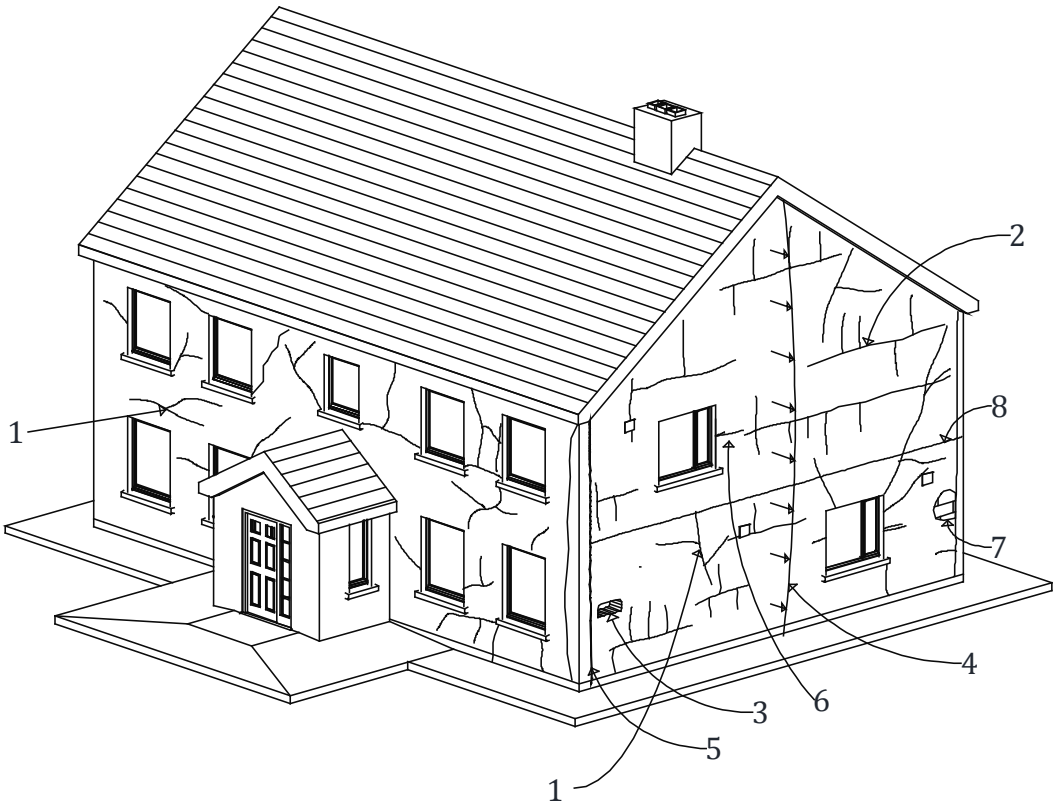


**Key**

| | |
|---|---|
| 1 | Web like cracking |
| 2 | Pattern like cracking (combined horizontal and vertical) |
| 3 | Disintegrated blocks leaving void in external leaf |
| 4 | Outward bowing of external leaf |
| 5 | Wide vertical crack, typically 200 mm from corner |
| 6 | Displacement at window/door reveals |
| 7 | Render blown or missing |
| 8 | Horizontal cracks (possibly attributable to day joint in blockwork) |

Refer to the Report of the Expert Panel on Concrete Blocks [1] for examples of the typical defects encountered.

**Figure 2 — Typical defects encountered**

### 4.5 Remedial works

Taking account of the Building Condition Assessment and the test results, the Chartered Engineer should outline remedial options guided by the recommendations in Clause 8.

This protocol addresses the issue of defective concrete blocks but does not rule out other potential defects in a dwelling which may for other reasons require remedial attention.

## 5 Building Condition Assessment

### 5.1 General

The Building Condition Assessment shall be carried out by a Chartered Engineer and shall comprise of a desk study and a dwelling inspection composed of a non-invasive external and an internal visual inspection of the dwelling.

