

LEV SYSTEMS UPGRADE PROJECT, GRETB
TRAINING CENTRES, MERVUE BUSINESS
PARK, MERVUE, GALWAY.



An tSeirbhís Oideachais Leanúnaigh agus Scileanna
Further Education and Training Authority

VOLUME A.2.3.1.1 - MECHANICAL SERVICES
GENERAL ITEMS

Document Control Sheet

Client	Galway Roscommon Education and Training Board, An Coilear Ban, Athenry, Co Galway.
Project Title	LEV Systems Upgrade Project, GRETB Training Centres, Mervue Business Park, Mervue, Galway.
Document Title	Volume A.2.3.1.3 Mechanical Services Equipment Schedules

Rev	Status	Issue Date	Document File Name	Author	Approved By
00	Draft Tender	03-2026	Spec/ Mechanical /6917-3	John Carr	
01	Tender Issue	12.08.26	Spec/ Mechanical /6917-3	John Carr	

SPECIFICATION LAYOUT

VOLUME A: (the Works Requirements)

Volume A.2.3.1.1	Mechanical Services General Items
Volume A.2.3.1.2	Mechanical Services Specification
Volume A.2.3.1.3	Mechanical Services Equipment Schedules
Volume A.3.3.1	Mechanical Services Drawings and Details

INDEX

VOLUME A.2.3.1.1 - MECHANICAL SERVICES GENERAL ITEMS

1. DEFINITIONS
2. FORM OF CONTRACT
3. CONTRACTOR TO INFORM HIMSELF FULLY OF SITE CONDITIONS
4. DESCRIPTION OF SITE AND BUILDING
5. SCOPE OF MECHANICAL AND ELECTRICAL SERVICES
6. REMOVAL OF EXISTING SERVICES
7. TENDER AND CONTRACT DRAWINGS
8. TENDERS
9. INSURANCES
10. TIME FOR COMPLETION
11. PAYMENT
12. DEFECTS LIABILITY PERIOD
13. SAMPLES /MATERIALS AND PRODUCTS
14. HOT WORK
15. BUILDERS ATTENDANCES/ BUILDERS WORK DRAWINGS
16. SUPERVISION
17. INSPECTIONS BEFORE CONCEALMENT
18. TESTS ON COMPLETION
19. MAKING GOOD DAMAGE
20. ELECTRICAL SUPPLY AND CONNECTION TO EQUIPMENT
21. ELECTRICAL SUB-SYSTEMS CERTIFICATION
22. WORKING HOURS/ INTERRUPTION OF SUPPLIES
23. SAFETY, HEALTH, WELFARE AND ENVIRONMENTAL ISSUES.
24. PROTECTION OF THE WORKS
25. ACCESS FOR PLANT AND EASE OF MAINTENANCES
26. AS INSTALLED RECORD DRAWINGS
27. INSTRUCTION TO STAFF IN USE OF APPARATUS
28. OPERATION AND MAINTENANCE MANUALS
29. COMMISSIONING AND TESTING
30. SUBSTANTIAL COMPLETION
31. LABELLING
32. FREEDOM OF INFORMATION (AMENDMENT) ACT. 2014

VOLUME A.2.3.1.2 - MECHANICAL SERVICES SPECIFICATION

1. ELEMENT (57) FUME EXTRACT VENTILATION SERVICES

VOLUME A.2.3.1.3 - MECHANICAL SERVICES EQUIPMENT SCHEDULES

- 1 Schedule of Fume Extraction Fans
- 2 Schedule of Fume Extraction Arms
- 3 Schedule of Fume Exhaust Hose Reels
- 4 Schedule of Attenuators
- 5 Schedule of Volume Control Dampers

VOLUME A.3.3.1 - MECHANICAL SERVICES DRAWINGS AND DETAILS

The Mechanical Services Drawings and Details are as listed in Clause 7 - “Tender and Contract Drawings”.

VOLUME A.2.3.1.1 – MECHANICAL SERVICES GENERAL ITEMS

1. DEFINITIONS

In construing the General Conditions and the Specification and Contract Agreement, the following words shall have the meanings herein assigned to them, except where the subject or context otherwise requires.

"The Employer"	Galway Roscommon Education Training Board, An Coilear Ban, Athenry, Co Galway. Tel: +353 91-549449 Email: info@gretb.ie
"The Architect / Employer's Representative"	Collins Boyd, Engineers and Architects, 4 Ballinagard, Galway Road, Roscommon. Tel: 090-6634421 Email: agacquin@collinsboydeng.com
"Project Supervisor Design Process (PSDP)/Assigned Designer And Certifier"	Collins Boyd, Engineers and Architects, 4 Ballinagard, Galway Road, Roscommon. Tel: 090-6634421 Email: agacquin@collinsboydeng.com
"The Mechanical/ Electrical Engineers"	Messrs Heavey Kenny Associates, 6 Liosban Business Park, 23E First Floor, Tuam Road, Galway Tel: 091-566004 / 091-565184 Email: admin@heaveykennyassociates.ie

2. FORM OF CONTRACT

The Form of Contract applying to this contract are those set out in the "Short Public Works Contract, Doc PW-CF6 V1.15", as published by the Department of Department Expenditure and Reform on the 25th November 2025.

