IBCI Building Control Conference 2019

The Lyrath Estate, Paulstown Road, Kilkenny
27th March 2019

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Building Control Manager
HomeBond Building Control Ltd
Preview

**Topic**

Assigned Certifier Duties Outside BCAR / Administration Process

Recurring Site Issues A-M

Robust Details - Fire Stopping the Party wall

Robust Details – Solar Panel Installation

Site Issues remediated after intervention by Assigned Certifiers- Case study

Assigned Certifier – Certificate of Compliance on Completion
Assigned Certifier Duties Outside BCAR

1. Owner must appoint AC - Contract
2. Contractor Tender Documents
3. Conveyance Requirements
4. Collateral Warranties
5. Bank Monitor Requirement – Interim Certificate
6. PI Insurance
7. LDI Insurance
## Administration Process

### Appendix A: Requirements of the Second Schedule to the Building Regulations

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Description</th>
<th>Apply</th>
<th>Does not apply</th>
<th>Partially applies</th>
<th>Comment</th>
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<tbody>
<tr>
<td></td>
<td><strong>Part A - Structure</strong></td>
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<tr>
<td>A1</td>
<td>Loading</td>
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<tr>
<td>A2</td>
<td>Ground movement</td>
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<td>A3</td>
<td>Disproportionate Collapse</td>
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<td></td>
<td><strong>Part B – Fire Safety</strong></td>
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<tr>
<td>B1</td>
<td>Means of Escape in case of fire</td>
<td></td>
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<tr>
<td>B2</td>
<td>Internal Fire Spread – (linings)</td>
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<tr>
<td>B3</td>
<td>Internal Fire Spread – (structure)</td>
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<td>B4</td>
<td>External Fire Spread</td>
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<td>B5</td>
<td>Access and Facilities for the Fire Service</td>
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</table>
# Administration Process – Design Review

## Elemental Design Matrix

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Description</th>
<th>Applies to Project</th>
<th>Element</th>
<th>Design Certificate Received</th>
<th>Design Responsibility (Enter Company Details)</th>
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<tr>
<td>A1</td>
<td>Loading</td>
<td>Y</td>
<td>Foundations</td>
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<td>Ground movement</td>
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<td>Rising Walls</td>
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<td>A3</td>
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<td>Ground Floor Slab</td>
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<td>XXX</td>
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<td>Timber Frame Intermediate Floors</td>
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<td>Timber Frame Roof Structure</td>
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<td>Fire Certificate Apartments</td>
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<td>B2</td>
<td>Means of Escape</td>
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<td>Means of warning and escape in case of fire.</td>
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<td>Fire Alarm &amp; Detection - Electrical Installations</td>
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<td>Doors and Windows</td>
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<td>XXX</td>
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<td>B7</td>
<td>Internal fire spread (linings).</td>
<td>Y</td>
<td>Plasterboard Linings</td>
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<td>Fire Performance elements</td>
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<td>Performance of elements</td>
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<td>Building Separation</td>
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<td>Definitions for this Part.</td>
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<td>Road Access/ bearing/ turning</td>
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# Administration Process – Document Control

## Site

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<tr>
<th>Developer</th>
<th>List of Documents Received</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>6</th>
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<td>Copies of Test Reports for Concrete Samples</td>
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<td>Architect(Ad,Ai,Ac)</td>
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<td>Windows &amp; Doors(Sd,Si,Sc)</td>
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<td>Easi Joists &amp; Trusses(Sd)</td>
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<td>Fasthouse Timber Frame</td>
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</tbody>
</table>