**Table 1 — Building Grouping**

| Group | Damage | Building Condition Assessment |
|---|---|---|
| Group 1 | Undamaged | Pattern cracking is not present, however some or all the circumstantial evidence [a] is recorded in the Chartered Engineer's Report |
| Group 2 | Damaged | Pattern cracking is present in at least one elevation (but insufficient evidence of other damage to classify the building as Group 4, see Group 4, a) to e)), and no circumstantial evidence [a] is recorded in the Chartered Engineer's Report |
| Group 3 | Damaged | Pattern cracking is present in at least one elevation (but insufficient evidence of other damage to classify the building as Group 4, see Group 4, a) to e)), and some or all the circumstantial evidence [a] is recorded in the Chartered Engineer's Report |
| Group 4 | Significantly damaged | Pattern cracking on at least one elevation, and at least two of the following further items of damage present on same or adjacent elevation:<br>a) vertical cracks near corners > 5 mm in width;<br>b) crumbling concrete blocks;<br>c) severe displacement of reveals with cracking;<br>d) wall leaning or bulging noticeably i.e. local deviation of slope in the horizontal or vertical plane of external walls of > 1 in 100 [4], and<br>e) cracking of widths > 1 mm on internal leaf where damage is also present on the corresponding external leaf (Figure 2), or multiple cracks of concrete masonry walls in one room of > 0,5 mm.<br>Where circumstantial evidence is available it shall be recorded in the Chartered Engineer's Report. |
| [a] Circumstantial evidence (risk factors) suggesting the possible presence of deleterious materials in concrete blocks includes:<br>– information that blocks came from manufacturer(s) reported to have supplied blocks to other damaged dwellings likely to have arisen from deleterious material in concrete blocks,<br>– construction within the date range of constructions mentioned in the Report of the Expert Panel on Concrete Blocks [1], and in the geographic areas reported to be affected; and<br>– documented information (e.g. Chartered Engineer's Report) that other dwellings in the same estate or locale have exhibited signs of damage likely to have arisen from deleterious material in concrete blocks. | | |

### 5.3.2 Group 1 dwellings

Group 1 dwellings are outside the scope of this Irish Standard. However, the process outlined in this Irish Standard may be used for assessing these dwellings.

## 5.4 Interim reporting

The Chartered Engineer should issue an interim report on the results of the Building Condition Assessment and make recommendations for sampling and testing of dwellings in Group 2, Group 3 and Group 4.

The appropriate reports that are required to be completed are defined in Clause 9.

# Annex A
(informative)

## Example Building Condition Assessment report template

| **Information on the building** | |
|---|---|
| **Address:** | **Eircode:** |
| **Type of building:** | |
| **Description of site location** e.g. in a residential estate or private site**:** | |
| **Orientation:** | |
| **Year built:** | |
| **Floor area ($m^2$):** | |
| **Year defects first appeared:** | |
| **Weather at time of assessment:** | |
| **Current owner:** | |
| **Other information** e.g. brief history of development of damage**:** | |
| **Site inspection of damage** | |
| **Chartered Engineer carrying out the inspection:** | |
| **Date:** | **Qualifications:** |
| **Circumstantial Evidence** | |
| **Source of concrete block materials:** | |
| Is there information that the blocks in the dwelling came from manufacturer(s) reported to have supplied blocks to other dwellings exhibiting damage likely to have arisen from deleterious material in concrete blocks? | ☐ Yes<br>☐ No |
| Was the dwelling constructed within the date range of constructions mentioned in the Report of the Expert Panel on Concrete Blocks [1], and in the geographic areas reported to be affected? | ☐ Yes<br>☐ No |
| Is there documented information (e.g. Chartered Engineer's Report) that other dwellings in the same estate or locale have exhibited signs of damage likely to have arisen from deleterious material in concrete blocks? | ☐ Yes<br>☐ No |
| Are other houses in the same estate exhibiting signs of damage likely to have arisen from deleterious material in concrete blocks? | ☐ Yes<br>☐ No |

| **Side elevation** | Notes: |
|---|---|
| | Web like cracking ☐ Yes ☐ No |
| | Pattern like cracking (combined horizontal and vertical) ☐ Yes ☐ No |
| | Disintegrated blocks leaving void in external leaf ☐ Yes ☐ No |
| | Outward bowing of external leaf ☐ Yes ☐ No |
| | Wide vertical crack, typically 200 mm from corner ☐ Yes ☐ No |
| | Displacement at window/door reveals ☐ Yes ☐ No |
| | Render blown or missing ☐ Yes ☐ No |
| | Horizontal cracks (possibly attributable to day joint in blockwork) ☐ Yes ☐ No |

| **Building Grouping per I.S. 465** | |
|---|---|
| ☐ **Group 1** | ☐ **Group 2** |
| ☐ **Group 3** | ☐ **Group 4** |

| **Location of sampling to be marked on he dwelling and/or on sketch elevations** |
|---|
| **e.g. Front Elevation Sketch** |