Payment to the Contractor shall be made by the Client on the Certificate of the Employer's Representative (Engineers), in accordance with Clause 4 of the attached "Short Public Works Contract".

A Copy of the "Short Public Works Contract" including the Schedule attached to the Contract, is included with the Tender Documentation issued to the Contractor.

3. CONTRACTOR TO INFORM HIMSELF FULLY OF SITE CONDITIONS

The Contractor shall be deemed to have made a thorough examination of the Contract Documents, the site and all features thereof, the existing premises, together with all internal and external services, adjoining premises and property or other things affecting the proposed works, to ascertain precisely the nature and extent of same and the condition under which the works will have to be executed, as no claim will be allowed on the grounds of want of knowledge in this respect. The Contractor shall generally obtain his own information on all matters and things which can in any way influence his tender.

Unless he does so at this time, it is probable that extra work arising from any deviation from the contract for any reason other than the most exceptional circumstances, shall not be compensated by the Client.

Access to the site for inspection purposes can be made by prior arrangement with the following:

<u>Contact Person</u>	<u>Capacity</u>	<u>Telephone No.</u>
Mr James Malone	Assistant Manager, GRETB Training Centre, Mervue Business Park, Galway	087-6583800 James.malone@gretb.ie

4. DESCRIPTION OF SITE AND BUILDING

The Metal Fabrication room (LEV Systems 1 to 5), Welding Workshop (LEV Systems 6 to 12) including the balancing of the existing LEV systems 14 and 15 in the Plumbing Unit are located in Building No 1 at the GRETB Training Centre in the Mervue Business Park, Mervue, Galway, and the upgrade works to the LEV systems 18 to 21 are located in the Garage in Building No 2 at the GRETB Training Centre in the Mervue Business Park, Mervue, Galway.

5. SCOPE OF MECHANICAL AND ELECTRICAL SERVICES

The entire Mechanical Services Installation and the associated Builders Attendances shall be carried out by a competent Contractor.

The Entire Electrical Installation for this project shall be carried out by a **Competent RECI /Safe Electric registered Electrical Contractor**, which shall comply fully with the rules of the NSAI National Rules for Electrical Installations I.S. 10101: 2020 +AC2: 2025), including the IET Wiring Regulations, 18th Edition, and BS 7671:2018 +A4: 2026.

The Mechanical and Electrical Services Installations are divided into sections as follows: -

Element (57): This section shall include for the provision of the upgrade works required to the Local Extract Ventilation (LEV) systems in the Metal Fabrication room (LEV Systems 1 to 5), Welding Workshop (LEV Systems 6 to 12) including the balancing of the existing LEV systems 14, 15 in the Plumbing Unit in Building No 1, including the upgrade works to the LEV systems 18 to 21 in the Garage in Building No 2, consisting of the provision of a number of replacement fume extraction arms, fume extraction fans, attenuators and fume extraction reels, including the provision of all associated alterations and additions to the galvanised steel fume extraction ductwork, ductwork supports, including the provision of some new isolation and control dampers, etc., all as indicated on the drawings and as specified below.

This section shall also include the provision of upgrade works to the existing “METRON” down-draft table in the welding workshop (LEV system No 13), including supply and installation of a tower all-in oneself cleaning cartridge filter unit complete with built-in fume extraction fan to serve the Plasma down-draft table (LEV system No 5), in the metal fabrication workshop in Building No 1.

Element (61): This section covers the provision of additional C-Type motor rated MCB’s, including the provision of new Contactors and overloads for the new fume extraction fans in the various electrical sub-distribution centres serving the Metal Fabrication Workshop and Welding Workshop in Building No 1, including the Garage in Building No 2, as indicated on the drawings and as specified below.

Element (62): This section includes the provision of new power and control wiring to the new fume extraction fans, serving the Metal Fabrication Workshop and Welding Workshop in Building No 1, including the Garage in Building No 2, as indicated on the drawings and as specified below.

Element (68): This section covers the provision of the earthing installation which shall comply with the requirements of the National Rules for Electrical Installations I.S. 10101: 2020 +AC2: 2025), including the IET Wiring Regulations, 18th Edition, and BS 7671:2018 +A4: 2026.

Builders Attendances: This section shall also include for the associated builders’ attendances consisting of the weathering of a number of openings in the roof, in both Building No 1 and Building No 2 as detailed on the drawings and as specified below.

6. REMOVAL OF EXISTING SERVICES

The Contractor shall include in his tender for the stripping out, removal and proper disposal of all the redundant mechanical services installations, which becomes redundant by virtue of the Contract Works, consisting of the existing redundant LEV Fume Extraction systems complete with fume extraction arms, fume extraction fan and all associated ductwork, etc.

When stripping out the redundant services the Contractor shall ensure that no unnecessary damage is caused to either the equipment and/or the building fabric which is to be retained, and the contractor shall include in his tender for protecting the building during the works.

