

EXTENSION WORKS SPECIFICATION

Community Dwelling Extension

All materials and workmanship shall comply with the Building Regulations 1997–2025, current Technical Guidance Documents, NSAI Agrément Certificates, relevant Irish Standards and manufacturer's recommendations.

PRELIMINARIES

The Contractor shall:

- Verify all dimensions on site before commencing works.
 - Protect existing building fabric, services, occupants and surrounding areas throughout construction.
 - Comply with the Safety, Health and Welfare at Work (Construction) Regulations 2013.
 - Provide all temporary works, scaffolding, hoarding and weather protection.
 - Remove all demolition and construction waste from site and dispose of at authorised facilities.
 - Coordinate all works with the operation of the existing community dwelling.
-

SITE CLEARANCE AND SETTING OUT

- Set out extension in accordance with approved drawings.
 - Strip topsoil and vegetation from building footprint.
 - Excavate foundations to depths required by the Structural Engineer and suitable bearing strata.
 - Formation to be inspected prior to placing concrete.
-

FOUNDATIONS

Strip Foundations

- Excavate strip foundations to Engineer's details.
- Foundations generally minimum 900mm below finished ground level unless deeper excavation is required.

- Concrete foundations to be minimum C25/30 strength.
- Foundation width and reinforcement to Structural Engineer's specification. Allow for 1050mm x 300mm with A393 mesh with 50mm cover from bottom of foundation.
- All concrete placed and compacted in accordance with IS EN 206.

Foundation Walls

- Foundation walls to consist of:
 - 215mm solid concrete blocks below DPC level.
 - Strength minimum 7.5N/mm².

GROUND FLOOR CONSTRUCTION

Hardcore

- Minimum 150mm Clause 804 hardcore.
- Laid in layers and mechanically compacted.
- Blinding layer of sand to receive radon barrier.

Radon Protection

- Radon barrier to comply with TGD C and current Building Regulations.
- Membrane to be continuous throughout footprint.
- All service penetrations sealed using proprietary collars.
- Radon sump to be installed beneath floor slab complete with accessible connection point.

Ground Bearing Slab

- 150mm reinforced concrete slab.
- Reinforcement as Structural Engineer's specification.
- Concrete strength minimum C25/30.

Floor Insulation

- 150mm PIR rigid insulation.
- Thermal conductivity not greater than 0.022 W/mK.
- Insulation laid continuously beneath screed.

- All joints tightly butted.
- Separation layer to be provided with polythene prior to installation of screed.

Screed

- 75mm sand/cement screed.
 - Mix ratio 1:4 cement:sand.
 - Power floated.
 - Movement joints provided in accordance with BS 8204 and floor finish manufacturer's requirements.
-

DAMP PROOF COURSES

- Horizontal DPC to all walls minimum 150mm above finished external ground level.
 - DPC to comply with BS EN 14909.
 - Vertical DPCs provided at all junctions and cavity closures.
 - DPC to link continuously with floor radon barrier and damp proof membrane.
-

EXTERNAL WALLS

Masonry Cavity Wall Construction

External walls to comprise:

- 100mm dense concrete block inner leaf.
- 150mm cavity.
- 110mm Unilin CavityTherm XT/TW cavity insulation.
- Residual cavity minimum 40mm.
- 100mm concrete block outer leaf.

Overall wall construction to achieve maximum U-value of 0.18 W/m²K.

Wall Ties

- Stainless steel wall ties suitable for cavity size.
- Installed in accordance with manufacturer's recommendations.
- Additional ties around all openings.

Cavity Trays

Provide proprietary cavity trays:

- Over all window openings.
- Over all door openings.
- At roof abutments.
- At all cavity interruptions.

Complete with stop ends and weep vents.

Lintels

- Proprietary insulated cavity lintels.
- Sized in accordance with structural requirements.
- Galvanised or stainless steel finish.

INTERNAL LOADBEARING WALLS

- 100mm solid concrete blockwork.
- Strength minimum 7.5N/mm^2 .
- Built in accordance with IS EN 1996.

