SCSI

Chartered property, land and construction surveyors

SCSI REPORT ON CONSTRUCTION COSTS FOR THE DEFECTIVE CONCRETE BLOCKS GRANT SCHEME

FEBRUARY 28, 2022

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ABOUT US

The Society of Chartered Surveyors Ireland (SCSI) is the independent professional body for Chartered Surveyors working and practising in Ireland. Working in partnership with the Royal Institution of Chartered Surveyors (RICS), the pre-eminent chartered professional body for the property, land and construction sectors around the world, the SCSI and RICS act in the public interest: setting and maintaining the highest standards of competence and integrity among the profession; and, providing impartial, authoritative advice on key issues for business, society and governments.

The SCSI, in conjunction with RICS, awards the Chartered Surveyor professional qualification, which is the internationally recognised mark of excellence in the property, land and construction sectors.

With over 5,000 members, Chartered Surveyor professionals are typically employed in the property, land and construction markets through private practice, in central and local Government, in State agencies, in academic institutions, in business organisations, and in non-governmental organisations.

INTRODUCTION

In recognition of the construction cost expertise and independence of the SCSI, the Society was asked by the Department of Housing, Local Government and Heritage (DHLGH) to provide construction cost information for the Government's Defective Concrete Blocks Grant Scheme. The SCSI agreed to produce an independent, standalone construction cost report for the demolition and rebuilding of homes affected by defective concrete blocks (option 1), and to propose a cost methodology for the partial remediation (options 2-5) as per the Terms of Reference appended to this report. This report has been drafted by SCSI volunteer members including surveyors practising in the North West region with professional experience of homes impacted by defective concrete blocks. The report is based on the parameters of the Defective Concrete Blocks Grant Scheme as announced on November 30, 2021. The SCSI has no role in setting the parameters of the scheme (e.g., which building regulations apply, exclusion of foundations, etc.) and has no role in the setting of the grant.

The SCSI has received no payment for this work, which has been undertaken in the public interest.

The SCSI would like to acknowledge the contribution of all stakeholders that provided valuable information regarding the costs and practical considerations for the rebuild and remediation of homes affected by defective concrete blocks in the North West region, including the Mica Action Group, the DHLGH, and local authorities. The SCSI extends our thanks to the Chartered Quantity Surveyor and Chartered Building Surveyor members who contributed to this report for applying their expertise, and we acknowledge the considerable efforts of the SCSI Defective Concrete Block Working Group for their detailed analysis.

APPROACH AND METHODOLOGY

In agreeing to provide an independent report on the real cost of remediation (full or partial) under the Government grant scheme, the SCSI sought specific technical details regarding the items that should be costed, for example specification assumptions given under the terms of the announced grant scheme. Full demolish and rebuild (remediation option 1) costs were calculated on a total loss situation; however, foundations are retained for the costing exercise. The pricing schedules used to gather construction cost information were issued to Chartered Quantity Surveyors[1] based in the North West, with expertise within residential development. To ensure the most up-to-date and relevant data, cost information was collected in February 2022 from Chartered Quantity Surveyor members practising in Donegal, Mayo, Galway, Sligo, Roscommon, Monaghan and Cavan. The construction cost information returned to the SCSI was analysed by an expert working group consisting of Chartered Building Surveyors and Chartered Quantity Surveyors to produce the area basis in **Table 3**.

SCSI pricing schedules were designed and completed by Chartered Quantity Surveyors under the assumptions that the houses to be rebuilt were brick/block, slate roofs, concrete ground floor, and timber intermediate floor. The house specification, as shown in **Table 2**, includes for oil boiler heating and standard plumbing with radiators and standard electrics. The issue of salvage, while raised in the context of the Terms of Reference, is not included within the pricing schedules but in a separate section of this report for consideration.

Site abnormalities can increase overall costs significantly; however, given that this is a rebuild on existing foundations, no additional cost was anticipated under this heading. As stated in the Terms of Reference, the Government has informed the SCSI that the Building Regulations to be applied in the context of the specification are from pre 2008 on the basis that the scheme allows for 'like-for-like' replacement and does not include for 'betterment'. The SCSI produced this report within the parameters of the current scheme; therefore, we have provided construction costs for rebuilding homes at February 2022 material and labour rates, but at pre-2008 Building Regulations.

While the parameters of the scheme are outside the scope of this Report, and the issue of which regulations should apply is a matter reserved for Government decision, as stated in the Terms of Reference, it is the position of the SCSI that best practice is to build to current regulations or to exceed current regulations.

The regulatory changes since 2007, which impact on the cost of different construction elements of a project, include additional fire safety regulations, energy efficiency requirements, and compliance with increased water connection specifications, all of which are detailed later in this Report. The construction materials priced are all available in the Irish market at the time of this report.

The SCSI Construction Cost Report as set out in the Terms of Reference agreed by the DHLGH includes the costs for:

1. Demolition and reconstruction costs.
2. Concrete path around the house.
3. Disconnection and reconnection of utilities.
4. Making good to driveway and garden.
5. Professional fees.
6. VAT at 13.5% on building costs and 23% on professional fees.

Costs do NOT include:

1. New foundations.
2. A-rated/NZEB homes – see note above re relevant building standards.
3. Contents such as carpets, curtains, loose furniture, domestic appliances, etc.
4. Outbuildings, garages, boundary walls, driveways (except as relating to item 4 above), septic tanks, etc.

1 All Chartered Quantity Surveyors that took part in this study are on the Statutory Register. Under the Building Control Act 2007, anyone using the protected professional title 'Building Surveyor' or 'Quantity Surveyor' must be on the Building Surveyors or Quantity Surveyors Statutory Register, respectively. Those on the Statutory Register have been assessed and confirmed as having the recognised qualifications and experience (in accordance with the criteria in the Act). Failure to be on the Statutory Register is an offence under the Building Control Act 2007, which could lead to prosecution.

This Report is informed by Chartered Quantity Surveyors based in the North West of Ireland, the DHLGH cost data and the MICA Action Group.

