Planning Agents Workshop

12th February 2014

Agenda

4pm Introduction - Adrian Hughes, Senior Planner

- Building Control Regulations 2014 Dermot Brannigan, Chief Fire Officer
 Overview of SI.9 of 2014 which has replaced SI.80 of 2013 and becomes effective from 1st March 2014, including electronic applications system, commencement notice applications, other procedural aspects, and public register implications
- 4.35pmPlanning Enforcement Ronan Woods, Enforcement OfficerOverview of enforcement procedures, warning letters, enforcement notices, and injunctions
- 4.55pm Tea/Coffee
- 5.05pm Water Quality Protection and Improvement Bernie O'Flaherty, Executive Chemist The importance of good site drainage, water management on site, water protection plan checklist, and site drainage plans
- 5.25pm Departmental Manual on Urban Roads and Streets Gareth McMahon, Senior Executive Engineer Overview of the principles of urban street design to achieve greater safety for vulnerable road users, and new design standards for urban street/housing estate roads
- 5.55pm Closing Remarks

Planning Agents Workshop

Building Control (Amendment) Regulations SI 9 of 2014

Building Control Management System

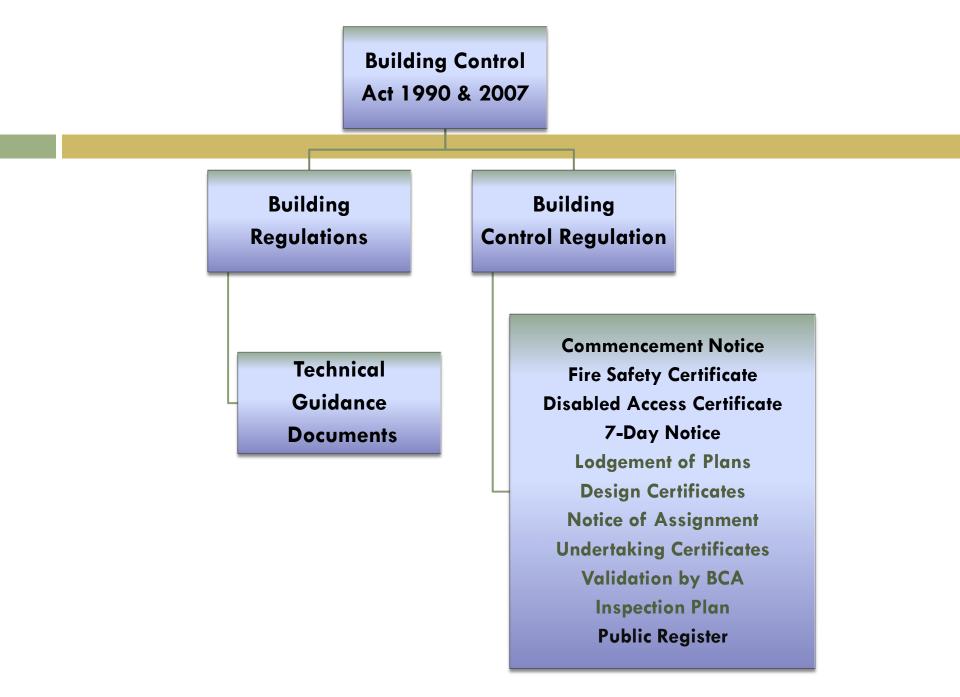
Dermot Brannigan (A) CFO

Statutory Context

Building Control Acts 1990 to 2007

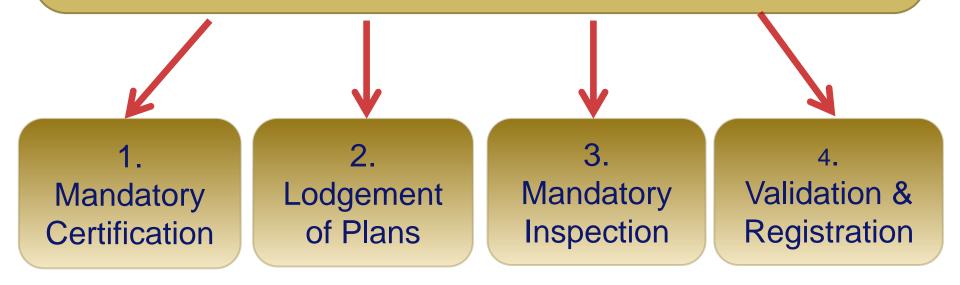
- Building Regulations 1997-2013 (technical requirements)
- Building Control Regulations 1997-2014 (procedural requirements)
 - BCA
 - Receipt and validation of submissions
 - Inspection
 - Enforcement where necessary

To secure the health, safety and welfare of people on or about buildings



S.I. 9 of 2014 – Major Elements

Activating Certificates of Compliance under Building Control Act 1990



NB: Validation does not mean approval

Mandatory Certification

- Mandatory Certificates of Compliance
 - Design Certificates of Compliance
 - Assigned Certifier Undertaking to inspect & certify the work
 - Builder Undertaking to Build & Certify
 - Completion Certificate of Compliance by Builder & assigned Certifier

Lodgement of Plans

Commencement:

- General arrangement drawings
- List of design documents (as prepared or to be prepared)
- Outline statement of compliance approach
- Proposed inspection plan

Completion:

- "such plans, calculations, specifications and particulars as are necessary to outline how the works or building as completed
 - differs from plans, calculations, specifications and particulars submitted" at commencement and
 - "complies with the requirements of the Second Schedule of the Building Regulations".

