Building Control Officers Perspective
IBCI Building Control Conference 2019
The Lyrath Estate, Paulstown Road, Kilkenny

27th March 2019

Michael Mansell  BEng (Hons) BSc (Hons) MCIOB C. Build E MCABE Reg. B.S. B0371
Senior Executive Building Surveyor
Building Control Department
Cork City Council
Outline of Presentation

- Building Control in Cork City Council
- Building Control Activity Cork City
- Building Control Reforms 2014 - 2019
- Common Non-Compliances Observed
- Building Control Site Inspections Parts A-M
- Concerns & Challenges
Building Control in Cork City Council

- Building Control Oversight and Enforcement
- Disability Access Certificates
- Dangerous Structures
- Adaptation Grants, Mobility Grants and Housing Aids for Older People
- Housing condition surveys for Property and Housing Directorates
- Construction Products Regulations
- Energy Performance of Buildings
- Advising on major indoor and outdoor events
Building Control Activity Cork City

Commencement Notices

Year

No. of Commencement Notices

240
220
200
180
160
140
120
100
2013 2014 2015 2016 2017 2018
Building Control Activity Cork City

New Buildings

No. of New Building Notifications

Year

2014 2015 2016 2017 2018
Building Control Reforms 2014-2019

• “Vision” - Promote a Culture of Compliance with the Building Regulations
• Significant progress and positive change
• BCAR 2014 - 2018
• National Building Control Office & NBCMP
• 4 Pillars – Training, Compliance and Support, BCMS, Inspections
• Boards, Working Groups & Regional Building Control Groups, Email campaigns / notifications
• CIRI Register
Most Common Construction Defects Observed by Cork City Council

• Wall ties – No.’s of, Spacing, Openings, Workmanship.... (Part A, D)
• Design and detailing of structural timber/steel/concrete/timber frame (Part A, B, D, E)
• Lateral support to Floors/Roof level – strapping (Part A)
• Ventilation – Lack of!, Design of, airtightness, roof voids (Part F, L)
• Guarding design at windows low level cills (Part K)
• Notching and drilling of floor joists (Part A)
• Fire stopping, protected stairways, party wall and floor detailing, cavity barriers, Fire detection and alarm system, windows for escape and rescue (Part B, E)
• Damp proof courses, Radon barriers, underfloor fill, incorrect materials, weepholes in brickwork (Part C, D)
• Part L design?, Insulation continuity and detailing, thermal bridging (Part L)
• Drainage— design of! Housing schemes, bedding material, access and maintenance, ventilation (Part H & D)
• Carbon Monoxide Alarms, design of flues, ventilation.... (Part J)
• Accessible entrances and ramps, accessible WC, Visual contrast, handrailing and steps (Part M)
Building Control Site Inspections
Part A - Structure

Steel UB bolted to rising wall blockwork....... Not foundation or concrete pad!

New extension built on existing stone walls – Note gaps to blockwork existing rafters.......
Part A - Structure

- Balcony has come away from wall bolted to masonry.
- Lintels over services below ground.
- Roof has spread...cavity closer block has moved outwards.
- No wall ties around opening.
- Lateral strapping of floor joists – noggings missing
Part B - Fire Safety

Party wall fire stopping – Note large gap

Escape / rescue window to bedroom...low level cill...no guarding or window restrictor

Timber frame party wall – Detail! Note gaps. Joints not staggered, poorly Fixed, not taped and jointed...

Fire resisting partition to landing three storey house. Note gap all along junction of wall and floor
Part B - Fire Safety

Three storey house – hall into kitchen – no fire door

The leaning tower of fire hydrants!!

Compartment Floor detailing........

Blockwork party wall – Large gaps.....
Part C - Site Preparation & Resistance to Moisture

Large holes to radon barrier all along subfloor to new build house

Suitable hardcore material? Extension to dwellinghouse
Part D - Materials & Workmanship

Branch pipe from WC second floor – supported by Block of insulation

Floor slab perimeter insulation used in movement joint to dwellings

Wall tie sloping inwards around ope, mortar droppings, thermal bridge SHS

Solar panel pipework from garage into house used as a step!

Water supply into dwellinghouse at reveal
Part E - Sound

Party wall – Structural steel built into....sound transmission, risk of fire spread....

Party wall – Joists built into....sound transmission, risk of fire spread.....
Part F - Ventilation

Living room to house – No ventilation in room, contained heat producing appliance......

Bathroom in house – No extract fan
Part G - Hygiene

Uninsulated storage tank in attic space – house occupied. No insulation to attic.
Part H - Drainage & Wastewater Disposal

Bedding material around AJ and pipework – Not granular aggregate bedding material compacted

Ready for footpaths!

Discharge stack ventilation to house – below eaves and beside window
Part J - Heat Producing Appliances

Flue from stove below in children’s wardrobe on first floor

5m Flue complete with TV aerial......

Not sure anybody thought about maintenance......
Part K - Stairways, Ladders, Ramps & Guards

No Guarding to escape / rescue window dwellinghouse

No Guarding to escape / rescue window dwellinghouse

No Guarding to stairs – public building
Part L - Conservation of Fuel & Energy

Ready for window board!

Bay window – gaps to insulation

Window head – gaps to insulation, loose walltie.....

Thermal bridge issue concrete beam cavity closer!
Part M - Access & Use

Ramp to rear door of dwellinghouse 1:5 – Main entrance (front) had level difference of 180mm!!

Extension to Secondary School – Door swing into access route – No guarding....
Part M - Access & Use

Accessible WC dwelling – door swings in, no space around WC, clear space 750x1200mm.....

Visual contrast - WC, WHB, grab rails and wall tiles
Concerns & Challenges

- Developers, Builders, Designers and Certifiers in a hurry again!! Tight construction programmes, volume against quality – paper compliance......
- Noticing a concerning drop in:
  - The quality of BCMS submissions including drawings and details (fit for construction/showing compliance!)
  - In construction methods and workmanship and non-compliances with the Building Regulations in some projects inspected
- Fall of in respect generally for BCAR in some quarters?
- Exponential growth in construction output, Methods of Construction, Complexity & Scale of projects, NZEB, Modular Build etc
- Resourcing and Funding of Building Control Inspections (NOAC PI - 10% in 2018 CCC)
- Effective and efficient enforcement function – Requires High Level of Oversight & Inspections
Thank You