The SCSI has a very specific role: to prepare a report on average rebuilding rates. Due to the multiplicity of house designs, sizes, choice of building materials, site typology/ground conditions, building finish quality and specification, to name but a few, there can be significant variances within construction costs. Therefore, the SCSI average rebuilding rates are based upon approximate house sizes specified within the Terms of Reference using non-complex house design plans sourced from Chartered Surveyors.

House types

This report provides average rebuilding rates for each of the eight house types specified within the Terms of Reference, four of which are estate-type homes and four are one-off homes typically located in more rural locations on their own site.

Table 1: House types within SCSI study
– REMEDIATION OPTION 1 –

Approximate house size in sq.m	House description
88	2 bed terrace estate house
98	3 bed semi-detached estate house
113	4 bed semi-detached estate house
113	4 bed detached estate house
180	4 bed single rural bungalow
195	4 bed single rural dormer
210	4 bed single rural 2 storey
270	5 bed single rural 2 storey

Estate houses – Type 1 to 4

Houses within this category are typically speculatively built homes located in suburban low-rise developments. The houses generally have front and rear gardens, and are often constructed using concrete block with a partial brick elevation. Allowances within the average rebuilding rates are made for one flue-lined chimney stack in each house type.

Single rural houses – Type 5 to 8

Houses within these categories are typically larger than average estate-type homes and are situated on their own grounds in more rural locations. The houses are often constructed using concrete block throughout. Allowances within the average rebuilding rates are made for one to three flue-lined chimney stack(s) in each house type.

The rebuilding process and associated costs

Statutory and mandatory requirements and necessary consents

In addition to the requirements under the Defective Concrete Blocks Grant Scheme, the key necessary consents with regard to design and construction of homes are planning permission and building control.

In addition to planning and building control consents, any materials used need to comply with applicable construction products legislation.

Planning permission

The SCSI understands that in the case of Option 1 of the Defective Concrete Blocks Grant Scheme as announced in November 2021, the Scheme intends to provide exempted development status for homes that are currently planning compliant and being demolished and replaced on a 'like for like' basis. Where an applicant does not rebuild on a 'like for like' basis, planning permission may be required.

The SCSI recommends that the homeowner and their project team should ensure that any repair or rebuild design and construction comply with the original planning grant, and all associated mandatory requirements.

Building Control (Amendment) Regulations 2014

The Building Control Regulations set out the system of administrative controls to support compliance with the Building Regulations. With regard to domestic buildings, the following are required:

- the appointment of a Design Certifier and Assigned Certifier;
- the submission of a Commencement Notice;
- a Fire Safety Certificate (where appropriate, such as in apartment complexes); and,
- a Certificate of Compliance on Completion by a Registered Building Surveyor, Registered Architect, or Chartered Engineer.

There is a facility to 'opt out' of the Building Control Regulations (S.I. 365) to obtain statutory certificates of compliance signed by a registered construction professional in relation to a new single dwelling, on a single unit development, or of a domestic extension. However, best practice is to apply the Building Control (Amendment) Regulations 2014 for applicable building works such as rebuilding homes.

CONSTRUCTION COSTS

Remediation Option 1 (Demolition and rebuild)

Our assessment of construction costs has been made on the presumption that the homeowner engages a Design and Assigned Certifier under the Building Control (Amendment) Regulations 2014, and therefore has chosen not to opt out.

Construction products legislation

Since July 1, 2013, the Construction Products Regulation requires any construction product placed on the market that is covered by a harmonised EU standard to be accompanied by a Declaration of Performance and to have the CE marking affixed. There is a suite of harmonised standards covering most construction products including aggregates, concrete blocks, etc.

In addition, the Construction Products Regulation has introduced a 'chain of custody' approach for construction products being placed on the market, which will result in greater legal responsibility for compliance not only on manufacturers but also with agents, importers and distributors (i.e., retailers) who must, among other things, take appropriate steps to ensure that these requirements have been fulfilled by the manufacturer.

The SCSI reiterates that the project team managing the rebuilding works is required to ensure that Declarations of Performance are obtained as required, and products are physically checked for CE markings.

Summary of the key changes in Building Regulations since 2007

The Defective Concrete Blocks Grant Scheme, as announced in November 2021, permits the repair/rebuilding of homes to specification in compliance with building regulations and standards in place prior to the introduction of S.I. No. 854/2007 – Building Regulations (Amendment) Regulations 2007.

In the intervening years between 2007 and 2022, Building Regulations have been updated.

Building regulations apply to the design and construction of most classes of building (including a dwelling) or an extension to an existing building. The minimum performance requirements that a building, or works, must achieve are set out in the Second Schedule to the Building Regulations. These requirements are set out in 12 parts (classified as Parts A to M). Technical Guidance Documents (TGDs) are published to accompany each part indicating how the requirements of that part can be achieved in practice. Adherence to the approach outlined in a Technical Guidance Document is regarded, prima facie, as evidence of compliance with the requirements of the relevant part of the Building Regulations. Alternative solutions may also achieve the requirements of the Building Regulations. The Building Regulations may be supported by supplementary guidance, including relevant standards and Agrément certificates (where appropriate).

The **panel below** shows a list of the updated versions of the Technical Guidance Documents (TGDs) in the period between 2007 and 2022.

The key changes between 2007 and 2022 relate to additional fire safety regulations, energy efficiency requirements, and compliance with increased water connection specifications. These are summarised as follows:

- TGD A (Structure) was updated in 2012 to include allowance for the Eurocodes. Other updates in TGD A include a new procedure for determining building heights, new guidance on fixings and disproportionate building collapse.
- TGD B (Fire Safety) has been updated in 2017 and 2020 to allow for separating the guidance into domestic and non-domestic, and

Technical Guidance Document	Subject	Updated version between 2007 and 2022
A	Structure	2012
B	Fire Safety	2017 (Volume 2 Dwelling Houses), 2020
C	Site Preparation and Resistance to Moisture	2020
D	Materials and Workmanship	2010, 2013
E	Sound	2014
F	Ventilation	2009, 2019
G	Hygiene	2008
H	Drainage and Waste Disposal	2010, 2016
J	Heat Producing Appliances	2014
K	Stairways, Ladders, Ramps and Guards	2014
L	Conservation of Fuel and Energy	2011, 2017, 2019, 2021
M	Access and Use	2010

providing additional guidance on best practice in fire safety for apartments.

