

eTenders Technical Specification

Proposed Extension of Workshop 1 & Workshop 2

Greene's Forge Engineering Ltd.

1. Project Description

The works comprise the extension of the existing Workshop 1 and Workshop 2 buildings by two additional structural bays to each workshop, together with all associated groundworks, structural steelwork, wall construction, roofing, cladding, drainage alterations, electrical works, fire protection, doors, finishes and ancillary works necessary to provide a complete operational extension.

The new extensions shall match the existing workshops in all respects including:

- Building dimensions and proportions.
- Structural arrangement.
- Roof pitch.
- Eaves and ridge heights.
- External appearance.
- Cladding profiles.
- Colour finishes.
- Fire performance.
- Operational functionality.

The completed extensions shall form a seamless continuation of the existing buildings.

2. Building Dimensions

Workshop 1 Extension

- Width: 11.20m
- Length: 12.00m
- Two bays @ 6.00m each
- Extension area: 134.4m²

Workshop 2 Extension

- Width: 12.40m
- Length: 12.00m

- Two bays @ 6.00m each
- Extension area: 148.8m²

Total Extension Area

Approximately 283.2m².

3. Structural Steel Frame

The extension structure shall match the existing workshops.

Structural Members

Columns

- 356 x 171 x 51 UB
- Grade S355 Steel

Roof Rafters

- 254 x 146 x 31 UB
- Grade S355 Steel

Roller Door Framing

- 200 x 90 PFC

Bracing

- 100 x 6.3 SHS
- Wall and roof bracing to match existing arrangement.

General

- All structural steel shall be CE marked.
 - Fabrication to EN1090 Execution Class 2.
 - All bolts, cleats, stiffeners and connections included.
 - Complete fabrication, supply and erection.
 - Contractor to provide all temporary bracing required during erection.
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4. Structural Steel Fire Protection

All structural steelwork shall receive:

- Shot blasting preparation.

- Primer coating.
- Intumescent paint finish.

Intumescent coating system shall provide:

- Minimum 60-minute fire resistance rating.
 - Certification to be provided upon completion.
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5. Roofing Works

Roof Construction

Provide and install:

- 60mm QuadCore insulated roof panels.
- Colour: Leaf Green RAL 6002.
- Minimum 60-minute fire rating.

Complete with:

- Ridge flashings.
- Verge flashings.
- Eaves flashings.
- Closure pieces.
- Weather seals.
- Bird stops.

Roof Purlins

- DP-SP175/65/180.

Roof Lights

Provide translucent rooflights over:

- Minimum 40% of roof area.

Rooflights to be integrated within roofing system.

Roof Fixings

- Stainless steel fixing screws throughout.
- Colour matched plastic caps to all visible fixings.
- Red washers to all rooflight fixing locations.
- Installation in accordance with manufacturer's recommendations.

6. Existing Roof Replacement

Tenderers shall include for removal and replacement of the existing roof covering to Workshop 1.

Existing Roof Dimensions

- Width: 11.20m
- Length: 30.40m
- Approximate Area: 340.48m²

Replacement Specification

Provide:

- Removal and disposal of existing roof covering.
 - New 60mm QuadCore insulated roof panels.
 - Leaf Green RAL 6002 finish.
 - 40% rooflights.
 - New flashings and trims.
 - Stainless steel fixings.
 - New weatherproof roof system throughout.
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7. External Wall Construction

Construct masonry walls to 3.0m high above finished floor level.

Wall build-up:

- 150mm outer concrete block leaf.
- 100mm cavity.
- 80mm cavity insulation.
- 100mm inner concrete block leaf.

Include:

- DPCs.
- Wall ties.
- Movement joints.
- Lintels.
- Closers.

- All associated masonry works.

Finishes

- Internal faces plastered.
 - External finishes to match existing workshops.
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8. Side Cladding

Above masonry wall level provide:

- 40mm QuadCore insulated wall cladding.
- Leaf Green RAL 6002.

Include:

- Flashings.
- Corner trims.
- Closures.
- Weather seals.
- Fixings.

Side Rails / Side Purlins

- DP-SP175/65/180.
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9. Roller Doors

Provide and install:

Quantity

- 2 No. insulated roller shutter doors.

Size

- Width: 4.0m
- Height: 4.35m

Specification

- Insulated curtain.
- Anthracite Grey finish.