Mandatory inspection

- Code of Practice for Persons Inspecting and Certifying Buildings or Works
 - Operating context
 - roles & responsibilities of Assigned Certifier and others
 - approach to inspection/certification, information to be lodged, etc.
- Assigned Certifier to draw up Inspection Plan & execute it with others as nominated
- Lodgement of provisional and final Inspection Plan

Validation and Registration

- A Certificate of Compliance on Completion must be submitted
- Plans, calculations, specifications and particulars for any amendments from those submitted at commencement
- Inspection Plan as implemented by assigned certifier
- BC Authority may reject the certificate and documentation or query within 21 days
 - Typical checks documents received, signatories registered & assigned, enforcement notices, conditions on FSC / DACs
- Completion Certificate must be on register before building is opened, occupied or used.

SI 9 of 2014 BCMS & Electronic Applications

- Building Control Management System defined and identified as the preferred means of building control administration
 - Administrative charge for scanning / uploading paper submissions
 - 'Electronic or otherwise' replacing 'in writing'
- Regs apply to extensions to dwellings involving a total floor area greater than 40 square metres.
- Validation period of Completion Certificate 21 day period extended by 7 days where additional information is sought
- BCMS facilitates 'automatic' inclusion on register if no queries raised within 21 days
 - N.B. S 6(4) of Building Control Act 1990

Electronic Process: Nominated Roles

Create

Save Cancel					
Project Details Nominate	Roles Project Particulars Upload	Documents Payment	Validation	Project Stages	
Owner:	k X			Owner Accepted:	
Builder:	k X			Builder Accepted:	
Designer:	k X			Designer Accepted:	
Assigned Certifier:	k X			Assigned Certifier Accepted:	
Pouro Connel					

+ Cre

Save Cancel

Electronic Process: Project Details

Actions: Greate Building Pr	rojects 📃 View Building Projects					
Create						+ Create
Save Cancel						
Project Details Nominate F	Roles Project Particulars Uploa	d Documents Payment	Validation	Project Stages		
Local Authority:	Clare County Council 🛛 🕅 🗙			Planning Permission No.:		
Date Granted:				Date of Expiry:		
Name: *				Туре:	Commencement Notice	
Activity Type:	Building 💌			Description:		A
						T
Total No. of Dwellings (All Phases):				Phase:		
Units for Phase:				Residential:	No 💌	
Easting:]		Northing:		
Address Line 1:]		Address Line 2:		
Town:]		County:		
Post Code:]				
Save Cancel						

Electronic Process: Project Particulars

Save Cancel							
Project Details	Nominate Roles	Project Particulars	Upload Documents	Payment	Validation	Project Stages	
Add Building							
Type:		💌 SI		velling House iisonette it		* (11) *	
Construction Ty	ype:	▼ Pr	roject Type: Ere	ection of New E	Building 💌		
Number of Pha	ses:	N	umber of Storeys:				
Phase for this I	Notice:	He	eight:				
DAC:		FS	SC:				
Quantity:							
Remove this B	uilding						
Save Cancel							

Electronic Process: Uploading Documents

Create					
Save Cancel					
Project Details Nominate Roles	Project Particulars	Upload Documents	Payment	Validation	Project Stages
Commencement Notice:				Browse	
Seven Day Notice:				Browse	
Design Certificate:				Browse	
Notice of Assignment:				Browse	
Undertaking by Assigned Certifier:				Browse	
Undertaking By Builder:				Browse	
Form of Seven Day Notice:				Browse	
Certificate of Compliance on Completion:				Browse	
Supporting Docs:	×		Browse		
Save Cancel					

Commencement Notice Article 9 & 7 day Notice Article 20A (2)

Commencement Notice

- Documents required
 - Notice in prescribed form;
 - Plans & Schedule of plans
 - Certificates of compliance
 - Notices of Assignment of builder and assigned certifier
 - Draft Inspection Plan

7 day Notice Article 20A (2)

- Similar documents as those required with Commencement Notice
 - Application for Fire Safety Cert
 - 7 day notice statutory declaration

BCA may:

- **(i)** check and assess documents lodged, and/or
- (ii) reject notice within 7 days (if filed via BCMA) or 12 days (if in writing) if the notice does not comply with Article 9

What if there is a change of certifier/builder/owner?

Owner must submit notice of change of the assigned certifier or builder to the BCA <u>within 14 days, with</u> certificates from the replacement certifier/builder to replace those originally lodged with the Commencement Notice. CoP, 4.7: **Change of certifier may trigger inspection**

New owner must notify the Building Control Authority of change in ownership of the works within 14 days

Code: an assigned certifier whose appointment is terminated / ended must provide the owner and the BCA with the records of inspection to the date of termination, with any certificates of compliance of design/construction until that date, <u>regardless of any fees issue</u> New Part IIIC provides for the Certificate of Compliance on Completion, which must be submitted to the BCA

Part A is completed by Builder, and **Part B** by Assigned Certifier.

Particulars of the certificate must be included on the Register before the relevant works are <u>opened</u>, <u>occupied</u>, <u>or used</u>

Plans must be submitted outlining how the completed works (i) **differ** from the original plans, and (ii) **comply** with the Second Schedule Requirements.

Inspection Plan must be submitted.

BC Inspections – BC Act 1990 & Register Part IV - BCR Act 1997

Inspections

- S. 11 (2) an 'authorised person' may enter land and inspect any building, plans or documents, during construction, alteration, extension, following completion, etc.
- □ 11 (3): Authorised officer may require information e.g. plans.
- 11 (5) Failure to allow entry to an authorised officer / obstruction of officer in exercise of powers = an offence.
- □ 11 (6) Authorised officer may apply for an entry warrant

Register

- The particulars to be kept in the Part IV Register have been expanded to include valid commencement notices, 7 day notices or certificates of compliance.
- Records relating to particulars on the Register may be accessed via the Fol Acts 1997 and 2003
- Pre- notification procedure: 20F(4)(8): requires BCA to consider particulars if submitted 3-5 weeks before lodgment of completion cert

Enforcement:

(Failure submit a valid Commencement Notice will make it impossible to produce a Completion Certificate)

- Failure to comply with the Regulations is an offence under s.17 of the BCA 1990 – potential for fines, imprisonment, and disqualification from signing certificates
- S. 8 (8) 1990 Act : Building Control Authority may recover the costs of taking enforcement action and any other actions arising from enforcement from the person on whom the enforcement notice was served
- BCA may have few options but to seek Court order requiring demolition of the building – as it will not have been able to inspect the building in the course of construction

Enforcement issues – what if building is opened before Cert is on the Register

- Purchasers/tenants will identify this as part of legal due diligence
- Buildings/public liability insurance may refuse to provide indemnity as non-compliance is a safety issue and thus increases their risk
- BCA under s. 8 (4)(b) may prohibit the use of the building until specified precautions are taken to the satisfaction of the BCA

Finally - Some Questions??