- TGD C (Site Preparation and Resistance to Moisture) was updated in 2020 to provide revised guidance on hardcore and ground floor construction.
- TGD D (Materials and Workmanship) has been updated in 2010 and 2013 to include allowance for Construction Products Regulation and revised guidance on glazing.
- TGD E (Sound) was updated in 2014 to provide revised guidance in several areas.
- TGD F (Ventilation) was updated in 2009 and 2019 to provide revised guidance in several areas.
- TGD G (Hygiene) was updated in 2008, the key changes were the requirement for dual flush toilets, and improved guidance to protect cold water supply systems against freezing.
- TGD H (Drainage and Waste Disposal) was updated in 2010 and 2016. The document placed improved performance specifications on drainage and waste disposal methods, to ensure that property waste is properly managed, recovered or disposed of without endangering human health and without using processes or methods that could harm the environment.
- TGD J (Heat Producing Appliances) was updated in 2014 to provide revised guidance in several areas.
- TGD K (Stairways, Ladders, Ramps and Guards) was updated in 2014 to provide revised guidance in several areas.
- TGD L (Conservation of Fuel and Energy) has been updated several times between 2007 and 2022. The overriding objective of Part L of the Building Regulations is to make homes more energy efficient and reduce overall reliance on fossil fuels. It is best practice to achieve current energy efficiency standards, which play a pivotal role in reaching carbon neutral targets by 2050 as part of the European Union Energy Efficiency Directive. The improvements to energy performance standards means that houses being built in 2022 have higher insulation values, higher airtightness standards to prevent air leakage from buildings, and heat generation sources replace carbon-producing oil/gas boilers to renewable sources of heat generation such as air to water heat pumps and photovoltaic panels.
- TGD M (Access and Use) was updated in 2010, reflecting an overall aim to foster a more inclusive approach to the design and construction of the built environment to facilitate the needs of all people regardless of age, size or disability. This includes approaches to a dwelling, widths of internal doors, entrances, sanitary facilities, etc.

Therefore, while outside the pricing brief prepared for this report, it would be best practice to apply the relevant building standards, particularly for the conservation of fuel and energy that would reduce energy use and improve the quality of a home. In doing so, homeowners should consider at an early stage items such as passive design measures (e.g., the use of energy-efficient materials and encouraging behaviour that focuses on energy conservation) and active measures (e.g., use of renewable energy sources and technologies like solar and wind). The SCSI understands that Government is proposing that successful applicants to the Defective Concrete Blocks Scheme can apply for the Sustainable Energy Authority of Ireland (SEAI) retrofit grant scheme, and that specific guidance is expected. These works should be overseen by appropriately qualified professionals.

The Building Contract

The rebuilding costs within this report are based on a building contractor appointed as the 'competent builder'. The rates are based on a rebuilding brief whereby a competitive tender bid is awarded to a competent building contractor, under the administration of a competent professional on the relevant Statutory Registers such as Building Surveyor, Quantity Surveyor, Architect, or Engineer.

While the average rebuilding costs are based on pre-2008 Building Regulations, the overall costs for rebuilding include for Building Control Regulations introduced in 2014. Professional fees associated with Building Control Regulations (i.e., where an Assigned Certifyer inspects the construction work) are included in the average rebuilding costs.

Foundations

House foundations can include raft, strip or pile foundations and should be designed and specified to cater for varying ground conditions and load-bearing quality of sites. Traditional strip foundations are typical in most house construction and are generally the most cost-effective form of foundation. However, some sites require other foundation designs such as raft or pile foundations, which can be substantially more expensive to construct.

The SCSI is requested to provide an average rebuilding rate of a variety of homes, excluding foundations, and therefore, the SCSI has not costed for this in the average rebuilding figures.

Average rebuilding rates

The report provides average rebuilding rates, including demolition costs, based on the pricing brief as shown within **Table 2: SCSI Construction Cost Pricing Brief**.

CONSTRUCTION COSTS

Remediation Option 1 (Demolition and rebuild)

Table 2: SCSI Construction Cost Pricing Brief.