STRUCTURAL STEELWORK

- Structural steelwork where indicated on drawings.
- Designed by Structural Engineer.
- All steelwork primed and protected against corrosion.
- Fire protection to achieve required fire resistance period.

TIMBER ROOF CONSTRUCTION

General

- Traditional cut timber hipped roof.
- Designed in accordance with Eurocode 5.
- Timber strength class C24 minimum.

Roof Structure

Provide:

- Wall plates.
- Rafters.
- Ceiling joists.
- Hip rafters.
- Valley rafters where required.
- Ridge members.
- Trimmers and binders.

All sizes and spans to Structural Engineer's specification.

Wall Plates

- 100mm x 75mm treated timber wall plates.
- Bedded on DPC.
- Securely strapped to masonry.

Restraint Straps

- Galvanised restraint straps at maximum 2m centres.
- Fixed in accordance with TGD A.

ROOF INSULATION

Cold Roof Construction

Provide:

- 400mm mineral wool insulation at ceiling level.
- Minimum 100mm between joists.
- Remaining insulation cross laid over joists.

Overall roof U-value not greater than 0.16 W/m²K.

Ventilation

- Continuous eaves ventilation.
- Proprietary ventilated soffit system.

- Roof ventilation to comply with TGD F.
-

ROOF COVERING

Concrete Roof Tiles

- Interlocking concrete roof tiles.
- Colour and profile to match existing dwelling.
- Tiles fixed in accordance with manufacturer's recommendations and Irish wind loading requirements.

Roof Underlay

- Breathable roofing membrane.
- Installed over rafters.

Battens

- Pressure treated timber battens and counter battens.
- Sized to roof tile manufacturer's requirements.

Ridge and Hip Tiles

- Dry fix ridge and hip system.
 - Mechanically fixed.
-

FASCIA, SOFFIT AND RAINWATER GOODS

Fascia and Soffit

- Powder coated aluminium fascia.
- Powder coated aluminium soffit.
- Colour selected by Architect/Client.

Gutters and Downpipes

- Powder coated aluminium gutters.
- Powder coated aluminium downpipes.
- Complete with all brackets, shoes and connections.

Rainwater to discharge to existing surface water drainage system.

EXTERNAL RENDER

Sand and Cement Render

Apply to all external masonry walls:

- Approved render carrier beads and stop beads.
- Three coat sand/cement render system.
- Waterproof additive incorporated.
- Smooth sponge finish.

Typical build-up:

- Scratch coat.
- Float coat.
- Finish coat.

Complete with movement joints where required.

Finish colour to Architect's selection.

WINDOWS

- Thermally broken aluminium double glazed windows.
 - Low-E glazing.
 - Argon filled units.
 - Warm edge spacers.
 - Maximum window U-value $1.4 \text{ W/m}^2\text{K}$.
 - Safety glazing where required.
-

EXTERNAL DOORS

- Thermally broken aluminium doors.
- Multi-point locking systems.
- Low threshold accessible door sills.
- Door U-value not greater than $1.4 \text{ W/m}^2\text{K}$.

CEILINGS

- 12.5mm plasterboard ceiling lining.
- Skim coat plaster finish.
- Moisture resistant board to bathrooms and wet areas.

Where required by fire strategy:

- Two layers 12.5mm Type F plasterboard.
-

INTERNAL WALL FINISHES

Masonry Walls

- Dot and dab plasterboard system or hardwall plaster finish.
- Skim coat finish throughout.

Wet Areas

- Moisture resistant plasterboard.
 - Wall finishes as scheduled.
-

FLOOR FINISHES

Provide finishes as scheduled including:

- Safety vinyl flooring to bathrooms and wet rooms.
 - Commercial sheet vinyl to circulation areas.
 - Carpet or vinyl finishes to bedrooms and living spaces as scheduled.
-

FIRE STOPPING

Provide fire stopping to:

- Service penetrations.
- Cavities.
- Junctions between new and existing construction.

