



Rialú Tógála, **An Roinn Pleanála agus Forbartha Maoine**  
Oifigí na Cathrach, An Ché Adhmaid, Baile Átha Cliath 8, D08 RF3F

Building Control Division, **Planning and Property Development Department**  
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## **Report to the Finance Strategic Policy Committee**

### **Re: Framework for the Inspection of Construction Sites to Monitor Compliance with the Requirements of the Building Regulations**

#### ***Building Control System***

Building Control in its present form was introduced by the Building Control Act 1990 which was significantly amended in 2007. The secondary supporting legislation is broken into two distinct sets of regulations; the technical Building Regulations and the procedural Building Control Regulations. The Building Control Regulations set down procedures for certificates of compliance, notice periods and other measures to support compliance with the technical Building Regulations. These procedures include Commencement Notices, Disability Access Certificates, Fire Safety Certificates, Certificates of Compliance on Completion and others.

#### ***The Building Regulations (Minimum Technical Standards)***

The minimum requirements relating to the design and construction of buildings are set down in the Second Schedule of the Building Regulations 1997 to 2015. This schedule sets out the regulations in terms of broad technical requirements as follows:

- Part A Structure
- Part B Fire Safety
- Part C Site Preparation and Resistance to Moisture
- Part D Materials and Workmanship
- Part E Sound
- Part F Ventilation
- Part G Hygiene
- Part H Drainage and Waste Water Disposal
- Part J Heat Producing Appliances
- Part K Stairways, Ladders, Ramps and Guards
- Part L Conservation of Fuel and Energy
- Part M Access and Use

Building owners are obliged to ensure that buildings are designed and built to meet the requirements of the regulations. The Department of Housing Planning Community and Local Government publish a series of Technical Guidance Documents setting out methods of achieving compliance in the design of buildings.

### ***The Building Control Regulations***

(Procedures to support compliance with Building Regulations)

The Building Control Regulations are a set of procedures set down to support the implementation of the Building Regulations. Owners of construction projects are required under Part II of the Regulations to give notice to the Building Control Authority of their intention to start a construction project by way of a Commencement Notice or 7 Day Notice.

Part III of the Building Control Regulations sets out the procedure of applying for a Fire Safety Certificate or Disability Access Certificate. For certain categories of projects, excluding primarily domestic housing, pre-approval of a proposed design is required from the Building Control Authority for Part B and Part M by way of the Fire Safety Certificate and Disability Access Certificate respectively.

The procedure for both Certificates is similar. Applicants submit an application accompanied by a technical report and detailed drawings setting out how the proposed design complies with the relevant building regulations. These are considered by the Building Control Authority and a Certificate is granted, granted with conditions or refused. Within Dublin City Council, Dublin Fire Brigade determine Fire Safety Certificate applications and the Building Control Division the Disability Access Certificate applications.

### ***Building Control (Amendment) Regulations 2014 – BC(A)R***

In March 2014 additional requirements were introduced which, for the first time, set out procedures for statutory certification of a building's compliance with Building Regulations in terms of its design and construction. Additional requirements apply at commencement stage whereby an owner is obliged to appoint a registered designer, competent builder and registered professional to act as Assigned Certifier. Drawings, specifications, and other information including an inspection plan must also be submitted at commencement stage.

The Assigned Certifier is a new role in the industry and their role is;

- to inspect a building regularly throughout its construction and
- with the builder, jointly certify a buildings compliance with the requirements of the building regulations upon completion

The role of Assigned Certifier has been restricted to persons who are members of one of three registered professions; these are Registered Building Surveyors, Registered Architects or Chartered Engineers registered with Engineers Ireland.

Before a building may be opened, occupied or used, a Certificate of Compliance on Completion must be signed by both the Assigned Certifier and the Builder and submitted to the Building Control Authority for consideration before being added to the statutory Register. The Building Control Authority may return such a submission without adding it to the Register if there unresolved matters such as unapproved variations to the design, outstanding compliance issues or unsatisfied Enforcement Notices.

A national online Building Control Management System has been developed to manage the implementation of the revised regulations and the significant increase in documentation required for submission to Building Control Authorities. This system is known as the BCMS and is accessed via [www.localgov.ie](http://www.localgov.ie)

## **Dublin City Council Building Control**

Dublin City Council, like all Building Control Authorities has powers to inspect construction sites for the purposes of monitoring, and enforcing where necessary, compliance with the requirements of the Building Regulations.

Dublin City Council Building Control implements the agreed national Framework for Building Control Authorities agreed under the auspices of the City and County Management Association which sets out the role of the Building Control Authority and aims to bring consistency and standardisation to Building Control across the country.