Demolition	▸ Full demolition, cartaway and disposal costs, retaining existing foundations in situ.		
Substructure	▸ Blockwork from top of foundation to the damp-proof course (DPC) at ground floor level. For clarity, blockwork of 900mm in height is costed (from top of foundation to DPC).	▸ 150 mm concrete floor slab, reinforced with A142 mesh steel supported by 200mm hardcore SR21 and 50mm sand blinding.	▸ Includes 100mm polyisocyanurate (PIR) insulation, radon barrier, with 75mm sand: cement screed.
Superstructure	▸ Concrete block external walls of 300mm wide. Walls constructed with two 100mm concrete block leafs, with 100mm cavity. ▸ 100mm internal concrete block walls at ground floor level.	▸ Brickwork included for partial elevations of estate-type homes only. ▸ 80mm polyisocyanurate partial external wall insulation.	▸ House ventilation with non-humidity wall vents in all habitable rooms. ▸ Inclusion for construction of chimneys, with varying number of chimneys proportionate to house size included within the pricing schedule.
First floor and roof	▸ Timber roof construction with fibre cement slate. ▸ Stud partitioning on first floor including sound insulation and plasterboard skimmed.	▸ Timber floor joists for intermediate floor construction, floored with 18mm Oriented Strand Board (OSB) throughout.	▸ Quilt insulation at ceiling level to achieve U-value of 0.16W/m^{2}K. ▸ Polyisocyanurate insulation at rafter level for dormer-type house.
Completions and finishes	▸ PVC double glazed windows and external doors including rooflights in attic (where applicable). ▸ Softwood internal doors including ironmongery and skirting throughout. ▸ Render finish including painting, where applicable. ▸ Tiling – splashback tiling in kitchen,	etc., waterproofing of wet areas to bathrooms with floor and wall tiling to selected locations. . ▸ Timber stairs c 1000mm wide, including balustrade and handrails. ▸ Plaster cornice to hall, main reception rooms. ▸ Allowance for kitchen units and extractor fan included, excluding	appliances. ▸ Allowance for fireplace(s). ▸ Built-in wardrobes. ▸ Hot and cold water installations, plumbed for oil boiler and radiators. ▸ Standard electrical installations. ▸ Sanitary fittings such as water closets, vanity units, bath, shower units (trays and screens).
Drainage and siteworks	▸ Replacing drainage within footprint of relevant house and localised connections to manhole/access	junction. ▸ Concrete footpath around perimeter of house.	▸ Making good to driveways, reseeding, etc.
Preliminaries, other fees	▸ Management, supervision, waste disposal, insurance, health and safety, office overheads, and VAT on building works.	▸ Disconnection and reconnection of utilities. ▸ Professional fees such as building surveyor, architect, engineer, and quantity surveyor, including VAT.	▸ Fees for certification under the Building Control (Amendment) Regulations 2014.
Cost exclusions	▸ Planning consent fees. ▸ Engineer professional fees for eligibility onto the Defective Concrete Blocks Grant Scheme as announced in November 2021. ▸ Fees relating to the Certificate of Remediation required by the Defective Concrete Blocks Grant	Scheme following completion of the remedial works, signed by the contractor and a competent engineer. ▸ New foundations. ▸ A-rated/nZEB standards. ▸ Contents such as carpets, curtains, loose furniture, domestic appliances	or removal/storage of same. ▸ Septic tank/secondary treatment wastewater system. ▸ Salvage of materials. ▸ Boundary walls/fences. ▸ Outbuildings and other unattached buildings (e.g., garage).

Table 3: Average rebuilding costs – priced at 2022 material and labour rates, with pre-2008 Building Regulations.

Please refer to Table 2 for a list of pricing assumptions and exclusions, i.e., includes demolition costs, excludes foundations, priced to pre-2008 Building Regulations.

Approximate house size in square metres	2 bed terrace estate house (88sqm)	3 bed semi-detached estate house (98sqm)	4 bed semi-detached estate house (113sqm)	4 bed detached estate house (113sqm)	4 bed single rural bungalow (180sqm)	4 bed single rural dormer (195sqm)	4 bed single rural 2 storey (210sqm)	5+ bed single rural 2 storey (270sqm)
Estimate rebuild cost February 2022	€149,688	€165,620	€193,456	€200,688	€317,880	€308,685	€339,150	€421,470
Average rebuild costs per square metre	€1,701	€1,690	€1,712	€1,776	€1,766	€1,583	€1,615	€1,561
Average rebuild costs per square foot	€158	€157	€159	€165	€164	€147	€150	€145

COSTING METHODOLOGY FOR REMEDIATION

Options 2 – 5 (Partial demolition and rebuild)

The SCSI notes that commentary on the appropriateness of remediation options 2 to 5 vis a vis remediation option 1 is outside of the scope of this Report. The SCSI is requested to provide a costing methodology for the partial demolition and rebuild under remediation options 2 to 5.

The following key cost components of remediation works must be considered as part of costing methodology for remediation options 2 to 5:

- Desktop review by a competent professional of the historic report(s) relating to the scale of the issue in the house under consideration, including testing.
- Full inspection by a competent professional outlining the schedule of works necessary to remediate the house.
- Risk allowance for any unforeseen additional works discovered during remediation.
- Temporary accommodation; due to the nature and disruption associated with a partial demolition incorporating temporary support and rebuilding of structures, phased work to permit occupiers to remain in situ during construction work is unlikely to be a feasible option in most circumstances.
- Ancillary temporary works, e.g., propping of intermediate floors, ceilings, joists, etc.
- Phased demolition of affected walls.
- Removal of construction waste.
- Removal and storage of salvage for future reinstatement.
- Removal and storage of furniture, etc.
- Replacement of walls, replastering and redecoration.
- Reinstatement of salvaged items such as sanitary appliances.
- Rewiring of certain affected areas, back to the consumer unit.
- Reinstatement of mechanical and electrical appliances and associated wiring/pipework.
- Repair of internal elements to restore to pre-building works state.
- Contractor preliminaries.
- Professional fees, including for snagging, final inspection and sign-off.

The construction cost of options 2-5 will therefore be site specific. Estimates based on gross floor area are unlikely to be appropriate. A site-specific cost exercise will have to be undertaken for the specific element/area to be replaced incorporating the additional ancillary items affected from the foregoing non-exhaustive list.

It is a matter for Government as to how such a site-specific remediation scheme could be established. The IS:465 Register of Chartered Engineers for determining whether a building has been damaged by concrete blocks containing certain excessive amounts of deleterious materials may provide a blueprint for the establishment of a panel of appropriately qualified professionals. The panel could assist homeowners with devising a suitable works plan for those identified as requiring remediation options 2-5 as per the engineer's assessment (Chartered Building Surveyors, Structural Engineers) and subsequently costed (Chartered Quantity Surveyors). If a sample Structural Engineering report can be provided for each of the 4 rebuild/remediation options 2-5 in the North West, the SCSI is willing to provide indicative costings for options 2-5 to assist in the establishment of such a panel.

Reuse of house components (salvage)

Reuse of existing house components was not included in the average rebuild cost calculations in Table 3; however, the economic and environmental benefits are worth considering. Based on qualitative feedback in the preparation of this Report, it is clear that considerations for viability may differ from component to component and home to home.

