

CAVAN COUNTY COUNCIL

HOUSING DEPARTMENT

GENERAL SPECIFICATION



October 2023

GENERAL CONDITIONS

1.1 Contract Conditions

Introduction:

This is a General or Standard Specification provided by Cavan County Council's Housing Section for use on a variety of Projects. It should be read in conjunction with the Project Drawings and Project Specification (if one is provided).

1.2 Parties

Employer:

Cavan County Council

Contractor:

To be selected after tender process

1.3 Definitions & Explanations

Headings:

The Clause headings used in the Specification shall not be deemed to be part of the text.

Approved:

"Approved" shall mean approved in writing by Cavan County Council's Engineer (the Engineer).

Instructed:

"Instructed" shall mean instructed in writing by the Engineer.

IS, BS + EN:

'IS', 'BS' and 'EN' followed by a number means respectively the Irish, British or European Standard Specification relating to a particular product. Where one of these standards is specified, items complying with a similar International or National Standard of another member of the E.U. may be used only if approved by the Engineer.

Standard Specification:

The Standard Specification of Cavan County Council is also known as the "General Specification" and the "Specification". Any reference to any other specification shall be referred to by full name and by who prepared it or other information to distinguish it from the Standard Specification of Cavan County Council.

Manufacturer and Type:

Where “Manufacturer” is used in the Specification of materials, it shall mean the firm under whose name the particular product is marketed. Where ‘Type’ is used, it shall mean the proprietary brand name, reference to other quality by which the product is identified. The phrase “or equal approved” shall be deemed included whenever materials are specified by manufacturer’s name. Approval will be issued for any alternative material that is, in the opinion of the Engineer, equal to the Specified/Named Material. The contractor shall include in his tender for the item or product as specified/named in the Specification. After tender the contractor may put forward alternatives as options for consideration but no commitment is given to accept any alternative, it will always be assumed that the tender includes for the items as specified/named.

Proprietary Names:

The phrase “or equal approved” shall be deemed included whenever materials are specified by proprietary name. Approval will be issued for any alternative material that is, in the opinion of the Engineer, equal to the Specified/Named Material. The contractor shall include in his tender for the item or product as specified/named. After tender the contractor may put forward alternatives as options for consideration but no commitment is given to accept any alternative, it will always be assumed that the tender includes for the items as specified/named.

1.4 Standards, Codes of Practice

Standards and Codes of Practice:

References herein to Irish, British and EU or other National Standards or Codes of Practice do not give the year of issue or dates of amendments. The latest relevant published version including any relevant amendments at date of invitation to tender shall apply. Where a Standard or Code of Practice has been suspended, the latest edition of the superseding publications shall apply. Any discrepancies should be notified in writing to the Engineer.

Standards, Codes of Practice and Text:

The Specification shall take precedence over the Standards and Codes of Practice that are referred to where the Specification requires a higher standard. All aspects of the Works are to be carried out in accordance with the current Building Regulations and other subsequent amendments. The Home Bond House Building Manual shall be used as a supplementary guidance document for instances that are not specifically referred to in the Building Regulations. Any discrepancies should be notified in writing to the Engineer.

Best Practice

In the event of a dispute or where a standard or regulation it is unknown or unspecified, best practice will be adopted. Best practice in this case is defined as; the best method for the performance of a task whether or not it is commonly used, any such method that is to be adopted for

the construction contract must be approved by the Engineer. Any perceived ambiguity shall be drawn to the attention of the Engineer before the tender is submitted.

In any situation where the contractor is unsure of the construction method to be used best practice will be adopted and priced for in the tender. The Engineer in consultation with the Contractor and Clerk of Works will make the final decision as to what method will be used on site. The Home Bond House Building Manual shall be used as a supplementary guidance document for instances that are not specifically referred to in the Building Regulations.

1.5 Statutory Obligations

Local Authority Approval:

Obtain approval from the Local Authority for the location of temporary offices, entrances, hard standings and crossings required for the works. Comply with the requirements of the Local Authority regarding maintenance and reinstatement.

Building Regulations:

All aspects of the Works are to be carried out in accordance with the current Building Regulations and additional amendments.