## Supporting Documentation Compliance with Parts A-M

- Houses Nos
Administration Process – Ancillary Certification

<table>
<thead>
<tr>
<th>Element</th>
<th>Design/ Inspect &amp; Certify</th>
<th>Design + Install</th>
<th>Install</th>
<th>Test &amp; Commission</th>
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</thead>
<tbody>
<tr>
<td>Foundations / Rising Basements / Podium slabs</td>
<td>Ad/Ed/Sd/Bsd Ac/Ec/Sc/Bsc Ai/Ei/Si/Bsi</td>
<td>Ac/Ec/Sc/Bsc/Cs/Css Ai/Ei/Si/Bsi Ad/Ed/Sd/Bsd</td>
<td>Cs/Css</td>
<td>Ac/Ec/Sc/Bsc (Refer to Testing Table Below)</td>
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<tr>
<td>Superstructure</td>
<td>Consulting Engineer Architects</td>
<td>Specialist Foundations</td>
<td>Ground Works / Formwork Contractors</td>
<td>Contractor</td>
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<tr>
<td>Structural Steel</td>
<td>Manufacturer / Supplier Consulting Engineers</td>
<td>Manufacturer / Supply</td>
<td>Contractor</td>
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<tr>
<td>PreCAST Concrete</td>
<td>Consulting Engineer Manufacturer / Supplier Consulting Engineer</td>
<td>Manufacturer /Supplier</td>
<td>Contractor</td>
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<tr>
<td>Roof Finishes</td>
<td>Architects Manufacturer / Supplier M&amp;E Consultant Consulting Engineer</td>
<td>Manufacturer /Supplier</td>
<td>Roofing Contractor</td>
<td></td>
</tr>
</tbody>
</table>
Recurring Site Issues - A

Set Out — Wall not centred

SR 325 — Lintels over Opes
Recurring Site Issues - B

Protection — Penetrations >40mm

Separation — Cavity Barrier
Recurring Site Issues - C

Penetrations — Sealing around pipes

Membrane — Sealing
Recurring Site Issues - D

Materials — Correct Documents

CE Marking — Notified Bodies
Recurring Site Issues - E

Separation – Cavity Barriers

Testing? – Standards Details
Recurring Site Issues - F

Natural – Vent Size?

Roof Ventilation – Materials
Recurring Site Issues - G

Insulation – Freezing

1.9.1 The underground service pipe from the external meter/stopcock to the dwelling has a minimum cover of 600mm. The minimum cover should be maintained along the whole pipe length. Where the pipe is close to the external wall, the pipe should be insulated with insulation impermeable to water vapour (see Diagrams 1 & 2).

Diagram 1
Insulation to a cold water supply through floors in contact with the ground (Par. 1.9.1)
Recurring Site Issues - H

Commissioning — Testing/ Materials

Maintenance — Access
Recurring Site Issues - J

Carbon Detectors — Location

Chimney — Flue Construction
Recurring Site Issues - K

Guarding — Restrictors

Handrail — Correct High
Recurring Site Issues - L

ACD — Correct Details

Zones — Thermostat Location
Recurring Site Issues - M

Access — Gradient

Toilet — Minimum Area
Robust Details – Party wall Fire Stopping

Tgd B 2017

IS 440
Blockwork / Soffit Board

Infill material correctly compressed
Close cavity at roof level

Vertical Separation in Cavity
Fire Stopping Between Battens
Robust Details – Solar Panel Installation

Site Specific Design

Certified System

Suitable Bracket
At each solar panel roof hook position a 100x75 C16 noggling is to be fixed to side of either 35mm or 47mm wide fixing for the roof hook to be fixed too. Below are the safe working loads for the specified detail using SDW2338 structural wood screws and M8 bolts. The safe working load is the maximum load that can be transferred from the 100x75 C16 noggling to the fixing. The fixing between the roof hook and noggling is to be determined by others and the roof hook shown on the details is for indication only.

**PLATE Support Design**
Flashing

Tgd B Requirements
Site Issues Remediated – Case Study 1

Roof Truss Drilled vertically
Site Issues Remediated – Case Study 2

Metal Web Joist Drilled vertically
Site Issues Remediated – Summary

1. Issue Identified
2. Site Procedure Review
3. Design Remedial Works
4. Remediate on Site
5. Inspection of Remedial Works
6. Certification of Remedial Works
7. Update the Actual Inspection Plan
8. Revise the Inspection Notification Framework
9. Update Site Procedures
10. Ongoing Monitoring
Certificate of Compliance on Completion Documentation

Table C.2 Typical documentation supporting compliance with Parts A to M for a Detached Non-Complex Dwelling House