The Contractor shall be responsible for removing all redundant materials from site and the disposal thereof in accordance with environmental guidelines, e.g. hazardous substances, recycling of metal, WEE Directive, etc.

7. TENDER AND CONTRACT DRAWINGS

Copies of drawings of the building are issued with each Specification. Dimensions and other information shown on the drawings forming part of the Contract are believed to be correct, but no responsibility for same is accepted. The Contractor shall be solely responsible for the setting out of the work, and he shall rectify any errors he may make, either in setting out the work or during its progress.

The Contractor shall not deviate in the execution of the work from the Specification or Drawings herein referred to, except upon written order signed by the Employers Representative authorising such deviation. Should any work or articles obviously intended by the drawings and necessary to complete the works have been omitted to be defined as specified in the Specification or the Schedule of Prices, same is to be performed or supplied to the directions of the Employers Representative without any additional payment.

The following are the drawing numbers which indicate the details of the layouts:

<u>Drawing No.</u>	<u>Title</u>	<u>Scale</u>
6917-3/M57/01	Layout of Ventilation Installation- Metal Fabrication Workshop (Building No 1)	As Shown
6917-3/M57/02	Layout of Removed Ventilation Systems- Welding Workshop (Building No 1)	As Shown
6917-3/M57/03	Layout of Proposed Ventilation Systems- Welding Workshop (Building No 1)	As Shown
6917-3/M57/04	Layout of Ventilation Installation- Plumbing Workshop (Building No 1)	As Shown

6917-3/M57/05	Layout of Ventilation Installation- Mechanics Workshop (Building No 2)	As Shown
6917-3/BLD/01	Layout of Associated Builders Attendances	As Shown

A copy of each of the above drawings is issued with this Specification and shall be signed and returned by the Contractor when submitting his tender.

8. TENDERS

The Contractor shall submit his tender for a gross specific amount in Euros, which shall include all materials, workmanship, plant, carriage and cartage and expense incidental to the due performance of the several works as set forth in the Specification and as shown on the drawings to their true intent and meaning.

Any item left unpriced in the Pricing Document (Volume C) shall be deemed to be included for in the tender and the cost of the item shall be deemed to be spread across and included in the rates generally.

9. INSURANCE

The Contractor shall make full provision in his tender for complying with the requirements of Clause 10 of the attached “Short Public Works Contract” in relation to Insurance and Compensation. He shall affect adequate insurance in his own name and also in the name of the Employer to cover all the risks or claims specified in the aforesaid “Short Public Works Contract” and shall hold the Employer indemnified against all such claims and risk in anyway arising out of the works included in the Contract. The Contractor shall fully comply with the Social Welfare Acts, the Conditions of Employment Acts and other Statutory Orders effecting the Employer and Employed.

The minimum sum for public liability insurance shall be €6,500,000.00 (six million, five hundred thousand euro) for any single claim, including employer’s liability of €13,000,000.00 (thirteen million euro) and separate all risks insurance as stated in the attached “Tender and Schedule”.

The contractor should note the following specific requirements in relation to the insurances on this project as follows:

The Contractor’s Public insurance must be extended to note GRETb as an Additional Insured and a Non-Vitiation clause applied, similar notations are required under the Contractor’s Products Liability and Contract Works Insurances.

The Contractor shall arrange with their insurers to provide evidence of their insurances confirming the extension *noting GRETb as an Additional Insured and a Non-Vitiation clause applying.*

10. TIME FOR COMPLETION

The Contractor shall complete the work in strict accordance with the drawings and specification and to the satisfaction of the Employers Representative within the period indicated in Clause 1.1 of the schedule attached with the “Short Public Works Contract”.

It is intended that the works will be carried out and fully completed and certified during the period from the 5th October 2026 to the 6th November 2026. The Contractor should note that both Training Centre buildings will be fully occupied during this period as there are ongoing classes taking place throughout the year, however the training centres can work around making areas of the building available to the Contractor as and when needed by the Contractor to carry out their works (with the exception of the Motors Mechanics Workshop which is only available for one week), in agreement with the Training Centre Manager.

Please note that the areas made available will be at the discretion of and by agreement with the Employer.

11. PAYMENT

Payments to the Contractor shall be from the Client to the amounts as certified by the Employers Representative, at the rate of 90% of the value of the works completed, and materials delivered to the site with title vested in the Employer, to the Employers satisfaction as per Clause 4.1 and 4.2 of the schedule attached with the “Short Public Works Contract”. Half the retention money shall be released upon 'Substantial Completion' and hand-over in accordance with the programme. The balance of the retention money shall be released 12 months after completion of all of the works, and only then if the contract terms of maintenance have been properly carried out. The Contractor shall ensure that all claims, along with all the necessary supporting paperwork, are submitted to the Employers Representative for clearance at least two weeks prior to the date on which the Certificate shall be issued.

12. DEFECTS LIABILITY PERIOD

During the defect's liability period, the Contractor shall be responsible for the proper performance of the installations provided.