The SCSI understands that reuse of components (salvage) is promoted by the Defective Concrete Blocks Grant Scheme, as this practice assists sustainability and the circular economy. The SCSI anticipates that the applicable components may include the following:

- kitchen cabinets;
- external doors and windows;
- internal doors;
- radiators;
- boiler;
- water storage tank;
- sanitary appliances/bathroom furniture;
- joinery and ironmongery; and,
- staircases.

The SCSI considers that for a competent professional to determine whether salvage is viable, based on a cost vs benefit analysis, several safety, economic and environmental factors need to be considered, including:

- damage of the component caused by the defective concrete blocks;
- damage to the component caused by removal;
- costs associated with proper storage;
- costs associated with re-installation; and,
- environmental impact of reuse vs recycling of materials.

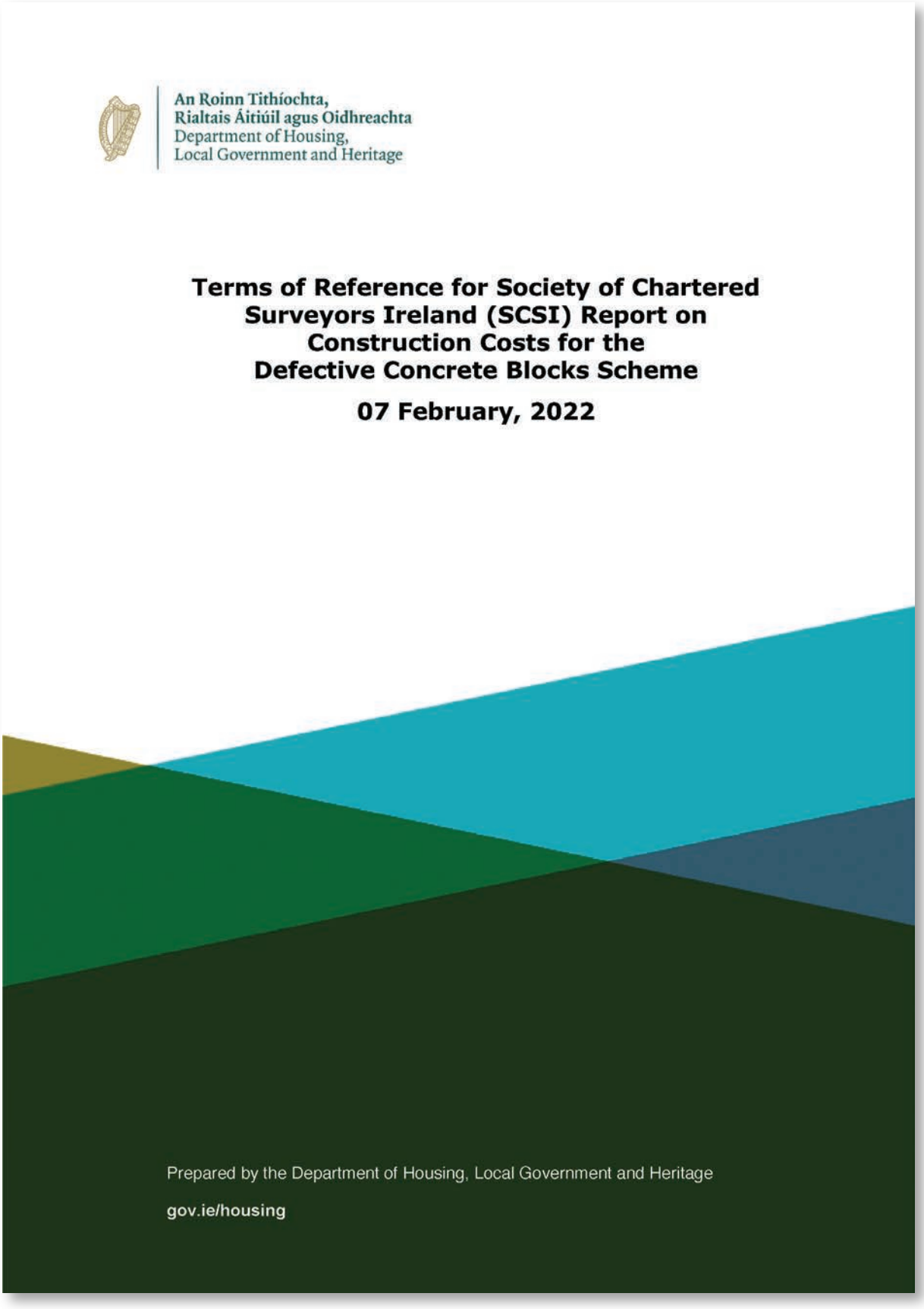
In a wider context there could be an opportunity to promote the widespread reuse of building components (not impacted by defective concrete materials) to promote the circularity of materials in the building sector. Unfortunately, the reuse of building components is not yet a mainstream practice in Ireland or other jurisdictions generally.

Annual review

Remediation Option 1

The SCSI commits to undertake an annual review of the construction costs contained in this Report and to provide an updated table of average rebuilding costs (Table 3) as required.

The SCSI produces a number of construction cost reports annually; however, as this is a separate, stand-alone report produced within the specific parameters of the Defective Concrete Blocks Grant Scheme, comparisons should not be drawn between the figures in this Report and other construction cost reports produced by the SCSI (e.g., the Tender Price Index, which tracks the level of construction price inflation nationally on commercial projects, or the SCSI Guide to House Rebuilding Costs for Insurance Purposes).



An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta
Department of Housing,
Local Government and Heritage

Terms of Reference for Society of Chartered Surveyors Ireland (SCSI) Report on Construction Costs for the Defective Concrete Blocks Scheme

07 February, 2022

Prepared by the Department of Housing, Local Government and Heritage

gov.ie/housing

APPENDIX

Terms of Reference for Society of Chartered Surveyors Ireland (SCSI) Report on Construction Costs for the Defective Concrete Block Scheme

1. The Department of Housing, Local Government & Heritage ("the Department") is the department with responsibility for a scheme established under the Dwellings Damaged by the Use of Defective Concrete Blocks in Construction (Remediation) (Financial Assistance) Regulations 2020[2] (S.I. No. 25/2020) ("Defective Concrete Blocks Scheme" or "DCB Scheme") under which levels of financial assistance are to be provided to eligible property owners for the remediation of damage caused to their properties by the use of defective concrete blocks in their construction. The level of financial assistance is to be determined by reference to a series of options for remediation which options are set out in Table 1 (Appendix 1) below, and range from full demolition and reconstruction of the entire dwelling, to demolition and reconstruction of affected elements only[3] (the "Options").