- Independence of parties
- Determining Dispute
- Sharing of inspection reports
- CIF register
- Small works
- Insurability
- only one CN form

Planning Agents Workshop

Planning Enforcement

Ronan Woods

Planning Enforcement - Overview

- This presentation will set out an overview of the planning enforcement process which the Planning Authority carries out in accordance with statutory requirements.
- Main sections of this presentation will contain the following:
 - What constitutes unauthorised development
 - Legislative provisions
 - An overview of the main stages of enforcement procedures
 - Offences and Penalties
 - Other matters & Planning Authority statistics

Unauthorised Development

- Unauthorised development is defined under Section 2 of the Planning and Development Acts and extends to cover any:
 - Unauthorised structures
 - Unauthorised use
 - Unauthorised works
 - Note: The above definitions apply to development commenced post 1st October 1964.
- Unauthorised development also includes any development which is proceeding/existing and not in compliance with conditions laid down in a planning permission such as:
 - Outstanding landscaping works
 - Unauthorised advertisements
 - Unauthorised entrance details

- Planning enforcement within the Planning Authority is carried out in accordance with legislative provisions as set out in Part VIII of the Planning and Development Acts, Sections 151-164.
- Section 152: Warning Letters: Where –
- 1(a) a representation in writing is made to a Planning Authority by any person that unauthorised development may have been, is being or may be carried out, and it appears to the Planning Authority that the representation is not vexatious, frivolous or without substance or foundation or
- (b) it otherwise appears to the authority that unauthorised development may have been, is being or may be carried out, the authority shall issue a warning letter to the owner, the occupier or any other person carrying out the development.
- (2) Notwithstanding (1), where the development in question is of a trivial or minor nature the Planning Authority may decide not to issue a warning letter.
- (3) A warning letter to be issued within 6 weeks from the date of a complaint being received by the Planning Authority.

Section 153: Decision on enforcement

- (1) As soon as may be after the issue of a warning letter under Section 152, the Planning Authority shall make such investigation as it considers necessary to enable it to make a decision on whether to issue an enforcement notice.
- (2a)Sets out a duty to ensure decisions by the Planning Authority are taken as expeditiously as possible
- (3)In deciding whether to issue an enforcement notice a Planning Authority shall consider any representations made to it and any other material considerations
- (4)The decision made by the Planning Authority shall be entered on the planning register.
- (5) Failure to issue a warning letter under Section 152 shall not prejudice the issue of an enforcement notice or other proceedings that may be initiated by the Planning Authority.

Section 154: Enforcement Notice(s)

- 1(a) Where a decision to enforce is made under Section 153 or where urgent action is required under Section 155, the Planning Authority shall, as soon as may be, serve an enforcement notice.
- (b)Where an enforcement notice is served, the Planning Authority shall notify any person who made representations, and other person who may be concerned with the matter.
- (4) An enforcement notice shall take effect on the date of the service thereof.
- □ (5) An enforcement notice shall refer to the land concerned and shall:
- (a) (i) in respect of development where no permission is granted require the development to cease or
- (ii) in respect of a development for which permission has been granted require that development will proceed in conformity with the permission, or with any condition to which the permission is subject.

Section 154: Enforcement notices (contd.)

- 5)(c) Requires the person(s) served with the notice to refund to the Planning Authority the costs and expenses reasonably incurred relating to the case.
- (6) If within the period specified on an enforcement notice the steps specified in the notice are not taken, the Planning Authority may enter onto the land and take such steps as are required under the enforcement notice.
- (11) (a) A Planning Authority may for stated reasons by notice in writing withdraw an enforcement notice under this Section.
- (12) An enforcement notice shall cease to have effect 10 years from the date of being served.

Section 155: Enforcement notices in cases of urgency

(1) Where in the opinion of the Planning Authority, due to the nature of an unauthorised development, and to any other material considerations, it is necessary to take urgent action with regard to the unauthorised development, notwithstanding Sections 152 & 153, it may serve an enforcement notice under Section 154.

Section 160: Injunctions in relation to unauthorised development

(1) Where an unauthorised development has been, is being or is likely to be carried out, the High Court or Circuit Court may, on the application of a Planning Authority or any other person, by order require any person to do or not to do anything that the Court considers necessary.

Section 161: Costs of prosecutions and application for injunctions

 (1) A Court shall, unless is satisfied that there are special reasons, for not so doing, order a person to pay the costs and expenses relating to the case, including those reasonably incurred by the Planning Authority.

Section 157 (4)(a) (Time limits on enforcement action)

- No warning letter or enforcement notice shall issue by a Planning Authority shall commence:
- (i) In respect of a development where no permission has been granted after seven years from the date of the commencement of the development; or
- (ii) In respect of a development where for which permission has been granted, after seven years beginning on the expiration as respects the permission authorising the development.
- (4)(aa) Note: Proceedings may be commenced at any time in respect of any condition concerning the use of land to which a permission is subject.