All items of plant, equipment, apparatus or materials supplied under this Contract, whether of the Contractors own make or supplied by a Supplier, shall be guaranteed against faulty workmanship or materials during the defect's liability period.

The defects liability period shall be 12 months from the date of the Employers Representatives date for certificate of substantial completion, which shall be in accordance with the requirements of Clause 30 below.

If any equipment or part thereof during that time be found defective or show signs of weakness due to its selection, manufacture, installation, commissioning, faulty design of materials or workmanship or to neglect on the part of the Contractor, or which in the opinion of the Employers Representatives is unsatisfactory, the Contractor shall at his own expense, repair or remove such equipment, articles or things and substitute others for them, and if the Employers Representatives think fit to make such repairs or removal, the Contractor shall bear the cost thereof.

In any event that any plant or equipment is shown to be defective due to manufacturing, installation or commissioning during the defect's liability period, the Contractor shall at his own cost obtain an extension to any applicable manufactures warranty in order to cover the full original warranty period for the item, starting at the date of the resolution of the fault or replacement of the faulty equipment.

In the event that the Contractor is unable to achieve an extended manufactures warranty, then the Contractor shall remain liable for the replacement of the item of plant or equipment if it fails during the extended warranty period.

The cost of making good any defects which may arise from fair wear and tear or from want of proper care or maintenance by the Employer in the running of the plant shall be excluded from this defect's liability period.

13. SAMPLES / MATERIALS AND PRODUCTS

Samples of all materials, manufactured articles or other goods shall, if required, be submitted to the Employer's Representative for provisional approval before adoption. Such approval shall not relieve the Contractor from responsibility for making good any defects which may arise as a consequence of failure or otherwise of any materials during the contract period.

The entire installation shall be constructed from new materials and equipment, and all materials and workmanship shall be the best of their respective kinds in accordance with the specification.

All materials and equipment selected or proposed by the Contractor shall be provided by manufacturers who have local maintenance and servicing capacity available within the Republic of Ireland as necessary.

All samples for approval shall be provided for appraisal in a timely manner and where samples are not available the Contractor shall submit other details for approval such as other reference sites, drawings or photographs as necessary.

14. HOT WORK

The Contractor shall provide for the following safety measures during any hot work processes carried out on site:

1. Suitable fire extinguisher apparatus available at site of hot work.
2. Checking and removing ignitable substances from vicinity of hot work while in progress.
3. Ensuring that all necessary fire precautions and supervision are implemented.

It shall be the Contractors sole responsibility to ensure that these measures are implemented.

15. BUILDERS ATTENDANCES/ BUILDERS WORK DRAWINGS

All Builder's Attendances associated with this contract **shall be marked out and carried out by the Contractor**. This shall include the provision of all new openings required in the internal walls, including all associated re-instatement works, including the provision of new weathered openings in the roofs, etc as indicated on the attached drawings.

The Contractor shall be responsible for the correct setting out and marking out of all such builder's attendances and for superintending and directing employees detailed to execute such work.

The Contractor shall be responsible for the fixing of all brackets, supports, clips etc., required to carry out the mechanical services installation in accordance with the specification and drawings and shall agree with the Employer's Representative the method of fixing before such works commence on site.

16. SUPERVISION

The Contractor shall make available throughout the duration of the works a Project Supervisor or Site Foreman with appropriate qualifications and or experience to attend site meetings and receive instructions as are necessary for the execution of the contract, and to carry out superintendence of the works on site.

The Project Supervisor /Site Foreman shall keep accurate records and details of all aspects of the works as necessary.

17. INSPECTION BEFORE CONCEALMENT

Whenever work requiring inspection or testing is subsequently to be concealed, due notice shall be given to the Employer's Representative so that inspection may be made or tests witnessed before concealment.

Failure to give due notice, of at least 48 hours, shall necessitate the Contractor uncovering the work and reinstating it at their own expense.

The Employer's Representative reserves the right to forego its inspection; however, this will in no way relieve the Contractor's responsibility to comply with the specification and drawings.

All work that is not installed to the required standard or does not demonstrate adequate co-ordination with the building and other services must be removed and re-installed in full compliance with the tender documentation and relevant standards at the Contractor's cost and without any associated increase in the project program.

18. TESTS ON COMPLETION

When the work has been completed the Contractor must carry out such tests and provide such apparatus, instruments and materials, as the Employer's Representative may consider necessary.

The Contractor shall give to the Employer's Representative in writing, 21 days' notice of the date after which he will be ready to make the tests on completion. Unless otherwise agreed, the tests shall take place within ten days after the said date, on such day or days as the Employer's Representative shall be writing to notify the Contractor. Electricity, as required shall be paid for by the Employer.

If the Employer's Representative fails to appoint a time after having been asked to do so, or to attend at any time or place duly appointed for making the said tests, the Contractor shall proceed to carry out the tests himself and shall report the results to the Employer's Representative and the tests shall be deemed to have been made in the presence of the Employer's Representative.