<table>
<thead>
<tr>
<th>Typical documentation (where applicable)</th>
<th>Builder to obtain and make available</th>
<th>Assigned Certifier Check</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Confirmation of the use of proper materials.</td>
<td>See Table C.3</td>
<td>See Table C.3</td>
</tr>
<tr>
<td>2. Mechanical ventilation &amp; heat recovery installation &amp; commissioning report.</td>
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<td></td>
</tr>
<tr>
<td>4. Space &amp; water heating system installation &amp; commissioning report.</td>
<td></td>
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</tr>
<tr>
<td>5. Air tightness test report.</td>
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<td></td>
</tr>
<tr>
<td>6. DEAP calculation for dwelling house (as built).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Evidence of Fire detection/ alarm commissioning</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 8. Other
  • | | |
  • | | |

Documentation
Certificate of Compliance on Completion Documentation

Testing – Sound / BER / Airtightness
Part L Compliance Report
Certificate of Compliance on Completion Documentation

Commissioning – Mechanical / Electrical ET101 & Fire Detection/ Alarm
Certificate of Compliance on Completion Documentation

Use of Proper Materials
3rd Party Certification / DoP / Fire tests to EN
Certificate of Compliance on Completion Documentation

As Built Drawings – Show Compliance
Certificate of Compliance on Completion
BCMS Administration
Signed Bcar Documents

Inspection Plan as Implemented
Certificate of Compliance on Completion
Site Completion

Mains Power — Required to Commission

Escape Windies — Hinges/locks/restrictors/size
Certificate of Compliance on Completion
Site Completion

Radon Sump – No Access

Toilet – Part M Not Fitted
Certificate of Compliance on Completion
Site Completion

Part L – Attic Insulation

Escape – Main Door Thumb Turn
Certificate of Compliance on Completion
Site Completion

Fire Alarm – Installation

Fire Doors – Commissioning
Certificate of Compliance on Completion
Site Completion

Guarding — 800mm min

Labels — Valves/ Isolators
Certificate of Compliance on Completion
Site Completion

Pipework — Insulation

Thermostats — Location
Certificate of Compliance on Completion
Site Completion

Stairs — Handrail/Nosings

Fire — Access/Hydrant
Certificate of Compliance on Completion
Site Completion

**Ventilation** — Extract Not Fitted

**Kitchen** — Sink Not Fitted
Certificate of Compliance on Completion Site Completion – Check List

a) Approach & Access
b) Finished G.L versus FFL
c) Soffit vents
d) Radon sump vent identification
e) Surface & Foul Drainage e.g.
   • rainwater goods
   • soil vent pipes
   • gulley traps
   • waste water treatment system (if any)
f) Fuel storage e.g.
   • Location
   • distance from dwelling/burner/ boundary
   • fire protection
g) Background vents & extraction fans
h) Mechanical Ventilation Heat Recovery (if any)
i) Windows & doors e.g.
   • opening sizes/ readily open able
   • restrictors
   • guarding
   • safety glazing
   • letter plate height
j) Floor to ceiling height
k) Circulation
   • Effective door width
   • Corridor width
l) Stairs e.g.
   • bulk head height/ stair width
   • riser/tread dimensions
   • handrail height/ guarding
Certificate of Compliance on Completion
Site Completion – Check List

m) Roof insulation (incl. tank insulation)
n) Fire requirements e.g.
  • smoke alarms (mains connected)
  • fire stopping at top of cavity wall
o) Carbon monoxide alarms (if applicable)
p) WC e.g.
  • Visitable
  • dual flush toilet
q) Water supply e.g.
  • direct to sink incl. stop valve
  • water storage capacity
  • insulation of pipework

r) Renewables
s) Heating system e.g.
  • zone controls
  • pipe work insulation where applicable, etc.
  • Primary heating appliance e.g.
  • Efficiency
  • air supply
  • condensate drain
u) Secondary heating system e.g.
  • Efficiency
  • air supply
  • notice plate for hearths & flues
Thank You

Douglas Ritchie BSc Building Surveying,
Registered Building Surveyor, MCIOB
Building Control Manager
HomeBond Building Control Ltd