Main Stages (Summary)

Complaint received; Assessment by Planning Authority (within 6 weeks) Decision re enforcement required

Warning Letter issued under Section 152

Period for submissions from landowner/offender (within 4 weeks)

Decision as to whether enforcement notice required (within 12 weeks)

Enforcement Notice Issued by Planning Authority under Section 154 (with steps and time periods specified)

Main Stages (Summary)

If enforcement notice not complied with, Planning Authority proceeds to legal action; case proceeds to Court

Prosecution in District Court; summary conviction and fine as determined by Court

Main Stages (Section 155; Cases of Urgency)

Section 155; Where due to the nature of an unauthorised development it is necessary to take urgent action, the Planning Authority may proceed to directly issue an enforcement notice .

Enforcement Notice Issued by Planning Authority under Section 154/155 (with steps and time periods specified)

Assessment made by Planning Authority has offender complied with enforcement notice; if so case is closed

If enforcement notice not complied with, Planning Authority proceeds to legal action; case proceeds to Court

Prosecution in District Court; summary conviction and fine as determined by Court

Main Stages (Injunctions)

Section 160 Injunctions: In the event that an unauthorised development is occurring, and urgent action is required, the Planning Authority (or any other interested person) can apply to the Court for an injunction under Section 160

> Court assesses the details of the application for an injunction; decision made by Court either to refuse an injunction or proceeds to issue an injunction via a Court Order with steps specified as appropriate, with costs included where appropriate

Offences and Penalties

Description of offence	On summary conviction	On indictment	For each day contravention is continued (indictable offences)	For each day contravention is continued (summary offences)
Damage to protected structure	€5000 fine, 6 month prison sentence, or both	€12.7 million fine, 2 year prison sentence, or both	€12,700 fine, 2 year prison sentence, or both	€1500 fine, 6 months in prison, or both
Unauthorised development	€5000 fine, 6 month prison sentence, or both	€12.7 million fine, 2 year prison sentence, or both	€12,700 fine, 2 year prison sentence, or both	€1500 fine, 6 months in prison, or both
Failure to comply with an enforcement notice	€5000 fine, 6 month prison sentence, or both	€12.7 million fine, 2 year prison sentence, or both	€12,700 fine, 2 year prison sentence, or both	€1500 fine, 6 months in prison, or both

Other Matters

Statistics

	2013	2012	2011	2010
Complaints received	125	88	102	154
Complaints dismissed	23	16	14	15
Resolution through negotiation	44	49	33	61
Warning Letters	139	74	68	123
Enforcement Notices	39	21	38	24

Planning Enforcement

Questions?

Coffee / Tea Break

Planning Agents Workshop

Water Quality Protection and Improvement

Bernie O'Flaherty

Water Quality Protection & Improvement

Content:

- New requirements in water management
- Why focus on water status?
- Assimilative capacity of waterways (Headroom)
- Case studies
- Review water protection plan (checklist) and importance of good site drainage

Questions!

Water Management – Plans and Programmes

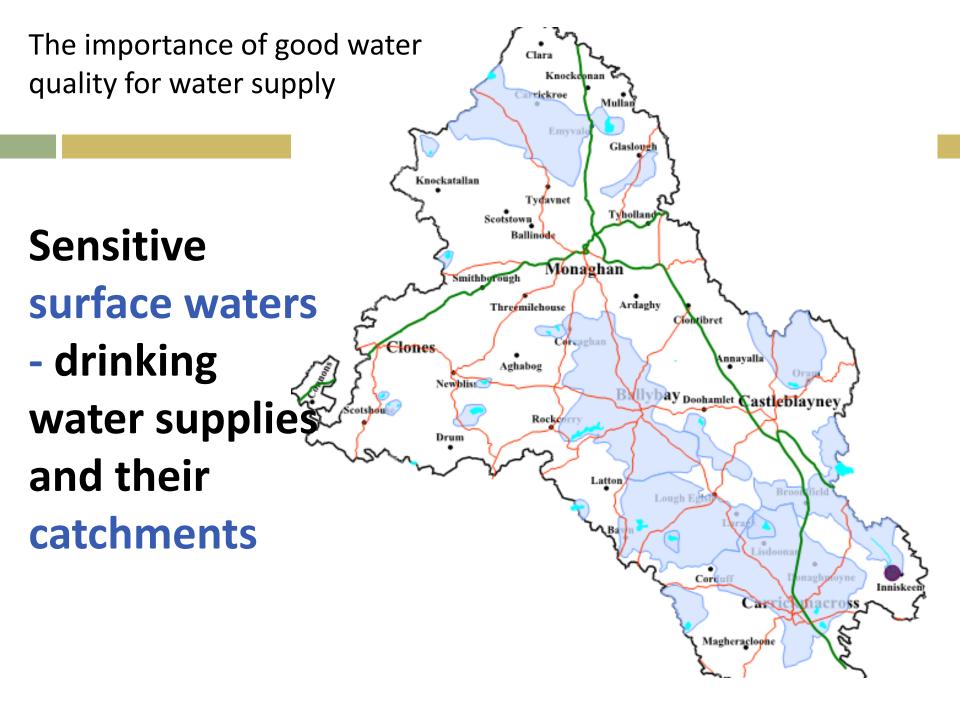
River Basin Management Plans (measures to achieve Water Framework Directive objectives by 2021 seen as a land-use plan or a whole living plan

County Development Plans – must sit side by side with RBM Plans to achieve sustainable development