All fire stopping materials to be certified and installed in accordance with manufacturer's instructions.

AIRTIGHTNESS

- Continuous airtightness layer throughout construction.
 - All service penetrations sealed.
 - Junctions taped and sealed.
 - Airtightness performance to achieve requirements of TGD L.
-

MECHANICAL AND ELECTRICAL SERVICES

Contractor shall allow for:

- Extension of existing heating system.
 - Extension of existing electrical installation.
 - Smoke detection and fire alarm alterations.
 - Mechanical extract ventilation to bathrooms and utility areas.
 - New lighting, power and data installations.
 - Testing and certification of all installations.
-

COMPLETION

Upon completion provide:

- Electrical Completion Certificate.
- Plumbing Certification.
- Airtightness Test Certificate (if required).
- BER assessment update.
- Manufacturer warranties and guarantees.
- Operation and Maintenance Manuals.
- Certification of compliance with Building Regulations.

PARTICULARS OF WORKS

Refurbishment and Reconfiguration of Existing Shared Bathrooms to Provide Individual Ensuite Facilities

Community Dwelling

1. GENERAL DESCRIPTION

The works comprise the complete strip-out, alteration, reconfiguration and refurbishment of existing shared bathroom facilities within an occupied community dwelling.

The existing layout consists of shared shower and toilet facilities serving two bedrooms. The proposed works involve subdivision and reconfiguration of the existing bathroom areas to create two separate self-contained ensuite shower rooms, each serving an individual bedroom.

Works include demolition, alterations, new door openings, closure of redundant openings, new partitions, concealed plumbing services, drainage alterations, ventilation upgrades, electrical works, sanitaryware installation, hygienic wall finishes, resin flooring, decoration, testing and commissioning.

All works shall be undertaken in accordance with current Building Regulations, HIQA requirements, HSE infection prevention guidance, manufacturer's recommendations and good building practice.

The Contractor shall verify all dimensions on site prior to commencement.

2. PRELIMINARIES

The Contractor shall allow for:

- Site establishment and welfare facilities.
- Protection of occupied areas.
- Dust control measures.
- Noise control measures.
- Segregation of residents and staff from construction activities.
- Temporary screening and hoarding.

- Daily cleaning of work areas.
- Protection of existing finishes outside work zones.
- Removal and disposal of waste materials.
- Coordination with management and staff to minimise disruption.
- Safe isolation of existing services.
- Temporary maintenance of essential services where required.

The Contractor shall ensure the dwelling remains safe and operational throughout the duration of the works.

3. DEMOLITION AND STRIP OUT

Carefully remove and dispose of:

Wall Finishes

- Existing ceramic wall tiles.
- Tile adhesive residues.
- Existing splashbacks.
- Wall-mounted accessories.
- Mirrors.
- Grab rails.
- Soap dispensers.
- Towel rails.

Floor Finishes

- Existing floor tiles.
- Tile adhesive.
- Existing waterproofing membranes.
- Existing shower drainage fittings where affected.

Plumbing

- Existing WCs.
- Existing wash hand basins.

- Existing showers.
- Existing exposed pipework.
- Existing boxing and service casings.
- Existing valves and fittings.

Electrical

- Existing light fittings.
- Existing extract fans.
- Existing switches.
- Existing accessories affected by works.

Doors

- Existing doors and frames to be removed where affected by new layouts.

The Contractor shall carefully identify and protect any services that are to remain.

4. ALTERATIONS AND BUILDING WORKS

New Door Openings

Form new door openings in masonry walls as indicated on drawings.

Works to include:

- Temporary support where required.
 - Saw cutting of masonry.
 - Installation of lintels.
 - Making good disturbed construction.
 - Fire stopping around penetrations where applicable.
-

Closure of Existing Openings

Existing door openings no longer required shall be infilled using lightweight partition construction comprising:

- 92mm metal stud framing.
- 100mm acoustic mineral wool insulation.

- 12.5mm moisture resistant plasterboard both sides.
- Jointing and finishing ready for wall finishes.