If, in the opinion of the Employer's Representative, the tests are being unduly delayed, he may by notice in writing call upon the Contractor to make such tests within ten days from the receipt of the said notice and the Contractor shall make the said tests on such day within the said ten days as the Contractor may fix and of which he shall give notice to the Employer's Representative.

If the Contractor fails to make such tests within the time aforesaid the Employer's Representative may himself proceed to make the tests. All tests so made by the Employer's Representative shall be at the risk and expense of the Contractor, unless the Contractor shall establish that the tests were not being unduly delayed in which case tests so made shall be at the risk and expense of the Employer's Representative.

19. MAKING GOOD DAMAGE

The Contractor shall inspect all equipment and materials on arrival on site for defects or any failure to meet the specification and shall replace any defective equipment or materials as necessary.

The Contractor shall take all necessary precautions to ensure that there is no damage or defacements caused by their employees or representatives to the furniture, fittings or other equipment within the buildings or to the premises themselves or to adjoining premises and shall make good at their own expense any damage caused to the premises or its contents during the works, to the entire satisfaction of the Employer's Representative.

The Contractor shall remove all rubbish, plant and unused materials from the site on completion of the works and provide for their proper disposal in accordance with the Local Authorities guidelines / requirements, including the WEE Directive.

At substantial completion the Contractor shall present all plant and equipment to the Employer's Representative in a fully working and un-damaged condition. Any damaged plant or equipment must be replaced prior to substantial completion. Failure to deliver un-damaged plant and equipment at substantial completion may lead to their exclusion from the substantial completion certificate and the delay of the commencement of the defect's liability period and warranties for the equipment in question.

In particular, any fume extraction fan casings that contain weld, burn marks, or dents, or significant scratches (howsoever caused) must be considered to be defective at substantial completion.

20. ELECTRICAL SUPPLY AND CONNECTION TO EQUIPMENT

The electric wiring of all equipment supplied under this contract shall be carried out under this contract by a **competent Safe Electric /RECI -registered electrical contractor**. The Contractor shall include for assisting the Electrical Contractor in the correct setting of all supplied plant and control equipment, etc., and shall be solely responsible for ensuring that they are operating satisfactorily. He shall also include for handing over to the Electrical Contractor, all information regarding electrical equipment being supplied by him.

This information shall be handed over as soon as possible after the contract is placed, and certainly not later than two weeks after signing of sub-contract.

The electrical supply available is normal ESB's Three phase supply, 380 volt, 50 cycles and all electrical equipment supplied under this contract, shall be suitable for the above-mentioned electrical supply.

21. ELECTRICAL SUB-SYSTEMS CERTIFICATION

The Electricity Regulation Act 1999, as amended, makes it mandatory for a [Registered Electrical Contractor \(REC\)](#) to issue a Completion Certificate for all restricted and controlled [electrical works](#).

It is through this certification system that Safe Electric, can monitor and validate that the electrical works completed meet the required safety standards of the National Rules for Electrical Installations, and the Electrical Contractor is required to issue an Electrical Completion certificate for all restricted and controlled electrical works undertaken by them, which would be supplemental to other certification such as IS 3217: 2023 (4-part) or IS 3218: 2024 (6-part) certificates for emergency lighting and fire alarm installations.

To facilitate the wide range of electrical works undertaken by RECs, the different types of Completion Certificates are outlined below:

[Certificate No. 1 \(paper based\)](#) (<50 kVA): Completion Certificate for the connection of new electrical installations (less than 50kVA) to the Distribution System Operator (DSO) Network. A sample for an Electronic Certificate No. 1 is available [here](#).

[Certificate No. 2 \(paper based\)](#) (≥50 kVA): Completion Certificate for the connection of new electrical installations (greater than or equal to 50kVA) to the DSO Network. A sample for an Electronic Certificate No. 2 is available [here](#).

[Certificate No. 3:](#) Covers alterations (including additions and extensions) to existing installations, additions, extensions, subcontract, agricultural and government grants (non-DSO). Certificate No. 3 cannot be used to obtain a connection or a re-connection of the electrical supply from the DSO.

[Interim electrical installations](#) (≥50kVA): Interim Certificates are validated by Safe Electric to enable the main distribution board in an industrial or commercial installation to be energised so that a completed subsystem e.g. a lift system, or a standalone module, can be tested or commissioned.

The Contractor and his Electrical Contractor shall issue an appropriate electrical completion certificate along with the test results associated with same, which shall be included in the Project Safety File.

22. WORKING HOURS/INTERRUPTION OF SUPPLIES

Whilst there are no particular strict limitations placed by the Employer on working hours on the project Works, the Contractor is to take into consideration that due to the nature of the project it will be necessary to maintain the mechanical and electrical services installations in operation at all times, as the works will be carried out when the training centre is occupied by staff and other groups.

All works involving significant noise must be carried out outside of the training centres hours in agreement with the Client. It may be necessary also to carry out some of the works after normal hours and the Contractor shall factor all of these costs in their tender submission.