### **Resources**

The Building Control Division is led by Pat Nestor, Acting Senior Building Surveyor, and supported by a technical team of 2 Executive Building Surveyors and 2 Building Inspectors. The administrative team is managed by Nial Dully, Administrative Officer, with a team of 3 whole time and 2 part time officers administrating the notices, applications, completion certificates and dealing with public enquiries.

### **Inspection of Construction Sites**

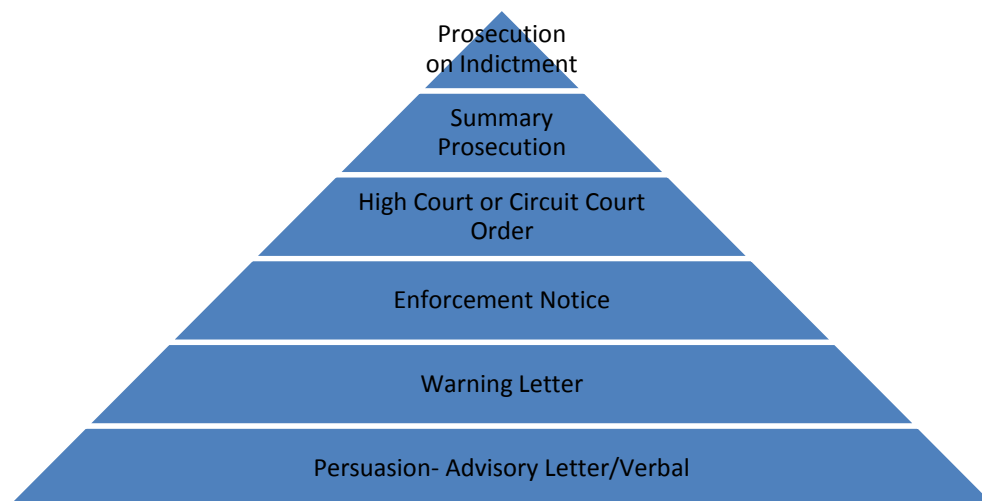
The inspection of construction sites is a discretionary power of the Building Control Authority. However, Dublin City Council considers the inspection of active construction sites as central to supporting the efforts of building owners, builders, designers and other professionals in achieving compliance with the requirements of the Building Regulations.

In 2016 approximately 75% of all new buildings notified to Dublin City Council were inspected by a Building Control Officer. Buildings are selected for inspection on a priority basis with new build multi-unit residential developments as the top priority and projects such as alterations to industrial or office buildings or smaller domestic extensions being of a lower priority. The total number of site inspections carried out was in excess of 1,100 in 2016.

Inspections take place on a regular recurring basis throughout the construction of a building from foundation/formation stage through to completion. A typical inspection reviews the work currently underway including documentation and any other relevant matters and may take between 40 to 90 minutes depending on the size or complexity of a project.

### **Enforcement**

Where a Building Control officer is concerned with any particular part of the construction in terms of its compliance with the requirements of the Building Regulations the matter is generally dealt with effectively on the site by discussions with the Builder and the Assigned Certifier. This is in line with recommendations of the Framework for Building Control Authorities which recommends an 'enforcement pyramid' for regulatory compliance as reproduced here;



**Figure 1 Enforcement Pyramid for Building Control Regulatory Compliance**

Through 2016 warning letters were issued in approximately 20 cases and 2 Enforcement Notices were served requiring the owners to carry out the necessary works to bring their developments into a state of compliance with the Building Regulations.

All inspections are recorded with photographs, notes, measurements etc added to an online inspection program using mobile tablets.

### ***Pyrite and its Prevention***

The problems caused by high levels of pyrite materials in the aggregate underneath floors have been well documented.

The Report of the Pyrite Panel (June 2012), commissioned at the time by the Minister of the Environment, Community and Local Government, recommended, inter alia, that in light of the knowledge and experience gained since 2007 on pyrite a more detailed and specific testing, certification and traceability regime to be put in place for hardcore material for use in buildings and recommends that a standalone specification for hardcore should be developed that covers the performance of the material, the testing requirements at various stages within the supply chain and ensures the traceability of hardcore.