2. The Society of Chartered Surveyors Ireland (SCSI) is the independent professional body for chartered surveyors working and practicing in Ireland and is a registered charity. The SCSI has been invited by the Department to prepare a report detailing cost calculation methods for each of the Options across a range of different house types (the "Report").

3. On the 30 November 2021, the Government approved changes to the Defective Concrete Blocks Scheme. A range of enhancements were agreed, including improvements to the Scheme including increasing the current 90% maximum grant to a 100% grant for all remediation Options 1-5 and increasing the maximum grant cap for Option 1 (demolition and rebuild) to €420,000 from €247,500.

4. The Government has agreed that the grant calculation methodology for Option 1 remediation works is to be based on a cost per square foot ('psf') based on the size of the existing home. The cost psf will be relative to the average psf construction

[2] Appendix A S.I. No. 25/2020 - Dwellings Damaged by the Use of Defective Concrete Blocks in Construction (Remediation) (Financial Assistance) Regulations 2020
[3] Protocol IS:465, published in November, 2018

costs for Option 1 remediation works for a standard specification home under the DCB scheme.

5. The current indicative cost psf has been set by Government based on advice from the Department which has been informed by its QS team based on first-hand experience, by a review of remediation cost plans received from homeowners which are Stage 2 approved under the scheme and by the SCSI Guide to House Rebuilding Costs for Insurance Purposes 2021.

6. Whilst the SCSI Guide to House Rebuilding Costs for Insurance Purposes 2021 has been of some assistance to date, it is acknowledged by the Department that by reason of the key points of divergence between the Guide and the requirements of the DCB Scheme (set out in Appendix 2) the present Report is required..

7. The Government has therefore directed that the cost calculation methodology (based on a cost per square foot) is to be updated in consultation with SCSI and that SCSI would be asked to provide a Report detailing an appropriate and up to date cost calculation methodology for remediation works under Option 1 together with an appropriate cost calculation methodology for remediation works under each of Options 2-5.

8. The Department will progress the work needed to give the decision of Government effect, including through revised legislation.

9. In furtherance of that work, the SCSI will provide a Report to the Department, on an independent and objective basis, upon the following issues:
    (i) Up to date construction costs in the North West for the demolition and rebuild (Option 1) of a variety of home types and sizes which have been impacted by defective concrete blocks (see Appendix 1). The costs will be dual reported on measurement in both square metres and square feet;
    (ii) an appropriate cost calculation methodology for the costing of remediation Options 2 – 5 under the Defective Concrete Blocks Grant

APPENDIX

Scheme and key issues for consideration in this regard (see Appendix 1);

(iii) the Department will require engagement with the SCSI on an ongoing basis to provide updated information on construction costs changes so as to assist the Department in annual reviews of the level of grant assistance to be made available to homeowners under each of the remediation Options 1-5

10. The Report shall be provided by the SCSI by 28 February, 2022.

11. Each of the SCSI and the Department will name a specific representative who will act as the focal point of contact for this work.

12. The SCSI and the Department and the Housing Agency shall meet at such specified intervals as may be agreed to consider and review progress with regard to completion of the work outlined above.

13. Background information is provided in Appendix 2. The Department in conjunction with Local Authorities will make such additional documentation available as may be of assistance to the SCSI and/or make officials available to consult with the SCSI in the course of its work on the above, if requested.

14. The Department may share such drafts of the Report as may be agreed with the SCSI with other government departments, including the Department of Public Expenditure and Reform

15. Either party may publish the Terms of Reference once finalised.

16. The Report provided under the Terms of Reference shall be published following its submission to Government at a time to be agreed with the Department.

17. The Minister for Housing, Local Government and Heritage shall set the appropriate grant rates for the scheme based on and informed by the SCSI Report.

18. It should be noted that while the Department has previously referenced the SCSI Guide to House Rebuilding Costs for Insurance Purposes 2021, the Report to be produced by the SCSI under these Terms of Reference is a standalone Report and not based on the Guide to House Rebuilding Costs for Insurance Purposes.

19. The SCSI will endeavour to address, in the Report, any queries that are brought to the attention of the SCSI by the Department in respect of costs calculation for the purposes of the Defective Concrete Blocks Grant Scheme.

20. The SCSI will be the independent and sole author of the Report.

21. The Department will use its best endeavours to provide an indemnity to SCSI and the members involved in the preparation and provision of the Report against any liability, loss, claim or proceedings whatsoever arising under statute or common law in respect of the preparing and provision of the Report.

22. Copyright in the Report shall be retained by SCSI.

23. It is intended that the views expressed and conclusions drawn in the Report to be produced will be the fair and reasonable views and conclusions of the members of the SCSI contributing to the Report based on their consideration and analysis of data provided by the Government and otherwise obtained from relevant market sources. However, neither the SCSI nor any individual member contributing to the Report shall under any circumstances be liable to the Department or any third party (whether in contract, tort (including negligence, negligent mis-statement and/or breach of statutory duty) or otherwise for any loss or damage whatsoever and howsoever arising in connection with the production or content of the Report nor shall they be liable for any actions (or lack thereof) taken by any party arising from reliance upon or in any way using the content of the Report. Readers of the Report will be advised to take advice from a qualified professional when dealing with specific situations.