Safety, Health and Welfare:

Comply with all statutory safety, health and welfare regulations and in particular the current Safety, Health and Welfare at Work (Construction) regulations.

FULL COMPLIANCE WITH ALL SAFETY AND HEALTH REGULATIONS ARE REQUIRED FOR THIS PROJECT WITH PARTICULAR EMPHASIS ON THE FOLLOWING: IN PURSUANCE OF THE ABOVE THE CONTRACTOR SHALL ENSURE THAT ALL PERSONNEL HAVE APPROPRIATE QUALIFICATIONS, EXPERIENCE AND/OR TRAINING FOR TASKS ALLOCATED TO THEM. THE CONTRACTOR SHALL ARRANGE FOR ALL NECESSARY SITE TRAINING OF HIS STAFF AND SUPPLY ALL NECESSARY PERSONAL PROTECTIVE EQUIPMENT INCLUDING 2 SPARE REFLECTIVE WAISTCOATS AND 2 SPARE CONSTRUCTION HELMETS FOR THE USE OF THE ENGINEER, CLERK OF WORKS OR ANY VISITOR TO THE SITE AUTHORISED BY THE ENGINEER.

The Contractor shall arrange regular “tool box” talks where he shall arrange for all operatives including subcontractors working on the site to attend and participate in a Safety, Health and Welfare briefing. The Contractor shall arrange and pay for site inductions for each visitor and operative including subcontractors and delivery drivers that access the site providing them with all Safety, Health and Welfare information they will require in the course of their work/visit on the site.

Project Supervisor for Design Process:

The client has appointed Cavan County Council as Project Supervisor for the Design Process of the Project to carry out the duties set out in Part 2 of the Regulations.

Project Supervisor Construction Stage:

The main contractor will be appointed as Project Supervisor for the Construction Stage of the Project unless otherwise notified by the Engineer.

Duties of Project Supervisor Construction Stage:

It shall be the duty of the project supervisor appointed for the construction stage:

- To prepare the construction stage safety and health plan prior to commencement of construction.
- To continually update the safety and health plan AND file as the project progresses.
- To co-ordinate the implementation of the general principals of prevention
- To co-ordinate the implementation of relevant requirements of regulations by contractors
- To follow the provisions of the Health & Safety Plan where required
- To organise co-operation between contractors and co-ordination of their activities in relation to a project with a view to protecting persons at work and preventing accidents and injury to health
- To organise the provision of information
- To co-ordinate the implementation by contractors of their duty to provide the project supervisor with the information in relation to any death, injury, condition or dangerous occurrence which the contractor is required to notify or report under the current Safety, Health and Welfare (General Application) Regulations.
- To provide appropriate information to the site safety representative
- To co-ordinate arrangements for checking implementation of safe working procedures
- To co-ordinate measures for permitting authorised persons only onto the construction site
- To co-ordinate arrangements which facilitate the provision and the maintenance, in an appropriate condition of site welfare provisions to all persons at work on the construction site
- To co-ordinate measures to ensure that relevant persons have Safe Pass training and have been issued with a registration card
- To co-ordinate measures to ensure that relevant persons have CSCS training and have been issued with a registration card
- To keep records relating to Safe Pass and CSCS
- To co-ordinate consultation
- To facilitate, where more than 20 persons are normally employed at any one time on the site at any stage of the project, the appointment of a site safety representative
- To inform the site safety representative when an inspector arrives on site for the purpose of making a tour of inspection.
- To take account of representations made by a site safety representative

- To give notice to the H.S.A. before commencement (Form AF2), where work is planned to last longer than 30 working days or on which the volume of work is planned to exceed 500 person days.
- To provide directions to designers, contractors or other in order for the PSCS to comply with their duties and if necessary, submit them in writing.
- To supply information to the PSDP for the Safety File.

The PSCS may appoint a competent person as health and safety co-ordinator to undertake on behalf of the Project Supervisor the above duties.