Finished surfaces shall align flush with adjoining walls.

New Partitions

Provide new internal partitions to create individual ensuite facilities.

Construction:

- 92mm metal stud framing.
- 100mm acoustic mineral wool insulation.
- 2 layers 12.5mm moisture resistant plasterboard each side.
- Reinforcement for sanitaryware and accessories.

Partitions shall extend full height to underside of structure above.

Provide airtight sealing at all perimeter junctions.

5. WALL LININGS

Following removal of existing finishes, provide new wall linings throughout.

Existing Masonry Walls

Apply proprietary drywall adhesive and fix:

- 12.5mm moisture resistant plasterboard.

Boards shall be:

- Plumb.
- Level.
- Securely bonded.
- Jointed and taped.

Finished surfaces shall be suitable for direct application of Altro Whiterock wall cladding.

6. SERVICES AND WALL CHASES

The Contractor shall remove all existing exposed plumbing services, boxing and associated fittings.

All new plumbing and electrical services shall be concealed within the construction wherever practicable.

Chasing of Existing Masonry Walls

Existing masonry walls shall be chased as necessary to accommodate:

- Hot water services.
- Cold water services.
- Electrical conduits.
- Ventilation wiring.
- Ancillary service installations.

Chases shall be carefully cut using suitable dust-controlled equipment.

The Contractor shall:

- Avoid excessive chasing which may compromise structural integrity.
- Maintain minimum wall strengths.
- Comply with manufacturer's recommendations and good building practice regarding chase depths.
- Reinstate all chased areas following installation of services.

Following completion of service installation, chases shall be filled and made good to provide a smooth substrate suitable for drylining.

All services shall be pressure tested prior to closing up.

No exposed pipework shall remain visible except for final sanitaryware connections where unavoidable.

Any unavoidable exposed pipework shall be chrome plated or boxed neatly and approved by the Employer.

7. FLOOR CONSTRUCTION

Following removal of existing finishes:

- Prepare existing substrate.
- Repair cracks and defects.

- Remove contaminants.
- Provide levelling compound where necessary.

Form falls towards shower drainage points.

Provide floor preparation suitable for application of resin flooring system.

8. RESIN FLOORING

Provide seamless heavy-duty resin flooring throughout all ensuite facilities.

System shall comprise:

- Primer coat.
- Self-smoothing resin body coat.
- Slip resistant finish.
- Integral coved skirting.

Performance requirements:

- Waterproof.
- Impervious.
- Seamless.
- Chemical resistant.
- Wheelchair suitable.
- Suitable for healthcare environments.

Colour to be selected by Client.

Coved Skirting

Provide integral resin skirting.

Requirements:

- Minimum 100mm high.
- Fully bonded.
- Smooth curved profile.
- Seamless connection to floor finish.

9. ALTRO WHITEROCK WALL CLADDING

Provide Altro Whiterock hygienic wall cladding throughout.

Installation to comply fully with manufacturer's recommendations.

Provide:

- 2.5mm Altro Whiterock PVC wall sheeting.
- Full-height installation.
- Thermoformed internal corners.
- Thermoformed external corners.
- Hygienic sealed joints.
- Matching trims and finishing sections.

Wall cladding shall extend:

- Floor to ceiling throughout all ensuite facilities.

All penetrations shall be sealed using proprietary hygienic seals.

Finished installation shall provide a durable, impact-resistant and easily cleaned surface.

10. CEILINGS

Existing ceilings shall be retained.

The Contractor shall:

- Remove any redundant fittings.
- Repair cracks, holes and damaged areas.
- Fill and make good disturbed surfaces.
- Sand surfaces to provide a uniform finish.

Ceilings shall receive:

- Stain-blocking primer where required.
- One undercoat where required.
- Two coats mould-resistant moisture-resistant acrylic paint suitable for bathrooms and wet areas.

Paint shall be suitable for high humidity environments and resistant to fungal growth.

Colour to be selected by the Client.