A number of technical standards and requirements have been published and updated to reduce the risk of excess or damaging pyrite in buildings. These are summarised as follows:

- I.S. EN 13242:2002+A1:2007 is the National Standard applicable to aggregates for unbound and hydraulically bound materials.
- S.R.21:2004+A1:2016 (SR21) provides national guidance on the use of I.S. EN 13242:2002+A1:2007 for the specification of aggregate properties for various end uses. The recommendations include the performance requirements, initial type testing, procedures for factory production control (including the on-going testing and traceability regimes) and the certification of unbound granular fill (hardcore).
- The revised Annex E to SR 21 sets out the national recommendations for the specification in relation to the use of granular fill (hardcore) under concrete floors and footpaths. The system of assessment and verification for this particular end-use has changed and now means that the quarry and production control systems is subject to initial inspection and continuous surveillance by a third party Certification Body.
- In addition, the revised Annex E now provides for 4 different materials/specifications for use as hardcore and changed some of the essential characteristics to reduce further the likelihood of pyrite being present in the fill and the properties that are now known to contribute to the problem associated with reactive pyrite.
- The intended use of the aggregate should be clearly stated on the required Declaration of Performance (DoP) which sets out the products material characteristics and performance. The delivery docket should also include the description of the material to ensure that the end use of the product is clear, explicit, known and understood by all in the supply chain.
- SR 21 also stipulates that a Competent Person (Professional Geologist) provides a statement of compliance as to whether the material is suitable or not for use under concrete floors and footpaths.

In addition to the above I.S. 888:2016 Code of Practice for the procurement and use of unbound granular fill hardcore for use under concrete floors and footpaths has been published. This standard provides guidance in respect to;

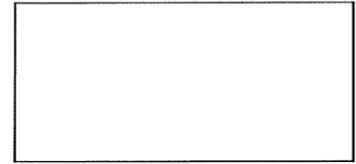
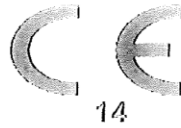
- Ordering, delivery and receipt on site. Requirements include project specification requirements, ordering direct from quarry or intermediary, delivery dockets, visual inspection, and sample testing (if required by the project specification).

- Placing and compacting. Correct material grade placed in each layer as per project specification, use of mechanical compaction dependent on small or large slab construction and on-site testing for satisfactory level of compaction.
- Traceability and record management. It is the Builder's responsibility to ensure that the hardcore is ordered in accordance with both the project specification and relevant standards. The preparation of a method statement is required, its correct implementation, and all documentation is to be available for inspection.
- Additional annexes provide a summary of supply chain responsibilities and compaction requirements.

It is the experience of Building Control that there is a high degree of compliance with the requirements described above. It is standard procedure to review a projects compliance with these specific regulations. Documentation is readily available when requested and builders and designers display a high level of awareness of the requirements of the regulations. Samples of delivery dockets and declaration of performance documents are attached.

**Pat Nestor MSCSI MRICS Chartered Building Surveyor  
Acting Senior Building Surveyor  
Building Control Division  
Planning & Property Development Department**

# Sample Documentation for Aggregate



## Declaration of Performance (DOP)

Aggregates for use in Hydraulically bound and Unbound Materials.

**RL.DOP-AE-FT-03**



1. Unique identification code of the product-type:

| CODE    | DESCRIPTION        | FINES CONTENT TO I.S. EN 933-1 |
|---------|--------------------|--------------------------------|
| 1152112 | T.0 Struc 0/125mm  | F9                             |
| 1152017 | T.1 Struc 0/31.5mm | F7                             |

2. Type, batch or serial number or any other element allowing identification of the construction product as required under Article 11(4) of the CPR:

Production details can be traced via the dispatch docket.

3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

I.S. EN 13242 & S.R. 21 Aggregates for Unbound and Hydraulically bound materials.  
Granular Fill to Annex E of S.R 21: 2014, Suitable for use under Concrete Floors and Footpaths

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(5):



5. Not applicable

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V:  
System 2+

7. Notified certification body

NSAI (identification No. 050) performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control, and issued the certificate of constancy of conformity of the factory production control.

8. Declared performance

| Characteristic                     | Declared Performance | Harmonised technical specification |
|------------------------------------|----------------------|------------------------------------|
| Water Absorption                   | 0.4%                 | I.S. EN 1097                       |
| Percentage crushed and broken      | C100/0               | I.S. EN 933-5                      |
| Resistance to fragmentation        | LA 25                | I.S. EN 1097-2                     |
| Resistance to freezing and thawing | MS 1                 | I.S. EN 1367-2                     |
| Sulphate Content (Acid Soluble)    | AS <.2%              | I.S. EN 1744-1                     |
| Total Sulfur                       | TS <.1%              | I.S. EN 1744-1                     |
| Mudrock Content                    | <10%                 |                                    |

9. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8. This declaration of performance is issued under the sole responsibility of the [REDACTED]

Signed for and on behalf of the manufacturer by:

[REDACTED]

(name and function)

[REDACTED]

(place and first date of issue)

[REDACTED]

(signature)

Revised 2016



**Declaration of Performance**  
DOP/SQ/01

**S.R. 21 Annex E - T1 Struc**

**Type/Batch/Serial:** S.R. 21 Annex E - T1 Struc

**Intended Use:** E.N. 13242 - Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction.  
S.R. 21 - Granular Fill to Annex E of S.R. 21:2014 + A1:2016, Unbound granular fill (hardcore) for use under concrete floors and footpaths.