- Heavy-duty industrial construction.
 - 3 Phase motors.
 - Motorised operation.
 - Safety edge protection.
 - Safety brake mechanism.
 - Remote controls.
 - Wall mounted controls.
 - CE certified.
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10. Emergency Exit Doors

Provide:

- 2 No. insulated steel emergency exit doors.
 - Anthracite Grey finish.
 - Panic hardware.
 - Door closers.
 - Ironmongery.
 - Safety signage.
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11. Groundworks & Foundations

Include all excavation and groundworks necessary for completion of the extensions.

Works to include:

- Site clearance.
- Setting out.
- Excavation.
- Disposal of surplus spoil.
- Hardcore fill.
- Compaction.
- Sand blinding.
- Reinforced concrete foundations.
- Foundation design by Contractor's Engineer.
- Backfilling and reinstatement.

Contractor shall verify existing ground conditions prior to commencement.

12. Concrete Floor Slab

Provide:

- 200mm thick reinforced concrete floor slab.
- C40 / 40 Newton concrete.
- Power floated finish.

Include:

- Reinforcement mesh.
- Saw cut joints.
- DPM.
- Radon barrier.
- Radon sump.
- Edge thickening where required.
- All associated floor construction works.

The completed floor shall be suitable for fabrication, engineering and material handling operations.

13. Drainage Works

Include for all drainage alterations required by the extension works.

Works shall include:

- Locating existing services.
- Trial holes.
- Diversion of existing foul drainage where affected.
- New 110mm uPVC foul drainage pipework.
- Inspection chambers.
- Bedding and surrounds.
- Testing.
- Reinstatement.

The contractor shall allow for re-routing of the existing foul drainage system serving the premises where required.

14. Rainwater Goods

Provide complete rainwater disposal system including:

- Gutters.
- Downpipes.
- Brackets.
- Outlets.
- Connections.

All components shall match existing workshops.

15. Electrical Installation

The electrical installation shall be extended from the existing workshops and integrated with existing services.

Lighting

Provide:

- 16 No. LED high-bay fittings.
- Minimum equivalent output to 250W industrial fittings.
- Suspensions and supports.
- Complete wiring and controls.

Service Stations

Provide:

- 8 No. workshop service stations.

Each station to contain:

- 3 No. three-phase outlets.
- 3 No. single-phase outlets.

Emergency Lighting

- Extend existing emergency lighting system.
- Complete testing and certification.

Fire Alarm

- Extend existing fire alarm system.
- Fully integrate into existing installation.

- Complete testing and certification.

Electrical Completion

Provide:

- Testing.
 - Commissioning.
 - Completion certificates.
 - Circuit schedules.
 - As-built documentation.
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16. Compliance Requirements

All works shall comply with:

- Planning Permission documents.
 - Building Regulations.
 - EN1090 Execution Class 2.
 - CE Marking requirements.
 - Relevant Eurocodes.
 - Current Irish Health & Safety legislation.
 - Manufacturer installation requirements.
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17. Shop Drawings & Engineering

The successful structural steel contractor shall provide:

- General Arrangement drawings.
- Fabrication drawings.
- Erection drawings.
- Connection details.
- Shop details.
- Structural calculations where required.

All drawings shall be submitted for approval before manufacture commences.

18. Contractor's Preliminaries

Tenderers shall include for:

- Labour.
- Plant.
- Materials.
- Craneage.
- Lifting equipment.
- Temporary works.
- Scaffolding.
- Access equipment.
- Site supervision.
- Health and Safety compliance.
- Welfare facilities.
- Traffic management where required.
- Waste disposal.
- Cleaning.
- Testing.
- Commissioning.
- Handover.

No claims for omitted items reasonably inferable from the scope shall be accepted.

19. Handover Documentation

Upon completion the contractor shall provide:

- EN1090 EXC2 certification.
 - CE certification.
 - Intumescent paint certification.
 - Electrical completion certificates.
 - Testing and commissioning records.
 - Product warranties.
 - Maintenance manuals.
 - As-built drawings.
 - Fire performance certification.
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20. Tender Return Requirements

Tenderers shall submit:

- Fixed lump-sum tender price.
- Programme of works.
- Structural steel fabrication programme.
- Confirmation of compliance with this specification.
- List of material manufacturers proposed.
- Confirmation of EN1090 accreditation.
- Insurance details.
- Relevant project references.

Tender Note

The extension shall match the existing Workshops 1 and 2 in every respect including structural steel sizes, roof pitch, dimensions, cladding profile, colours, fire rating, workmanship and overall appearance. Any departures from this specification must be clearly identified and priced separately within the tender submission.