23. SAFETY, HEALTH, WELFARE AND ENVIRONMENTAL ISSUES

Safety, Health, Welfare and Environmental Issues

Comply fully with all statutory safety, health and welfare regulations regarding work people, including those employed by Sub-contractors employed on the site and particularly the Safety, Health & Welfare at Work (Construction) (Amendment) Regulations SI No 528 of 2021 and carry out the function of Project Supervisor for the Construction Stage of the Project.

The contractor shall comply in all respects with the Factories and Safety in Industry Acts and any other Acts and with any Statutory Instruments or Regulations issued thereunder.

The Contractor is required to provide a safety method statement clearly indicating the precautions he will be taking at each stage in the works to protect his employees, sub-contractors, visitors and the Employers personnel and any plant and equipment, etc. Full details of any chemical or substances proposed to be used in the project construction process should also be detailed fully and the Employer's prior written approval received for its use.

Safety, Health, Welfare at work Acts and Regulations Compliance

The contractor shall be appointed by the client under a collateral agreement to the main contract as Project Supervisor for the Construction Stage in respect of the project pursuant to the Safety, Health & Welfare at Work (Construction) (Amendment) Regulations SI No 528 of 2021. The contractor shall include all costs for the provision of the services of Project Supervisor for the Construction stage pursuant to Regulations 16 to 22 inclusive of these Regulations.

The Contractor shall include for providing all necessary information as requested by the Project Supervisor for the Design Process, to enable the completed Safety File including drawings, commissioning and test certificates, to be available at substantial completion stage.

Project Supervisor Construction Stage

The contractor will be required, with the prior written consent of his insurance company, in consideration of acceptance of his tender to act as the Project Supervisor (Construction Stage) under the Safety, Health & Welfare at Work (Construction) (Amendment) Regulations SI No 528 of 2021. He will be required to enter into a Collateral Agreement with the Employer to provide the services of Project Supervisor (Construction Stage) and to indemnify the Employer from the consequences of any failure on his part to do so, the agreement to take effect on acceptance of the tender for the works or any agreed modifications thereof.

The contractor acting as Project Supervisor Construction Stage will be required, inter alia:

- to provide the services of Project Supervisor (Construction Stage) by way of Collateral Agreement in consideration of acceptance of his tender.
- to return Safety and Health information to establish competence to provide this service in the form agreed.
- to identify with his tender any aspect of the project which he considers, as a competent Contractor, to be incapable of being constructed in a reasonable safe way.
- to provide a general warranty of competence for the services of the Main Contractor and Project Supervisor (Construction Stage).
- to provide written confirmation that the Insurance Company consent to his acting as Project Supervisor (Construction Stage).
- to develop a Safety, Health and Welfare Plan at least one week before construction commences on site and review and revise as necessary and circulate copies to all parties concerned as necessary.
- to submit a commencement, notice to the Health and Safety Authority.

- to review and revise the Safety, Health and Welfare Plan as the work proceeds circulate copies to all parties concerned as necessary.
- to prepare the Safety File for the building and give the Employers Representative one bound hard copy and two electronic copies on CD on completion of works.
- to co-ordinate the implementation of the general requirements in relation to technical, organisational and/or programming of the works.
- to co-ordinate the implementation of requirements to manage the site properly and advise all workers, sub-contractors, employees and site visitors, etc., of the Health and Safety legislation's requirements.

24. PROTECTION OF THE WORKS

The installations shall be properly protected at all times. Should the measures taken by the Contractor prove to be inadequate, then it shall be the sole prerogative of the Employer' Representative to decide whether repairs may be affected and suitable recompense made to the Employer or whether damaged installations shall be completely replaced. See the above section on making good damage for further details.

At no time is the Employer' Representative obliged to accept anything other than the new totally undamaged, correctly installed and selected equipment. All costs for replacement remain with the Contractor.

The Contractor is required to include in their tender for the provision of duct covers to protect all computer and electronic equipment in the vicinity of the works as necessary.

25. ACCESS FOR PLANT AND EASE OF MAINTENANCE

Prior to the works commencing on site and plant and equipment placed on order, the Contractor shall check on site the dimensions of all plant / equipment locations and all access doorways, etc. to ensure that each item can be admitted to its allotted position and installed as specified, together with all other services.

Failure of the Contractor to determine that the plant and equipment can be easily installed in its proposed location prior to ordering will result in the replacement of the plant or equipment and the Contractor shall be responsible for all re-stocking and delivery charges etc. associated with the replacement of the plant or equipment.

The Contractor shall also ensure that there is sufficient access available around the plant and equipment prior to the installation to allow easy removal for replacement or maintenance purposes without carrying out any destructive operations.

Installation of equipment shall be arranged to give ease of subsequent removal of electronic motors, thermostats, or other equipment, and of any other item to which it may be reasonably anticipated that maintenance would apply.

The Contractor shall co-ordinate all ductwork to allow extract fans to be removed without the need to their associated ductwork.

Should the Contractor be unable to demonstrate clearly that equipment and plant can be easily removed for maintenance or replacement purposes the Contractor must modify the installation as required at its own costs to provide a level of access that is acceptable to the Employer' Representative.