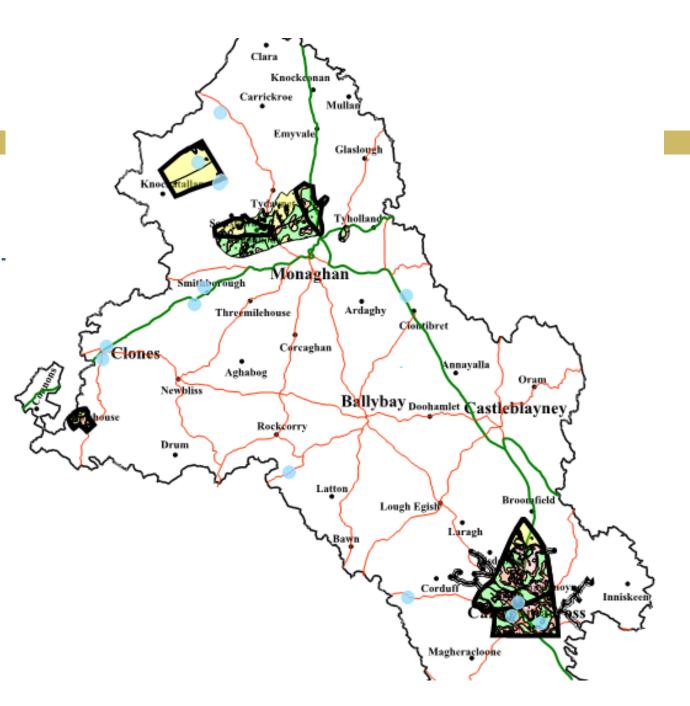
 Nitrates Action Programme – we must demonstrate improvements in water quality to negotiate our derogation with the EU - essential for Harvest 2020 Water quality described as the NEW QUOTA

Legislation - Water Quality

- Water Pollution Acts 1977 & 1990 (Discharge Licence assimilative capacity to be demonstrated at planning stage)
- Surface Water Regulations 2009 (EQS set)
- Groundwater Regulations 2010 (Tier 1,2 & 3 site investigations)
- Water Services Act 2007 ('Duty of Care' for septic tanks existing DWWTS should be 'fit for purpose' & new tanks/systems to designed to EPA Standards.
- Good Agricultural Practice (for the Protection of Water) Regulations 2014 (known as 'Nitrates' Regulations – revised 2014) - Agricultural Developments



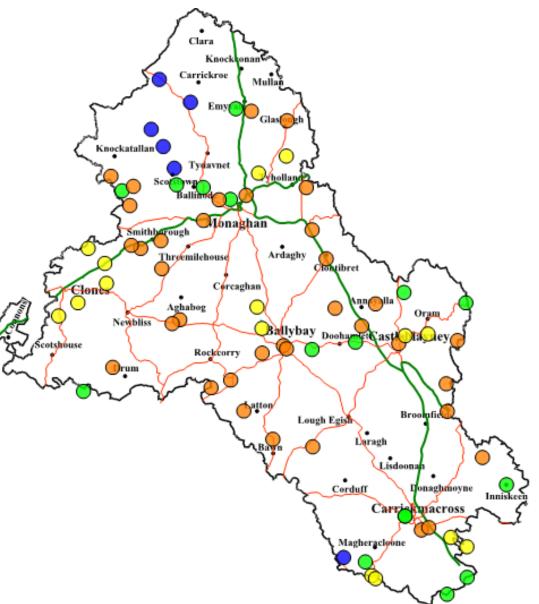
Sensitive ground waters drinking water supplies and their source protection zones and industrial and commercial abstractions



River Water Quality – Q Values (2012 & 2013)

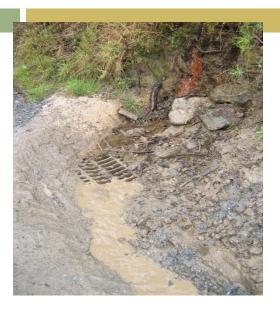
Quality

- Blue High
- Green Good
- Yellow Moderate
- Orange Poor



_icence number 2010/03 CCMA/Monaghan County Council

Sources of pollution are numerous & everywhere Point and diffuse sources



Silt and soils

Physical damage to waterways



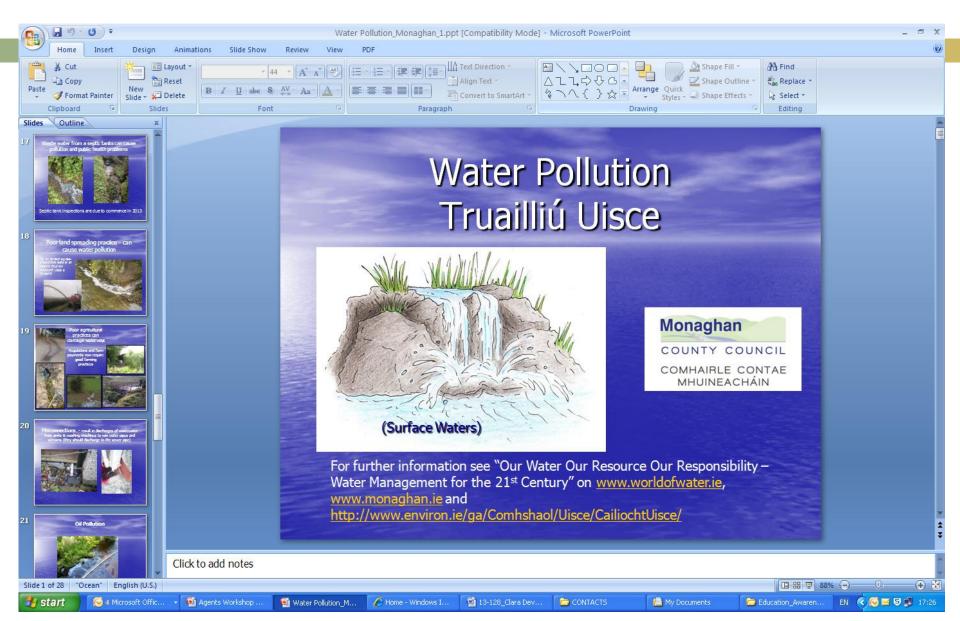
Dirty yards, Poorly maintained drainage systems and oil spills