Any ceiling penetrations associated with ventilation works shall be neatly formed and sealed.

WC

Provide:

- Close-coupled vitreous china WC.
- Dual flush cistern.
- Heavy-duty commercial seat.
- Soft-close mechanism.
- Isolation valve.

WCs shall be securely fixed in accordance with manufacturer's recommendations.

Cisterns shall remain exposed for ease of maintenance and to maximise available floor space.

Wash Hand Basin

Provide:

- Wall-mounted basin.
- Lever-operated mixer tap.
- Thermostatic temperature control.
- Accessible operation.

Where practical, wastes and pipework shall be concealed within wall chases.

Shower

Provide:

- Level-access shower area.
- Stainless steel floor drain or linear drain.
- Thermostatic mixing valve.

- Adjustable shower rail.
- Hand-held shower head.
- Anti-scald protection.

Shower controls shall be easily accessible and suitable for users with reduced dexterity.

Accessories

Provide:

- Mirror.
- Toilet roll holder.
- Soap dispenser.
- Towel hook.
- Grab rails where indicated.
- Shower curtain rail or screen where shown on drawings.

All fittings shall be securely fixed through the Altro Whiterock lining into suitable structural backing.

12. ACCESSIBILITY

Provide accessibility features in accordance with TGD M and HIQA requirements.

Include:

- Grab rails.
- Contrasting sanitaryware where required.
- Slip resistant flooring.
- Lever operated controls.
- Accessible shower controls.
- Accessible mirror positioning.
- Accessible accessory heights.

Provide additional reinforcement within walls to facilitate future adaptation if required.

13. PLUMBING SERVICES

Provide complete new plumbing installation.

Allow for:

- Hot and cold water services.
- Waste services.
- Drainage alterations.
- Isolation valves.
- Pipe insulation.
- Concealed pipe routes.

All pipework shall be concealed within:

- Service walls.
- Ceiling voids.
- Service ducts.

No surface mounted pipework shall be permitted unless approved by the Employer.

14. VENTILATION

Provide independent mechanical extract ventilation to each ensuite.

Minimum performance:

- 15 l/s intermittent extract.

Fans shall:

- Operate automatically with lighting.
- Include adjustable overrun timer.
- Discharge directly to external air.

Provide rigid ductwork where possible.

Provide external weather louvres.

15. ELECTRICAL INSTALLATION

Provide complete electrical installation.

Allow for:

Lighting

- IP65 LED ceiling light fittings to WC's. New light fittings to bedrooms & corridor.
See drawing

Ventilation

- Connection of extract fans.

Accessories

- Pull cord emergency assistance alarm where required by Client.
- Local isolators.
- Connection to existing emergency call system where present.

All wiring shall be concealed.

All electrical works shall comply with I.S. 10101.

Provide completion certification.

Bedrooms – Allow for relocation of sockets, switches and TV points in Bedrooms where works are taken place. This is a result of moving doors to ensuites.

16. FIRE STOPPING

Provide fire stopping to all penetrations through walls and ceilings.

Seal all service penetrations using proprietary tested fire stopping systems.

Maintain integrity of all existing compartmentation.

17. DECORATION

Decorate all exposed plasterboard and ceiling surfaces.

Provide:

- Mist coat.
- Two coats high-quality anti-fungal washable paint.

Colour selection by Client.

18. TESTING AND COMMISSIONING

Allow for:

- Pressure testing plumbing systems.
- Testing drainage systems.
- Testing ventilation systems.
- Testing electrical installation.
- Demonstration of operation to Client.

Provide all certification on completion.

19. CLEANING AND HANDOVER

Upon completion:

- Remove all debris from site.
- Thoroughly clean all surfaces.
- Remove labels and protective coverings.
- Clean sanitaryware.
- Clean wall cladding.
- Clean resin floors.
- Leave areas ready for immediate occupation.

Provide:

- Product data sheets.
- Manufacturers warranties.
- Maintenance recommendations.
- Commissioning records.
- Electrical certification.