26. AS INSTALLED RECORD DRAWINGS

When the installation is complete, the Contractor shall supply a set of record drawings in both hard copy and on disk/ USB Stick (AutoCAD 2022 or higher format) showing the layout of the installation as installed, with description, identification and location of all plant equipment, Fume Extraction Fans, Attenuators, ductwork, etc.

The Contractor will receive a copy of the tender drawings on disk format on their appointment from the Employer' Representative and the Contractor will be requested to update his drawings on disk/USB Stick on a monthly basis to reflect any revisions to the building and the services as installed on site.

On completion of the works the Contractor will be required to produce a copy of the update drawings on disk/USB Stick format, together with a hard copy set of the drawings (A1 size) which shall be handed to the Employer' Representative for checking and approval before final printing.

27. INSTRUCTION TO STAFF IN USE OF APPARATUS

The Contractor shall include in his tender for the instruction of the staff appointed by the Employer to operate the plant and equipment, and he shall also provide instructions for all items of plant and equipment whatsoever supplied by him under this contract, and he shall ensure that these instructions are clearly and fully understood by the personnel to operate such plant and equipment.

All instructions listed above shall first be submitted to the Employer' Representative and their signed approval obtained before they are presented to the Employer.

After the Employer' Representative is satisfied and has witnessed that all plant, equipment and systems are operating satisfactorily, then the Contractor shall arrange to provide the instruction of the end user and staff appointed by the Employer to operate the plant and equipment and shall provide at least 3 weeks' notice to the Employer of the intended date for the demonstrations.

The Contractor shall provide a simple DVD recording of the Contractors formal handover talks, including the training and demonstration of the Mechanical Services, and training in their management and use, which shall be handed over to the college authorities together with a completed and signed Handover and Completion record sheet (see attached "Appendix A" at the end of this document), which is intended to act as a future aid/ memoir for the training centre authorities.

28. OPERATION AND MAINTENANCE MANUALS

The Contractor shall include in their tender for the provision of a safety file incorporating all maintenance / operation instructions, DVD recording of the Client instructions, commissioning / test certificates, record drawings and Declaration of Performance and CE Certificates for the project in accordance with the Safety, Health & Welfare at Work (Construction) (Amendment) Regulations SI No 528 of 2021.

One hard copy shall be provided by the contractor bound in a strong folder, with two copies in disk or USB format also and shall have the Employer' Representative approval before they are handed over to the Employer.

The following is a summary of the relevant information to be included in the safety file: -

1. **Contents Sheet**
2. **Introduction** Given a general Introduction incorporating an overview of the installation with list of equipment, and their suppliers, with contact names address and telephone numbers and email addresses.
3. **Operating Procedures** General description of the installed systems, including operating procedures, preliminary checks, startup procedures, operating checks, shut down procedures and emergency shutdown of the following main plant items:

- Section 1 - Fume Extraction Fans
- Section 2 - Fume Extraction Arms
- Section 3 - Fume Extract Hose reels
- Section 4 - Fan Inverter drives
- Section 5 - Attenuators
- Section 6 - All sub-systems Certificates (where appropriate).

4. **Maintenance Procedures** Outline the recommended procedures for maintaining the services.

5. **Equipment Schedules** Provide technical details of all plant and equipment including individual manufacturers handbooks, technical literature, relevant catalogue sections, wiring diagrams etc.

6. **Commissioning / Test Certificates** The following are a list of the Commissioning/Test Certificates required:
 -
 - 1. Suppliers Commissioning Certificate for the Mechanical Fume Extract Ventilation Systems and associated controls
 - 2. SAFE Electric /ETCI Electrical Completion certificate

7. **Client Instruction** DVD recording of the Clients Training and Demonstration of the Mechanical and Electrical Services.

8. **Declaration of Performance Certificates and CE Certificates.**

Provide a complete set of the Mechanical “Declaration of Performance Certificates” and “CE Certificates” as listed in “Appendix B” at the end of this Document.

9. **Record Drawings** Provide a complete set of “As installed Drawings”: (A1 Size)

29. COMMISSIONING AND TESTING

The Contractor shall notify the Employer' Representative in writing when in its opinion, the electrical and mechanical services installation or parts thereof are ready for testing and commissioning. The Contractor shall then carry out the tests required. The Contractor shall prove that all test results are in accordance with the performance-based specification. The Contractor shall then operate the installation or selected parts thereof in the presence of the Employer' Representative and shall make all specified tests to the satisfaction of the Employer' Representative.

Where it is not possible at the particular time of commissioning and testing for full load conditions to be obtained or simulated, the Contractor shall repeat such operations of full load or simulation thereof at a time when this can be achieved.

Where portions of the work are commissioned and tested separately, the Contractor shall, upon substantial completion or completion of section as defined in the contract, demonstrate to the Employer' Representative that all of the several portions are capable of proper co-ordinated simultaneous operation.

In cases where the construction programme is such that the Contractor will need to return to the portion of the building taken over and occupied by the Employer' Representative in order to undertake testing and commissioning, etc., the Contractor shall take all necessary precautions against, and shall be responsible for, any damage caused whilst working in such areas for that purpose.