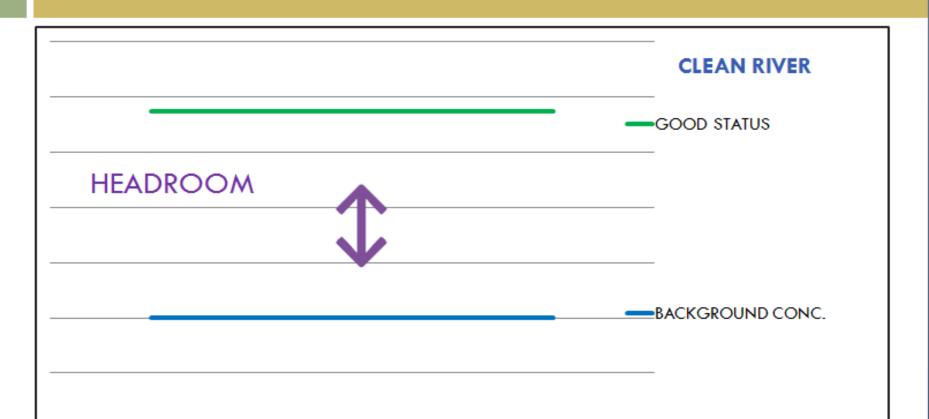


Water Pollution Slide Show available

http://www.youtube.com/watch?v=8X8WLwZKt44

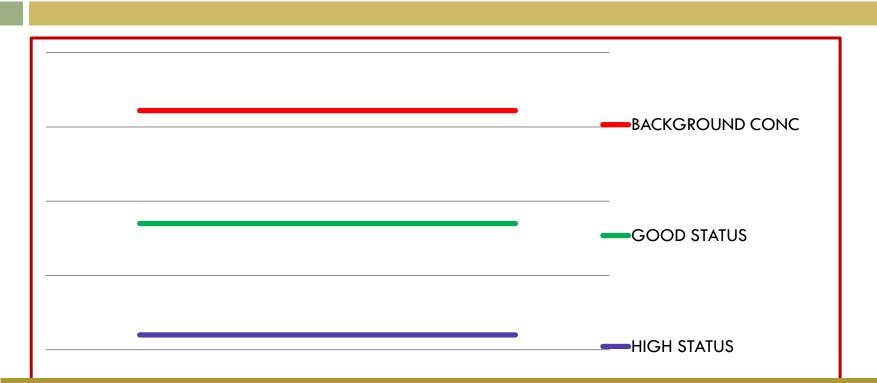


Assimilative Capacity River water quality EQS and 'Headroom')



Headroom available for economic development, agriculture & necessary wastewater infrastructure etc

Polluted waterways - background quality (e.g phosphorus) maybe **above** environmental quality standards (EQS)



Can we manage waters in a manner that maintains available headroom for economic development rather than unauthorised discharges, diffuse pollution, improper use of drains etc? Development planning and planning control is a key measure in protection of high and good water quality and in improvement of waters that are below good status.

Impact assessments
Use of best practice
Post planning checks

Case Study 1 – Institutional PE >100 Proposed Expansion

- Percolation area undersized for existing wastewater discharge
- Polluting discharge to surface waters observed by LA staff
- Sink and kitchen waste water discharging to storm water (misconnections on site following previous expansion)
- Ground water entering foul drains poor manhole (existing) construction resulting in shock hydraulic loads to WWTS
- → major AI request and site investigations required to meet adequate environmental standards
- → Site needs a Environmental Management System

Case Study 2 – Agricultural Enterprise Proposed Expansion

- Sensitive area Source Protection Zone
- Site Visit and desk review (previous history of water pollution)
- Polluted water course on site
- Open yard areas badly managed resulting in silt laden waters discharging to watercourse
- Evidence of recent effluent tank overflow
- Oil interceptor partially installed effectiveness doubtful
- Complex site drainage system not managed
- Concerns that expansion would lead to further pollution
- → Application refused application should have comprehensively dealt with existing issues on site.

Case study 3 – Small Domestic Type Renovation/Small Extension

- Site visit desk review of plans
- Kitchen sink and roof rain water entering same manhole
- Septic tank not found at location shown on site plan
- No percolation area shown on site plan
- Where food preparation (e.g. creche, community centre) proposed as part of proposal –application should assess impact of expansion or demonstrate that existing wastewater disposal system was fit for purpose (grease trap, water usage?)

Additional Information Request

Case Study 4 – Large Transport Yard Proposed Office Expansion

- Site visit and desk review of plans
- Silt and oil contaminated watercourse noted adjacent the site
- Previous planning permission conditions not complied with
- No bund on oil tank & no oil interceptor facilities
- Septic tank system not assessed for increased load
- Water usage unknown.

→ Significant AI and re-inspections under Water Pollution Act

Use WPP Checklist to Prompt and Guide

- New developments need to consider pre, during and post development how will natural waters be impacted ?
- Location & proximity to waters and sensitivity of waters
- Type and scale of development including open yards
- Wastewater production
- Will discharge to GW or SW result?
- Adequacy of assessment of wastewater disposal proposal
- Site drainage plan foul/clean, pollution control systems (e.g silt traps, interceptors, treatment systems) SUDS and soft engineering solutions (settlement ponds/wetlands), river corridor protection
- **?AGENT Is information submitted adequate to show a water protection plan is in place** – read & sign- <u>both parties</u> applicant and agent

Use WPP Checklist to Prompt and Guide

- **Existing Development** in addition to previous slide
- Have previous pollution prevention conditions been complied with?
- Are existing pollution control systems 'fit for purpose'?
- What is the water usage? Wastewaters generated?
- Are yards generating soiled yards?
- Has drainage system been checked for misconnections?
- Existing water pollution problems?
- Do proposals deal with all relevant site issues in relation to water management?