Competency of Project Supervisor Construction Stage:

For this appointment the client must make reasonable enquiries to check the person or company to be appointed is able to fulfil the responsibilities of the position. The enquiries include the following:

- The Company's safety and health policy and the arrangements in place for the effective organisation and co-ordination of safety and health matters.
- Knowledge and experience of construction, particularly in relation to the nature of the project
- The availability of sufficient staff to carry out the role and also, their skills, knowledge, experience and training
- Experience of working with, and co-ordinating the activities, of different contractors involved in a project
- Experience in developing and monitoring compliance with safety and health plans
- Experience in preparing safety files
- Details of notifiable accidents in the last 3-5 years
- Evidence of ISO certification or other Quality Assurance Scheme, if any.

THE CONTRACTOR WILL PROVIDE DOCUMENTARY EVIDENCE OF THE ABOVE WITH THEIR TENDER.

The client may seek the advice of the project supervisor design process if other than Cavan County Council when appointing the project supervisor construction stage.

Preliminary Safety & Health Plan

In accordance with Part 3.1.4 of the regulations, a preliminary Safety & Health Plan in a form as defined in the regulations has been prepared for the purpose of providing information to the Project Supervisor for Construction Stage. The copy of the said plan attached.

Social Welfare Regulations:

Comply with all statutory social welfare regulations regarding registering of work people, including those employed by sub-contractors, employed on the site.

Insurance, All Risks:

Effect and maintain All Risks Insurance for the works and Ancillary items.

Electrical**15.1 General Conditions****The Electrical Installation:**

Must be carried out to the entire satisfaction of the Engineer and R.E.C.I. Inspector (or equivalent) and must comply with the current guidelines of the Electro-technical Council of Ireland. The electrical installation is to form part of the general building Contract and the responsibility for carrying out work to a satisfactory conclusion is to be borne by the Building Contractor, who shall, however, sub-let the work to an experienced Electrical Contractor. The Electrical Contractor shall supply all materials and labour necessary for the complete electrical installation as herein specified and indicated on the relevant drawings. Electrical installations shall comply with part M of the Irish Building Regulations, switches and sockets to be easily accessible for the wheelchair bound.

Only Electrical Contractors of good standing will be permitted to undertake the electrical installation. Before the installation is commenced it will be necessary to obtain the Engineer's approval of the electrical sub-contractor. The Engineer may also wish to know the arrangements and work schedule for completion of the work.

Standards:

All electrical work must comply with the latest edition of the I.E.E. Regulations and the latest requirements of the E.T.C.I., E.S.B., and must be R.E.C.I. certified or equivalent.

Electrical Mains:

The Electricity supply mains will be erected by the E.S.B. and do not form part of this Contract but any necessary ducting required to connect and/or divert the supply will be included.

Mains and Wiring:

Routes are to be ascertained by the Contractor at an early stage so that ways are to be left to receive wire and ducts to save unnecessary cutting away.

Notice to Electricity Supply Board:

The main Contractor and the electrical sub-contractor shall consult at an early stage with the District Manager of the E.S.B. to arrange for service and meter position. Provision, during the construction of the house, of an entry duct and "hockey stick connection" through the wall to the meter position for service cables should be allowed.

Inspection of Work:

All material to be used in this Contract shall be of first class quality and be available for examination by the Engineer or his specified representative at any time during the progress of the Contract. If requested, samples of materials must be forwarded to the Engineer before commencing work. Any departure from the Specification or the approved samples without written confirmation from the Engineer may also cause certification of the installation to be refused.

Examination on Completion of Work:

The Engineer shall be notified when the electrical installation has been completed. No house will be taken over unless the electrical installation has been approved by the Engineer or his authorised representative. The electrical contractor shall carry out loop impedance and polarity tests on all houses - R.E.C.I. completion certs or equivalent should then be issued to the Engineer or his representative.

15.2 Cables and Fixtures**Cables General:**

All cables shall be I.S. 201 and I.S. 202 and shall be of the following sizes:-

Cable Lighting Circuits: 1.5mm² P.V.C./P.V.C. cable with earth continuity conductor.

Cables socket outlets/immersion Group circuit - 2.5mm² twin core flat P.V.C./P.V.C. cable with earth continuity conductor.