For the purposes of commissioning and testing of the installation the Contractor shall provide all necessary skilled and unskilled labour and all necessary instruments and testing equipment.

Subsequent to the completion of all testing and commissioning to the satisfaction of the Employer' Representative the Contractor shall operate the plant and equipment and shall demonstrate that the overall systems function correctly in accordance with the requirements of the performance-based specification.

30. SUBSTANTIAL COMPLETION

Substantial completion of the mechanical and electrical services installation, or agreed phase or part of the works, **shall not be achieved until the Contractor has demonstrated to the satisfaction of the Employer' Representative that the following aspects are complete: -**

- All works are complete other than minor snags or defects which could be reasonably completed within an agreed programme without causing disruption to the Employer or their Agent's use of the building.
- All tests and demonstrations to have been undertaken in the presence of the Employer' Representative as are required in the specifications.
- All final copies of the Record Drawings, Schedules, test and commissioning certificates, including the Declaration of performance and CE Certificates and the Mechanical Operating and Maintenance manuals have been supplied in a format agreed with the Employer' Representative.
- All spares, keys, tools, and other materials required by the specification for the running and maintenance of the plant and equipment as specified are to have been supplied and handed over to the school authorities.
- All instruction of the Employer's staff have been satisfactorily completed and a DVD recording of the Client training and a signed record of the demonstration meeting and the handing over of the Mechanical Operation and Maintenance Manual and drawings have been obtained by the Contractor.

31. LABELLING

The Contractor must provide labelling on all plant, equipment, and pipework, etc.

All labels must be neat, lined up with other labels (in case of ductwork), orientated for easy view and securely fixed. Any labelling installed which does not fit this description shall be removed and replaced as required.

32. FREEDOM OF INFORMATION (AMENDMENT) ACT, 2014

Information in relation to this tender may be available on demand, in accordance with the Freedom of Information (Amendment) Act, 2014.

The Contractor is requested to consider if any of the information supplied by him in this tender should not be disclosed because of its sensitivity. If this is the case, he should, when providing the information, identify same and specify the reasons for its sensitivity. The Client will consult with the Contractor about sensitive information before deciding on any Freedom of Information request received.

Appendix “A”

HANDOVER AND COMPLETION RECORD SHEET FOR THE MECHANICAL AND ELECTRICAL SERVICES INSTALLATIONS

Name/Address: LEV Systems Upgrade project, GRETB Training Centres, Building No 1 and No 2, Mervue Business Park, Mervue, Galway.		
Mechanical and Electrical Services Installations		
ITEM	Signatures and Date	
Mechanical Services comprising of the mechanical fume extract ventilation systems and associated controls, etc., have been tested and are operating satisfactorily.		
The associated Electrical Services comprising of all wiring power and control wiring, etc., have been tested and are operating satisfactorily.		
The associated Builders Attendances comprising of all openings in the internal walls and roofs and all associated re-instatement works etc., have been completed satisfactorily.		
The Clients instructions on the operation of the mechanical fume extract ventilation systems are included in the Operating and Maintenance Manuals.		
A soft copy of the Operating and Maintenance Manuals has been provided by the Contractor and is included in the Operating and Maintenance Manuals		
Operating and Maintenance Manuals have been checked for compliance and handed over by the Building Services Consulting Engineers to the training centre and have been fully explained.		
A demonstration meeting were held in the presence of the Building Services Project Engineers, the Contractor, and the Training Centre Manager and were fully briefed on the operation of the mechanical fume extract ventilation system and the associated controls	Date Meeting:	
BUILDING SERVICES CONSULTING ENGINEERS (COMPANY NAME): Heavey Kenny Associates		
Names (Printed) (i) (ii)	Signed:	Date:
Training Centre Manager		
Name: (Printed)	Signed:	Date:

Appendix “B”

SCHEDULE OF MECHANICAL DECLARATION OF PERFORMANCE AND CE CERTIFICATES

Item No.	Product	Manufacture/ Supplier/ Standard	Declaration of Performance Cert	CE Cert
----------	---------	---------------------------------------	---------------------------------------	------------

Element (57): Fume Extract Ventilation				
1.	Ductwork	BS EN 10143: 2006 and DW 144 (Class D system)	√	√
2.	Fume Extraction Arm	GEOVENT Compact	√	√
3.	Fume Exhaust Hose Reels	GEOVENT GTS-1000-10-125	√	√
4.	Fume Extraction Fan	GEOVENT MEF range	√	√
5.	Attenuators	AAFA Attenuators	√	√
6.	Volume Control Dampers	Model A Series 900	√	√
7.	Tower Filter unit	GEOVENT GFB2	√	√

Appendix “C”

SCHEDULE OF MECHANICAL ANCILLARY CERTIFICATES

Certificate No	Contractor/Supplier	Certificate Type /Ref Number
1	Mechanical Contractor	Cs CIF-01 Ancillary Certificate of Compliance on Completion.
2	Mechanical Contractor	Css CIF-02 Ancillary Certificate of Compliance on Completion.