**Manufacturer:** ██████████ Quarries Ltd., ██████████

**AVCP System:** System 2+

**Notified Certification Body:** NSAI 0050 - CPR - 0489

**Technical Specification:** IS EN 13242:2002 + A1:2007 & S.R. 21:2014 + A1:2016 Annex E

Initial Type Testing and Factory Production Control conducted by Mattest Ireland Ltd.  
In accordance with the requirements of Annex ZA of IS EN 13242.

| Essential Characteristics                 | Declared Performance |  | Technical Specification |
|---|----------------------|--|-------------------------|
|   | Designation          | Performance  |                         |
| Aggregate Type / Petrographic Description |                      | 72% Phyllite and 28% meta-dolerite (<1% pyrite observed overall) | EN 932-3                |
| Particle Size                             | Designation          | 0/31.5 Ga80  | EN 933-1                |
| Shape of course aggregate                 | Category             | NPD  | EN 933-3                |
| Particle Density                          | Declared value       | 2.80 Mg/m <sup>3</sup>   | EN 1097-6               |
| Fines Content                             | Category             | F <sub>7</sub>   | EN 933-1                |
| Fines Quality                             | Category             | NPD  | EN 933-9                |
| Percentage of Crushed & Broken Particles  | Category             | C <sub>90/13</sub>   | EN 933-5                |
| Resistance to Fragmentation               | Category             | LA <sub>30</sub>   | EN 1097-2               |
| Water absorption                          | Category             | WA <sub>24</sub> 2   | EN 1097-6               |
| Acid soluble sulphates                    | Category             | AS <sub>0,2</sub>  | EN 1744-1               |
| Total Sulphur                             | Category             | S <sub>1</sub>   | EN 1744-1               |
| Durability against Freeze thaw            | Category             | MS <sub>25</sub>   | EN 1367-2               |
| Mudrock Content                           |                      | <10%   | EN 932-3                |

The performance of the product type identified by product type and product code is in conformity the Declared Values in the table above.  
The declaration of performance is issued in accordance with EU Regulation No 305/2011, under the sole responsibility of

Signed on behalf of the manufacturer:

Signed:

Managing Director

Date:

27/05/2016





Sales Docket

Docket No.: 7462569

Feltrim Quarry  
Feltrim Road



Roadstone Ltd.  
018450986

21-Feb-2017 14:15  
Location: 221  
Truck : 7104  
Distance: 4  
Gross : 33.00  
Tare : 12.40  
Net : 20.60

Site: [Redacted]  
Order No: [Redacted]

Customer (Account Number): [Redacted]

Customer P.O. [Redacted] Contact No. RV6 GENERAL TEMPLATE

| Customer P.O. | Contact No.    | RV6 GENERAL TEMPLATE | Qty   | Price | per | VAT | Value |
|---------------|----------------|----------------------|-------|-------|-----|-----|-------|
| 1192017       | SR21 Annex E11 | STRUC (S EN 13242)   | 20.60 |       | TN  |     |       |

On Site: [Redacted] Off Site: [Redacted]

Received and Authorised By: [Redacted]

Signature [Redacted] Print Name [Redacted]

Signature [Redacted] Print Name [Redacted]

On Site: [Redacted] Off Site: [Redacted]

Signature [Redacted] Print Name [Redacted]

Signature [Redacted] Print Name [Redacted]

On Site: [Redacted] Off Site: [Redacted]

Signature [Redacted] Print Name [Redacted]

On Site: [Redacted] Off Site: [Redacted]

Signature [Redacted] Print Name [Redacted]

On Site: [Redacted] Off Site: [Redacted]

Signature [Redacted] Print Name [Redacted]

On Site: [Redacted] Off Site: [Redacted]

Customer Copy

This product can cause serious injury if not used correctly. Please refer to important Health & Safety information printed on the reverse of this docket. Also see overleaf for Conditions of Sale.