The completed ensuite facilities shall provide robust, hygienic, low-maintenance accommodation suitable for long-term use within a HIQA-regulated community dwelling environment.

Item	Description	Quantity per Ensuite
WC	Close-coupled vitreous china WC with dual flush cistern, heavy duty soft-close seat, white finish	1 No.
Basin	Wall-mounted semi-pedestal wash hand basin, approx. 550mm wide, white finish	1 No.
Basin Tap	Lever operated monobloc mixer tap with TMV3 thermostatic blending valve	1 No.
Mirror	Safety backed mirror, approximately 600 x 900mm with polished edges	1 No.
Shower Valve	Thermostatic exposed T-bar shower valve with anti-scald protection	1 No.
Shower Rail	Adjustable shower rail complete with hand-held shower head and flexible hose	1 No.
Shower Drain	Stainless steel floor drain or linear drain suitable for resin flooring	1 No.
Grab Rail (Shower)	32mm diameter stainless steel grab rail adjacent shower area	1 No.
Grab Rail (WC)	Stainless steel horizontal grab rail beside WC	1 No.
Grab Rail (Basin)	Stainless steel support rails adjacent basin	1 No.
Toilet Roll Holder	Stainless steel anti-ligature type	1 No.
Soap Dispenser	Wall mounted liquid soap dispenser	1 No.
Towel Rail	Stainless steel towel rail, approx. 600mm long	1 No.
Coat Hook	2 no. Heavy duty stainless steel hook to back of door.	1 No.
Isolation Valves	Concealed isolation valves to all sanitary fittings	As Required
Wall Cabinet	Wall mounted double door cabinet, 800mm W x 700mm H x 125mm D	1 No.

CANOPY STRUCTURAL SPECIFICATION

Construct galvanised steel canopy structure in accordance with Structural Engineer's drawings and details.

Foundations to comprise reinforced concrete pad foundations taken down through lean-mix concrete to sound bearing stratum. Top of pads to be approximately 400–450mm below finished ground/yard level unless otherwise confirmed on site by Engineer.

Foundation pads:

P1 pads: 600 x 600 x 300mm reinforced concrete pad with A393 mesh top and bottom.

P2 pads: 900 x 900 x 300mm reinforced concrete pad with A393 mesh top and bottom.

All pads to be founded on C10/15 lean-mix concrete to sound bearing.

Fabricator to provide shop drawings prior to manufacture for structural engineers approval.

Steel columns to be concrete surrounded up to the underside of finished yard level. Provide 25mm non-shrink grout below base plates. Column base plates, holding-down bolts and anchors to Engineer's details. Columns are designed as pinned at foundation level.

Steel frame to act as portal frame with moment-resisting column-to-rafter connections. Provide 20mm thick connection plates to column/rafter joints as detailed by Structural Engineer.

All steelwork to be hot-dip galvanised to minimum 150 microns. All anchors, holding-down bolts, spun bolts, fixings, turnbuckles and associated bracing components to be galvanised.

Roof glazing system to be designed, supplied and installed by specialist glazing contractor. Glazed roof and support system to be designed for minimum imposed load of 1.5kN/m^2 to allow for snow loading and maintenance/cleaning access. Glazing support steels to be designed to L/500 deflection limit.

Provide galvanised turnbuckle-type plan bracing below roof support steels, fixed to columns, to provide lateral restraint and plan stability to the canopy structure.

Yard surface to be laid to falls away from columns and foundations. Provide ACO channel drain or similar linear drainage system to collect surface water and discharge to suitable surface water drainage system. Ensure no ponding occurs around canopy column bases or foundations.

Column protection to be independent of the canopy steel frame and independent of the structural foundations. Provide separate bollard protection system set into independent concrete-filled bases. Bollards to be positioned with suitable clearance from canopy columns so that vehicle impact is not transferred to the canopy frame or pad foundations. Bollards to be minimum 1.1–1.5m high, visible to reversing drivers, and finished in a contrasting colour to the canopy structure.