodate the new LV installation requirements. All LSF cables to be ran on cable tray / conduits and galvanise back boxes, no PVC trunking to be used. Face plates to be the same as the existing Enterprise House installation. Contractor to extend the existing distribution board to accommodate the new supply requirements if required.

Mechanical LV distribution system (MVHR)

Contractors to supply and install additional MCB / C protected 20A circuits to accommodate the new mechanical installation requirements, generally as per drawings. All LSF cables to be ran on cable tray / conduits and galvanise back boxes, no PVC trunking to be used. Face plates to be the same as the existing Cooney Furlong installation. All external isolators to be IP65 rated with bottom only entry points.

Additional Cat 6 / ELV Data

Contractors to engage the existing Enterprise House ICT specialist and generally re test / label and patch the existing system to prove system functionality. Specialist to patch and terminate all cables in to live / active switches accordingly. All data cables to be run on separate cables trays to any of the fire alarm / LV data cable trays.

Internal Lighting / Emergency Lighting

Contractor to wire and install luminaries generally as per drawings, all luminaries to be TEGRAL as per reference on drawings, all switching plates to be WHITE HAGAR. TEGRAL Emergency pin spots to be used where shown.

Fire Alarm Works

The contractor shall employ the services of the existing specialist fire alarm provider and extend the system generally as per the drawings shown. On completion of all works the building shall be fully certified and commissioned / signed off by the incumbent fire alarm specialist.

ELECTRICAL BUILDING SERVICES INSTALLATION TENDER SUMMARY

• Additional LV Power	€
• Mechanical / Lift LV Power	€
• Additional ELV/ Cat 6a	€
• Internal / Emergency Lights	€
• Fire Alarm Works	€
Electrical Total Price	€

Additional LV Power

Modifications to existing panels to suit new feeds	€
LSF cabling + tray to all new outlets shown	€
Supply and install outlet plates to match existing Cooney Furlong outlets	€
Test + Commission all above	€

Mechanical LV Power

Modifications to existing panels to suit new feeds	€
LSF cabling + tray to all new outlets shown	€
Test + Commission all above	€

Additional ELV / Cat6a

Employ incumbent specialist to terminate and validate new installation works	€
Supply and install all cabling and RJ45 connectors generally as shown	€
Supply and install WI FI Access Points	€
Test + Commission all above	€

Extend Existing Fire Alarm

Employ incumbent specialist to re commission and sign off installation	€
Supply and install all cabling / field devices generally as shown	€
Test + Commission all above	€