Use the checklist to prompt preparation of plans, assess site/site walkover and ensure a detailed site drainage plan is provided.

Thank You

Planning Agents Workshop

Design Manual for Urban Roads and Streets

Gareth McMahon

Design Manual for Urban Roads and Streets





An Roinn Iompair Furasóireachta agus Spóirt Department of Transport,



Comhshool, Pobel agus Rialfas Áitiúil Environment, Community and Local Government

The Design Manual for Urban Roads and Streets (DMURS) States:

DMURS provides guidance relating to the design of urban roads and streets. The Design Manual for Roads and Bridges (DMRB) shall not henceforth apply to urban roads and streets other than in exceptional circumstances.

Where those circumstances arise, written approval shall be obtained from the relevant sanctioning authority.

DESIGN MANUAL FOR URBAN ROADS & STREETS

Some Caveats:

This Manual does not purport to account for every scenario that a designer will encounter, particularly when retrofitting existing streets.

Nor can this Manual cover every technical detail.

Many matters are left to the professional expertise and judgement of users, while others are covered elsewhere in relevant Irish, British or European standards, in codes of practice and guidelines.

This Manual complements previous advice issued:

Traffic Management Guidelines (2003). Smarter Travel (2009). Guidelines on Sustainable Residential Development in Urban Areas (2009) National Cycle Manual (2011). Draft Planning Guidelines: Local Area Plans (2012).

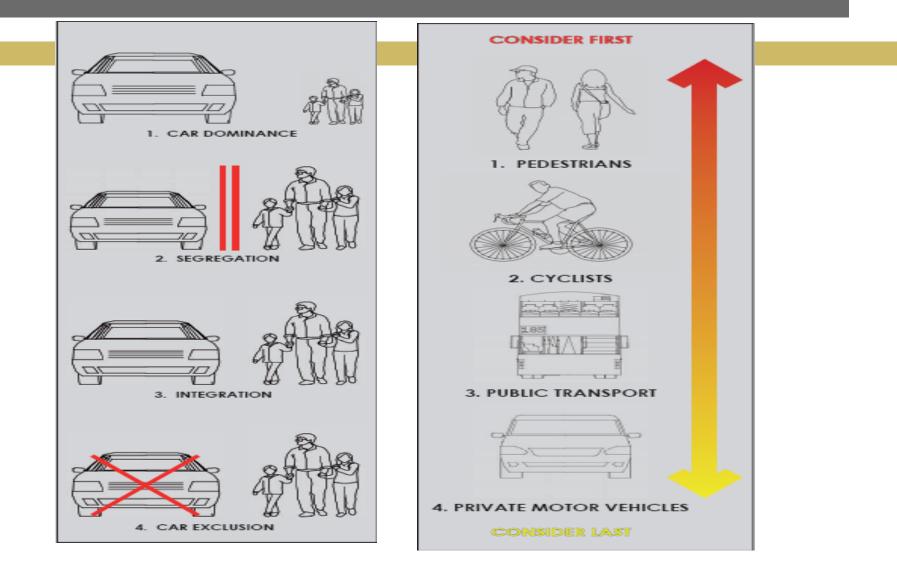
Designers must exercise a duty of care when applying the Manual. Compliance with a standard does not in itself confer immunity from legal obligations.

Design Manual For Urban Roads & Streets



Conventional Design v Sustainable Approach

Priority Shift



EXISTING PROBLEMS DMURS SEEKS TO ADDRESS

COMMUNITY SEGREGATION



- Distributor Road which creates severance between communities.
- Designed to minimise any disruption to vehicle movement by restricting the number of junctions and pedestrian accesses.
- Frontage free.



Pedestrian Access & Safety

Car-centric Junction Design

Creates Convoluted Pedestrian Routes

Pedestrians Ignore the Dedicated Route in Favour of Random Crossings at Unsafe Locations



Car-Centric Design

Vehicle speed is influenced by the street environment

DMURS Places Communities, Place And People At The Centre Of The Design Process

Place Based Design

Connectivity Between Communities by means of Arterial Routes

Enhancing key spaces by creating a sense of enclosure

Making Spaces Pedestrian Friendly by means of Active Street Edges and Enhanced Pedestrian Facilities

Appropriate Utilisation of Street Furniture and plant

Gateway Buildings at the Point of Arrival at a Space

Give Priority to Pedestrians Where Appropriate

Shared Spaces

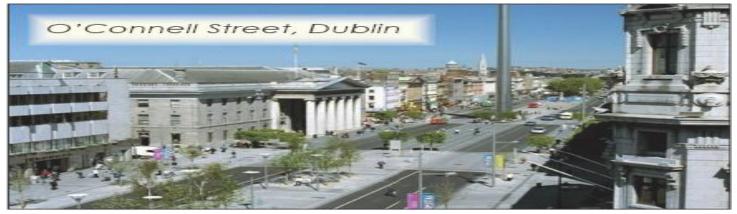
KEY CHARACTERISTICS OF PLACE BASED STREET DESIGN CONNECTIVITY ENCLOSURE ACTIVE EDGE

PEDESTRIAN FACILITIES/ACTIVITY

Streets With a High Place Value

As the degree of segregation decreases Integration increases





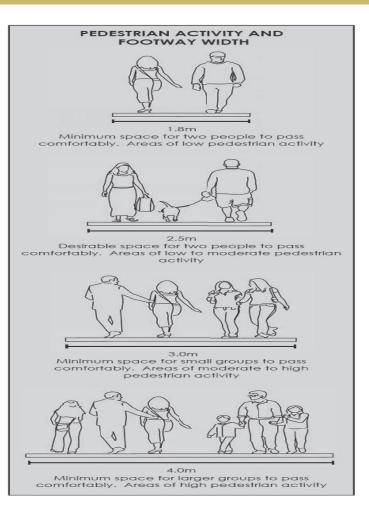
Pedestrian Centred Design

Well designed footpaths free of obstructions

Frequent pedestrian crossings

Pedestrianised streets where suitable

Shared surface streets where pedestrians, cyclists and vehicles share the main carriageway