24. Whilst every effort will be made to ensure that the information on which the Report will be based is true, accurate and up to date, the SCSI makes no representations or warranties of any kind, express or implied about the completeness, accuracy,

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reliability, suitability or availability of the Report to be produced. Any party using and relying upon the Report would do so at its own risk and the SCSI shall have no liability to that party in any circumstances. SCSI will disclaim any responsibility to update the Report.

25. The disclaimers and exclusions to be included in the Report when produced, shall be governed by and construed in accordance with Irish law. The SCSI has received no payment for this pro bono work which will be performed in the public interest.

Costings Required for Remediation Option 1

Approximate House Size in Sq. Mts	House Type	Estimate Re-build Cost Feb 2022	Average Rebuild Costs psm	Average Rebuild costs psf
75	2 Bed Terraced Estate House	€	€	€
110	3 Bed Semi Detached Estate House	€	€	€
130	4 Bed Semi-Detached Estate House	€	€	€
160	4 Bed Detached Estate House	€	€	€
180	4 Bed Single Rural Bungalow	€	€	€
180-210	4 Bed Single Rural Dormer	€	€	€
210	4 Bed Single Rural 2 Storey	€	€	€
300	5+ Bed Single Rural	€	€	€

Assumptions

Re-build costs should be calculated on a total loss situation, i.e., the house has been totally destroyed and has to be demolished and rebuilt but existing foundations are sound and remain in situ.

Costs should assume timber frame or brick/block walls, slate/concrete tiled roof, concrete ground floor and timber first floor, rendered finish to external walls, softwood flush doors and double-glazed windows, painted plaster to walls, plastered ceilings, standard electrics, heating (oil boiler and wall mounted radiators) and insulation.

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The Department have suggested that the costs calculations should be based on typical speculatively built homes to a standard quality specification in compliance with *building regulations and standards in place prior to the introduction of S.I. No. 854/2007 – Building Regulations (Amendment) Regulations 2007* by reason of the fact that it is intended that grant rates for the scheme, to be determined by the Minister, will be based on 'like for like' remediation.[4].

Costs should also include for;

1. demolition and reconstruction costs
2. concrete path around the house
3. disconnection and reconnection of utilities
4. making good to driveway and garden
5. professional fees
6. VAT at 13.5% on building costs and 23% on professional fees

Costs should not include for

1. new foundations
2. A Rated/NZEB homes – see note above re relevant building standards
3. contents such as carpets, curtains, loose furniture and domestic appliances etc.
4. outbuildings, garages, boundary walls, driveways, septic tanks etc.

Additional Consideration - Salvage

DCB homes are not impacted on a total loss basis. There is therefore the possibility of salvage and reuse of house components such as kitchens, doors, radiators, boilers, bathroom furniture, joinery and ironmongery, stairs, roofing materials, built in wardrobes etc.

Whether it is financially viable to salvage and reuse house components should be considered by SCSI by examining the likely savings, if any, which could be made by a homeowner through salvage and reuse of house components to a standard specification of a speculatively built 4 bed detached estate built home of 160 sq. mts. constructed in the early 2000's.

Costing Methodology for Remediation Options 2 – 5

[4] SCSI agrees to cost rebuild based on 2007 regulations as suggested, however, best practice is to build to current regulations.

The remediation works involved in Options 2 – 5 are very different to those which will be carried out under Option 1. It is the quantity of blockwork in the external walls of the dwelling which would appear to be the most relevant consideration. The issue of different house types; terraced, semi-detached, single storey, two storey, dormer, apartment etc. needs further and detailed consideration.

The Department has not determined or set a costing for remediation works under options 2 – 5. Some work has been carried out by the Departments QS team in this regard but SCSI is asked to consider, in the Report , a method for calculating costs for the remediation works required under each of the Options 2-5.

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Appendix 2: Background Note

The cracking of the external walls of dwellings in Donegal and Mayo, due to the crumbling of concrete blockwork, came to light and public prominence in 2013. An Expert Panel was established in 2016, chaired by Mr Denis McCarthy and including representatives nominated by the National Standards Authority of Ireland (NSAI), Association of Consulting Engineers of Ireland and the Institute of Geologists of Ireland, to investigate the matter.

Its Report was published on 13 June 2017, concluding that the disintegration of the concrete blocks used in the construction of the affected dwellings in Donegal and Mayo was primarily due to excessive amounts of deleterious materials in the aggregate used to manufacture the concrete blocks. The deleterious material in Donegal was primarily muscovite mica and in Mayo it was primarily reactive pyrite, meaning that the impact and remediation options were expected to be somewhat different in both counties, with more Option 1 (demolition and rebuild) anticipated in Mayo.

The Defective Concrete Blocks Grant Scheme

The Defective Concrete Blocks Grant Scheme was signed into law under S.I. No. 25 of 2020 on the 31 January 2020. It is a grant scheme of last resort which was put in place by Government in order to voluntarily assist homeowners who are in a very difficult position, with no other apparent options open to them to remediate actual damage to their home owner occupied principal private residences and financially assist people so they can remain in those homes. It is not a compensation or redress scheme.

In light of the extraordinary State intervention and so as to incentivise cost control it was originally designed on the basis of a 90% grant scheme.

Prior to its introduction, in order to ensure consistency in the assessment, testing and categorisation of defective concrete blocks, the NSAI was tasked with putting in place

a protocol to guide engineers, geologists and laboratories in assessing, testing and categorising damage.

Protocol IS:465, was published in November, 2018, and gives guidance on the choice of the appropriate remedial works option. In addition, to assist homeowners in sourcing appropriate engineers, Engineers Ireland (EI) was tasked with putting in place a panel of engineers, trained in the application of the IS:465 protocol.