Cables Cooker Circuits:

6mm² twin core flat P.V.C. /P.V.C. cable with earth continuity conductor.15.25 Flexible Cables:

The minimum size is 0.5mm (High temperature type). Tails to E.S.B. meter and service fuse 16mm P.V.C./P.V.C.

Pumped Electric Shower

All bathrooms to be wired with a suitable cable and fittings for a 10kW pumped electric shower even where showers are not shown, blank to be fitted at end of cable in bathroom wall and appropriate m.c.b. /r.c.d. to be fitted in consumer unit and labelled. Showers only to be fitted where shown on plans or specified in tender documents, where a shower is shown Mira 9.8 pumped electric shower to be fitted.

Junctions:

Junctions in wiring shall only be made in suitable ceiling roses, switches, slack cables shall be left at the back of ceiling roses; switches and fuseboards to facilitate inspection, testing and maintenance. Sufficient slack cable should be left behind the fuseboards to permit any circuit to be transferred to another fuse.

Wiring:

The wiring of each final sub-circuit shall be electrically separate from that of every other final sub-circuit. The wiring for the lighting and socket outlets will be effected in cable concealed under the floor or in the attic, WIRING TO BE CLIPPED TO THE RAFTERS IN CABLE TRAYS ABOVE THE 300mm THICK INSULATION AND RUNNING IN NEAT RUNS PARALLEL OR

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PERPENDICULAR TO THE TRUSSES. Joists may not be grooved; any holes required must be bored through the centre of the joists. In solid walls all switch and socket outlet drops shall be enclosed in plastic conduit and recessed in walls. Cables to be fixed with buckle clips spaced 225mm apart horizontally or 375mm vertically. The electrical sub-contractor shall provide all chases for conduit and recesses for switch boxes and socket outlet boxes. All socket outlets to be wired on a Ring-Main system.

Conduit:

Conduits shall be oval plastic type sunk in the wall for each switch drop and socket outlet. Conduits shall only be run horizontally and vertically.

Fuseboards:

A distribution board shall be located in a place agreed, usually in front entrance hall or utility, and should comply with E.T.C.I. Requirements. Unit to have integrated door and casing. All M.C.B.s and R.C.D.s etc. to be clearly labelled with typed labels.

Fuses / M.C.B.'s:

Fuses / M.C.B.'s ratings shall be as follows:-

Lighting Circuits - 6 amps. Socket outlet circuits - 20 amps. Cooker circuits - 30 amps.

Water heating circuit - 20 amps.

Lighting Switches:

Lighting switches shall be with Bakelite flush type 5 amp switch to B.S. 3676. They are to be installed between 900mm and 1200mm above floor level; brass or other non-corroding fixed screws must be used.

Lampholders:

Lampholders shall be cord grip type with solid plungers and flange holders. They should be Bakelite type. In bathrooms, toilets and kitchens, lampholders should have a shield of insulating material. Additional outdoor light with PIR detector to be installed at back door of each house and recessed outdoor light to be installed above front door also. One kitchen light to be 1.2m long double fluorescent tube light with diffuser. Recessed lampholder to be installed in WC under stairs.

Ceiling Roses:

Ceiling roses shall be white bakelite type. They should be mounted on a suitable ground attached to the structure behind the plaster.

Flexible Cable:

All flexible cables are to be B.S. 6004 and 6500. The minimum size shall be 1.5mm² and the lighting pendants shall be circular white P.V.C. insulated type.

Lamps:

All lights to be fitted with General Electric extra mini 20w BC/B22d COMPACT FLUORESCENT LAMPS (Low Energy Light Bulbs) electrician to supply and fit bulbs and check that each bulb is working.

Socket Outlets:

All socket outlets are to be 3-pin 13 amp type to B.S. 1363 earthed with on/off switches to be located on the outside of the unit for ease of use. Socket outlets to be between 900mm to 1200mm above floor level and 500mm from any internal corner, brass or other non-corroding fixing screws are to be used. Allowance must be made for remotely switching appliances such as washing machines etc. which are located under worktops. A suitable switch and terminal must be used. The number of sockets required shall be in compliance with Quality Housing for Sustainable Communities published by the Department of the Environment or the number shown on the electrical layout drawing, whichever is the greater.