Controlling Vehicle Speed in the Urban Environment

Vehicle Speeds

HARD AND FAST FACTS

Pedestrians hit by a car...

at **30 km/h** – 1 in 10 will die



at 50 km/h – 5 in 10 will die



at 60 km/h – 9 in 10 will die



Graduated Approach

Apply lower speeds (30Kph or Less) where pedestrians & cyclists are present in larger numbers or where vehicle movement priority is low

Where shared spaces are utlilised an advisory speed limit of 10-20kph is appropriate

		PEDESTRIAN PRIORITY		VEHICLE PRIORITY						
FUNCTION	ARTERIAL	30-40 KM/H	40-50 KM/H	40-50 KM/H	50-60 KM/H	60-80 KM/H				
	LINK	30 KM/H	30-50 KM/H	30-50 KM/H	50-60 KM/H	60-80 KM/H				
	LOCAL	10-30 KM/H	10-30 KM/H	10-30 KM/H	30-50 KM/H	60 KM/H				
		CENTRE	N'HOOD	SUBURBAN	BUSINESS/ INDUSTRIAL	RURAL FRINGE				
	CONTEXT									

Speed Limit Matrix

		PEDESTRI	AN PRIORITY	VEHICLE PRIORITY				
FUNCTION	ARTERIAL	30-40 KM/H	40-50 KM/H	40-50 KM/H	50-60 KM/H	60-80 KM/H		
	LINK	30 KM/H	30-50 KM/H	30-50 KM/H	50-60 KM/H	60-80 KM/H		
	LOCAL	10-30 KM/H	10-30 KM/H	10-30 KM/H	30-50 KM/H	60 KM/H		
		CENTRE	N'HOOD	SUBURBAN	BUSINESS/ INDUSTRIAL	RURAL FRINGE		
CONTEXT								

Moderating Driver Behaviour

- Self Regulating
- Psychological & physical measures
- Highlight transition zones
- Advance warning of changing driver conditions



Poor integration of place and movement function



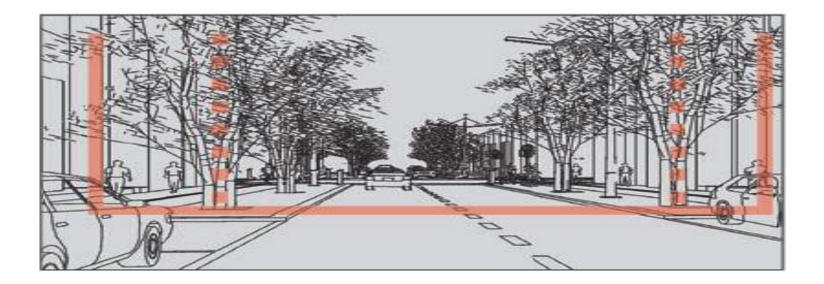
Better integration of place and movement function

PHYSICAL MEASURES

- Develop a strong sense of enclosure
- Reduce road widths
- Frequent crossing points
- Plan for active ground floor use
- Minimise signage and road markings
- Reduce visibility splays by utilising horizontal and vertical deflections
- Tighten corner radii
- Utilise shared surfaces

Create a Sense of Enclosure

- Streets enclosed with buildings create a greater sense of intimacy
- Important in large centres
- Street trees can be used to enhance the space



Utilise Materials

- Increased sense of place
- Pedestrian-centred design
- Traffic calming

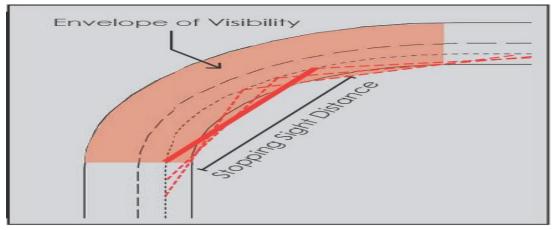




Reduced Visibility Splays

- Engineered Stopping Sight Distance
- Limited Forward Visibility
- Horizontal and Vertical Curves

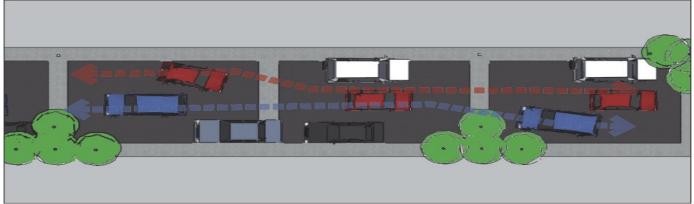




Horizontal & Vertical Deflections

- Offset Junctions Change Alignment
- Informal Parking can reinforce a low-speed environment
- Utilise raised crossings at junctions





Shared Surfaces

- Gives priority to the pedestrian
- Expanding from lightly trafficked areas to include heavily-trafficked streets and junctions
- Dependent on advance warning to drivers



Shared surface junction at Ashford, UK

Psychological Effects

The physical measures act on the psychology of drivers causing them to moderate their behaviour and speed.

Advance warnings prepare drivers for impending change to driving conditions

Reduced signage and forward visibility creates uncertainty and thus caution in the driver

And induces enhanced driver awareness of vulnerable road users

Implementation of DMURS

DMURS principles must be incorporated into policy documents.

All future developments must be set within the DMURS framework

Urban design teams must be multi-disciplinary and include traffic engineers, landscape architects and heritage and conservation specialists as required

Will require close collaboration between developers designers and local authorities

DMURS

Questions?

Close of Workshop

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