The DCB Scheme funds 5 different remediation options set out in IS:465 as follows;

Table 1: Grant Amount Payable per Remedial Option[5]

Remedial Option	Remedial Option Description	Maximum Grant Payable[1,] (90% of Max Eligible Expenditure)
Option 1	Demolish entire dwelling to foundation level and rebuild.	€247,500
Option 2	Demolish and rebuild external walls (both outer and inner leafs) down to foundation on a phased basis and re-render.	€198,000
Option 3	Demolish and rebuild external walls (both outer and internal leafs) down to top of rising wall on a phased basis and re-render.	€189,000
Option 4	Demolish and rebuild external walls (outer leaf only) down to top of rising wall on a phased basis and re-render.	€67,500
Option 5	Demolish and rebuild outer leaf of affected walls only and re-render.	€49,500

NOTE:

1. All costs are inclusive of VAT.

[5] As per the Scheme as originally formulated – now updated and enhanced.

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Challenges with Scheme Administration

Under the current operating terms of the Scheme, homeowners engage an IS:465 registered engineer to assess their home for eligibility and to determine the appropriate minimum feasible remediation option. The local authority are then required to assess the submission and check that the engineers Report has been prepared in accordance with I.S. 465 and the remedial option recommended represents the minimum feasible remedial works for the dwelling. If the local authority is satisfied confirmation is issued (Stage 1 approval). The homeowners engineer then prepares a remedial works plan and arranges for contractor quotations. The remedial works plan and the contractors cost plan are then assessed by the relevant local authority and all ineligible works and costs which are not allowable are excluded. The homeowner is then notified by the local authority of their approval and the grant amount. They can thereafter commence remediation works. (Stage 2 approval).

For more information on the historic scheme, see Overview of Defective Concrete Blocks Scheme.

SCSI 'Guide to House Rebuilding Costs for Insurance Purposes' – key points of divergence

The SCSI publish an annual 'Guide to House Rebuilding Costs for Insurance Purposes' which is used by homeowners as a guide to help them determine the appropriate level of insurance cover for the rebuild of their homes.

It is the view of the Department that the SCSI guide is fair and reasonable and helpful in framing rebuild construction costs. The published 2021 SCSI guide estimated that the appropriate rebuild cost for the North West is an average €138 psf. This covers the cost of rebuilding a home on new foundations to 2021 building standards.

It is important to acknowledge however that the SCSI guide is not an exact match for DCB grant calculation purposes.

The guide is based on typical speculatively built, estate type house across 6 house types ranging in size from 753 – 1,571 sq.ft. with average rebuild costs psf ranging from €145 to €134.

> Many of the properties eligible under the DCB Scheme are likely to be one off houses in rural settings.

The SCSI guide relates to costs for the re-build of homes on new foundations to current building standards.

> Foundations do not require replacement in DCB impacted homes and the costs adopted for the grant scheme must reflect this and also that homes are grant aided for replacement on a like for like basis.
> Under DCB, homeowners are free to rebuild homes and upgrade to current building standards but the marginal cost is not reflected in the grant available and must be borne by homeowners. SEAI grants are however available to homeowners to help defray such costs, where incurred.

The economies of scale associated with housebuilding, which are evident even across a small range of house types and sizes within the SCSI guide, are also important for The Department in the context of setting fair and reasonable rates grant rates for homeowners.

Subject to the key points of divergence set out above, the actual estimated rebuild costs within the 2021 SCSI guide for the 6 house types considered are as follows;

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House Type	Sq. Mts.	Sq. Ft.	Advice on Rebuild Cost	Avg Cost PSF
2 Bed Terrace	70	753.47	€109,550	€145.39
3 Bed Terrace	95	1022.57	€140,410	€137.31
3 Bed Semi-Detached	95	1022.57	€141,645	€138.52
4 Bed Semi-Detached	118	1270.14	€174,404	€137.31
4 Bed Bungalow	118	1270.14	€175,938	€138.52
4 Bed Bungalow	146	1571.52	€210,386	€133.87
Average Cost psf				€138.49

Indicative Cost Per Square Foot (psf) Set by the Department for Option 1

For the purposes of costing the revised DCB scheme the Departments DCB team, in collaboration with internal technical advisors (QS), developed a costing methodology based on a cost psf, which was informed by first-hand experience of costs through the Department's extensive social housing build programme, a review of remediation cost plans received from homeowners which are Stage 2 approved under the scheme, and the SCSI rebuild guide.

The indicative cost psf approved by Government under the current proposed methodology allows for grants to homeowners based on;

- ***a fixed sum of €20,000 for alternative accommodation and storage costs,***
- ***€145psf for the first 1,000 sq. ft.,***
- ***€110psf for the next 1,000 sq. ft. and***
- ***€100psf thereafter.***

The table below sets out what this means for different home sizes in terms of cost psf and the maximum grant available under an Option 1 remediation (demolition & rebuild on existing foundations);

House Size in Sq. Ft	Accommodation & Storage Costs	Average Rebuild Costs Allowable PSF	Max Homeowner Grant
800	20,000	€145	€136,000
1,200	20,000	€140	€187,000
1,600	20,000	€132	€231,000
2,000	20,000	€128	€275,000
2,500	20,000	€122	€325,000
3,000	20,000	€118	€375,000
3,450	20,000	€116	€420,000

The sliding scale effect in the grant calculation methodology is apparent. This is an important issue as it protects homeowners with smaller homes where there are few economies of scale. It also deals appropriately with the economies of scale which owners of large homes will experience. A grant based on a flat rate cost psf would not do this as it will disproportionally benefit the owners of larger homes and disadvantage owners with smaller/average sized homes.

Using a grant calculation methodology based on a cost per sq. ft. will:

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- significantly streamline the grant application process
- give homeowners certainty on their grant level before commencing the design of remediation works
- remove significant potential disagreement between homeowners and local authorities on contractor quotations and eligible and allowable costs
- embed a stronger level of cost certainty within the overall scheme
- encourage homeowners to seek value and, in keeping with climate action objectives and the circular economy, encourage homeowners to reduce and reuse where appropriate and feasible
- allow for construction cost changes to be kept under review, in consultation with SCSI, and incorporated seamlessly into the DCB scheme. The terms of reference encompass consideration and advice on this issue

For more information on the changes to the Defective Concrete Blocks Scheme, see Defective Concrete Blocks Grant Scheme: Your Questions Answered.

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