Switch and Socket Outlet Boxes:

Switch and socket outlet boxes are to be galvanised metal conforming to B.S. 4662. They shall finish flush with the finishing wall surface and shall be firmly secured in position with sand and cement mix.

Bathrooms:

No electrical equipment shall be installed in a bathroom other than the following -

- a) Lighting fittings complying with E.T.C.I. 5.113.2.1.
- b) Water heaters and associated wiring complying with E.T.C.I. 5.113.2.2.
- c) Shower units complying with E.T.C.I. 5.113.2.3.
- d) Heating appliances and fans complying with E.T.C.I. 5.113.2.4.
- e) Safety extra-low voltage equipment complying with E.T.C.I. 1.4.4.2.

NOTE: Shaver units will be installed and shall have an isolating transformer and shall comply with B.S. 3052 or equivalent standard. This unit shall not be located directly over the bath.

Shower:

All bathrooms to be wired with a suitable cable and fittings for a 10kW pumped electric shower even where showers are not shown, blank to be fitted at end of cable in bathroom wall and appropriate m.c.b./r.c.d. to be fitted in consumer unit and labelled. Showers only to be fitted where shown on plans or specified in tender documents, where a shower is shown Mira 9.8 pumped electric shower to be fitted.

Water Heaters and Associated Wiring:

A water heater where shown or specified, may be instantaneous or non-instantaneous and shall be permanently fixed and wired. Its associated wiring shall be mechanically protected against damage. A flexible cable which is firmly clamped at each end and which does not exceed 300mm in length need not have additional mechanical protection. A cable shall be installed in such a way that it cannot be grasped by persons using the bath.

Heating Appliances and Fans:

Heating appliances if shown or noted to Class II (double insulated) type and heating appliances having enclosed or sheeted heating elements shall be permanently fixed and wired and situated at least 1m from the edge of the bath measured horizontally. Such heating appliances shall not have switches fitted as part of the appliance.

Appliances in Bathroom:

The following heating appliances and fans, (if shown), shall be permanently fixed and wired and situated outside a zone bounded by a horizontal distance of 1m from the edge of the bath and a height of 2.1m from the floor.

Fan-assisted heater. Infra-red heater with sheeted elements. Extractor fan to be Safety Extra Low Voltage. Ultra-violet lamp. Combined heat and light unit. Switches on such appliances shall be controlled by means of a non-conducting cord or rod. Separate switches operated by means of a non-conducting pull-cord shall be mounted at least 2.1m from the floor.

Socket outlets other than those forming part of a shaver unit complying with 5.113.2.3 shall not be installed in a bathroom.

Kitchen and Utility Rooms:

In kitchens and utility rooms extraneous conductive parts as metal sinks, splash-backs and water pipes shall be metallically interconnected to form one local equipotential system. The equipotential system shall be connected locally to a protective conductor in compliance with Electro-technical Council of Ireland guidelines.

Labelling:

All fuses / M.C.B.'s shall be suitably labelled as to the manner and position of points on each circuit.

Meter Boxes:

Meter boxes are to be E.S.B. type or other approved equivalent set in walls to regulation height.

Extractor Fans (to be installed whether shown on drawings or not, see Building Regulations)

A Safety Extra Low Voltage (S.E.L.V.) Vent-Axia extractor fan, or similar approved, will be installed in the ceiling of the bathroom above the bath or shower with a capacity to extract a minimum of 30 litres per second or the capacity specified in the current Irish Building Regulations, whichever is the greater. The duct from the fan will pass through the roof space and be fixed securely to a grilled hit and miss vent in the soffit. The duct will be fitted with a condensation trap that will be piped to the outside underside of the soffit. The bathroom light switch will operate the extractor fan and the fan will have an adjustable 15-minute over-run. A white splash-proof fused spur isolator will be installed downstream of the bathroom light in such a way that the fan can be completely isolated to allow an electrician to work in complete safety on the fan with the light switched on. The transformer for the S.E.L.V. fan will be securely fixed to a truss above the insulation above the ceiling of the bathroom at 1.5m from the external wall for ease of accessibility, length and type of cable required to be checked for compliance with manufacturer's recommendations. A small gap of approximately 10mm will be allowed for under the bathroom door to allow air infiltration.

A cooker hood with extract fan incorporated will be installed above the cooker in the kitchen with a capacity to extract a minimum of 60 litres per second or the capacity specified in the current Irish Building Regulations, whichever is the greater (samples to be supplied and type to be agreed with the Engineer / Clerk Of Works). The cooker hood extract fan will not re-circulate the extracted air.

The duct for extracting air through the kitchen wall will be formed in a single piece of clay pipe where it passes through the wall.

A Vent-Axia VA150A extractor fan, or similar approved, will be installed in the rear wall of the utility room and the downstairs toilet (where shown) with a capacity to extract a minimum of 60 litres per second or the capacity specified in the current Irish Building Regulations, whichever is the greater.

ALL fans will be controlled by both a simple wall mounted switch or pull cord switch and a Vent-Axia humidity controller or equivalent to ensure fully automatic condensation control. The switching system will allow the fan to be switched on manually but it will also be switched on automatically by the “humidistat” humidity control switch if the humidity increases beyond an acceptable level and will run until the humidity has dropped below the set level. All fans to be fully commissioned and tested in operation by the electrician.

Television Booster:

Additional double socket outlet to be installed in roof space to accommodate television booster and lamp or other appliance, supply to be taken from socket ring main. Conduit for TV aerial cable from top of roof to outlet in Living room to be of sufficient size for two 1.27mm² cables, one 1.27mm² cable to be installed in conduit with 6 metres of slack.

15.4 Earthing

Earth Electrodes:

The earth electrode shall consist of one of the following:

A bare copper or hot-dip galvanised iron pipe or rod of at least 12mm diameter, driven vertically into the soil for a length not less than 1,200mm ; or a straight length of at least 4,500mm of the same bare copper or galvanised iron rod, or a straight length of at least 4,500mm of bare copper or galvanised steel wire of at least 25mm cross-sectional area, buried in the soil at least 500mm deep; or with the agreement of the E.S.B. the metal sheath of an E.S.B. underground supply cable; or in installations with a main fuse rating not exceeding 150A, a copper clad high tensile steel rod of at least 9mm diameter driven vertically into the soil for a length of not less than 1,200mm.

Fit aluminium horse shoe type cover in paving over and surround with dry chamber.

15.5 The Earthing Lead

The Earthing Lead:

Shall connect the earth electrode to the main earthing terminal of the installation. The earthing lead shall consist of an uninsulated copper conductor having a cross-sectional area not less than 10mm (or greater if required by Electricity Supply Board or Electro-Technical Council of Ireland); otherwise the earthing lead shall comply with the requirements for protective conductors and it shall be mechanically protected.

The insulation shall be coloured green/yellow.

The connection at the earth electrode shall be accessible for inspection and shall be protected against corrosion by a suitable waterproof tape.

15.6 Main Earthing Terminal

The Main Earthing Terminal (or “neutralising block”):

Shall be at the distribution board position. Where the meter is located in a separate compartment, the neutralising connection is made in that compartment.

The Neutralising Lead from the Main Earthing Terminal to the Meter Compartment:

Shall consist of insulated copper conductor having a minimum cross-sectional area of 10mm or greater if required by Electricity Supply Board or Electro Technical Council of Ireland. This conductor may form part of a multicore cable, or it may be a separate conductor insulated for system voltage.

15.7 Fire Alarms:

Provide at least FOUR self-contained, interconnected fire alarms including: one ionising smoke detector alarm (on landing or in hall near bedrooms), two optical smoke detector alarms (one in living room and one in hall near kitchen) and one heat detector with alarm (in kitchen), located so that no door to a habitable room is more than 7.5m from the nearest smoke alarm (check drawings to verify whether or not four alarms will be sufficient and price for additional alarms where required). All smoke and fire alarms to be hard wired to consumer unit m.c.b. with continuous charge LITHIUM battery back-up and shall comply with I.S. 3218:1989 or subsequent standard if superseded.

