Llywodraeth Cymru
Welsh Government

Regulatory Impact Assessment

Consultation on changes to the Building Regulations – Part R of the Building Regulations: Physical Infrastructure for High Speed Electronic Communications Networks.

March 2016

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Building Regulations

Broadband – In building physical infrastructure

Final Regulatory Impact Assessment

Rationale for intervention and policy objective

1.1 The Welsh Government Programme for Government has a commitment to seek to ensure that all premises in Wales should have access to next generation broadband by 2015. Super-fast is defined by the Government as speeds in excess of 30 Mbit/s.

1.2 In parallel, the European Commission has introduced a Directive requiring Member States to ensure that new buildings and major renovations are constructed with the necessary in-building infrastructure which is suitable to enable connection to a broadband network with a speed of at least 30 Mbit/s (a "high speed network"). This requirement is in Article 8 of the Directive at http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014L0061

1.3 The policy objective is to transpose the European requirement for in-building infrastructure into the Welsh system of Building Regulations. The new requirements apply to building work in respect of which a building notice, initial notice or a plans certificate has been given to the local authority after 31 December 2016 and to building work where full plans have been so deposited after that date.

1.4 The effect will be that all new buildings to which the new requirements apply, and major renovations of those buildings, will be caught by the requirements to install in-building infrastructure. So all new housing developments, commercial buildings, schools, retail and other buildings will be required to have in-building infrastructure to enable connections to broadband speeds in excess of 30 Mbit/s. Buildings which contain more than one dwelling will also have an access point for connection to a high speed network.

1.5 The effect will be that all new buildings to which the new requirements apply, and major renovations of those buildings, will be caught by the requirements to install in-building infrastructure. So all new housing developments, commercial buildings, schools, retail and other buildings will be required to have in-building infrastructure to enable connections to broadband speeds in excess of 30 Mbit/s. Buildings which contain more than one dwelling will also have an access point for connection to a high speed network.

1.6 The Welsh Government published a public consultation on a proposed new Part R of the Building Regulations from 1 December 2015 to 12 January 2016; 11 responses were received.

1.7 The Minister for Natural Resources has decided to implement the EU Directive through the Building Regulations so that all new builds and buildings with major

renovation would be required to have super-fast broadband infrastructure.

Policy options

1.8 The requirements of the Directive have to be implemented by "*laws, regulations and administrative provisions"*.

1.9 Our view (and that of the UK government) is that this is best achieved through the Building Regulations, as enforcement or compliance checking will be undertaken by Building Control Bodies as part of their normal functions. The Regulations can be used to transpose the Directive requirements. Statutory guidance can then be issued (via an Approved Document) that sets out some of the approaches that developers could take to meet the regulatory requirements.

Description of options considered

1.10 **At consultation stage 2 options were discussed: Option 1:** To do nothing, not implement the EU Directive and risk infraction proceedings.

1.11 **Option 2:** To make Building Regulations which will require new buildings and major renovations to be constructed with the necessary in-building infrastructure to enable connection to broadband speeds of no less than 30 Mbit/s.

1.12 Following consultation it has been decided to take forward option 2.

Costs and benefits of option 2(including administrative burden)

Benefits of Option 2

1.13 The small minority of new build properties that do not have planned super-fast broadband connection would now be required to have one. Affected builders would likely pass on this extra cost.

1.14 There will be non-monetised benefits as the implementation of the EU Directive on broadband would mean the country will become even better connected to the internet.

Costs of Option 2

Summary of impact

1.15 There are several ways of delivering fixed network technology for residential and small commercial buildings, they include;

- broadband provided over networks originally deployed for cable television – via a combination of fibre and coaxial cable. These can deliver speeds of up to 152 Mbit/s.

- a combination of fibre and copper technology. This is where fibre is provided

between an exchange and a cabinet, and then the existing copper phone line is used to deliver higher speeds of up to 76 Mbit/s.

- fibre only technology. These networks rely entirely on fibre to connect buildings to the exchange. This delivers speeds of up to 1 Gbit/s.

1.16 Based on these solutions, and following discussions with the house building industry our view is that the market is already meeting the requirements of the Directive for new dwellings, as even the most basic in-building infrastructure designed for copper technology would be capable of transmitting broadband speeds of up to 76 Mbit/s. It is the existence of wider infrastructure beyond the building that determines the actual speeds.

1.17 One of these main solutions would be provided for in the vast majority of new homes. It is estimated up to 5% (see parallel Department for Communities and Local Government consultation document[1]) of all new housing developments may not be intending to provide any in-building infrastructure. It is envisaged that there will be some single build homes (particularly in rural areas), where even the most basic copper telephone technology to enable broadband may not be part of the development.

1.18 For larger commercial buildings it is considered that the necessary in-building infrastructure required by the Directive to deliver speeds of at least 30 Mbit/s is universally provided for in new commercial buildings. There would simply not be a market for any kind of commercial building without access to broadband, and therefore there would always be the necessary in-building infrastructure in place to enable super-fast speeds if the wider infrastructure is in place locally.

1.19 The Directive imposes specific requirements for multi-dwelling buildings (i.e. blocks of flats). Under the Directive, developers of flats are required to provide an access point and ducting to each individual dwelling, up to the network termination points. It is unlikely there will be any additional costs. Modern blocks of flats will already make provision for the technological requirements in the Directive, and have to include vertical and horizontal distribution space for utilities such as water, electricity and gas which can easily accommodate telecom provision. The alternative would be to have wires running externally, which would make those properties difficult to market.

1.20 For major renovations, our interpretation of the Directive is that in-building physical infrastructure to enable connections to super-fast broadband will only be a requirement where there is existing infrastructure related to the provision of broadband within the building, and where the major renovation involves the removal or alteration of those elements. Where no such infrastructure exists, the regulation will not apply. Most major renovations, even where there is no broadband infrastructure, will automatically exceed Directive requirements where they meet industry basic

[1] https://www.gov.uk/government/consultations/new-part-r-of-the-building-regulations

specifications. This will be particularly true of older commercial buildings and for major renovations of historic buildings, for example, there will be no regulatory requirement.

Cost Analysis:

1.21 All of the cost estimates in this assessment have been rounded to the nearest £10. Recurrent costs have been discounted using HM Treasury's central discount rate of 3.5%.

Build Costs

1.22 It is believed that regulation in this area will not impose any additional costs on the majority of new commercial buildings, major-renovations and flats developments in Wales, as it is considered that in-building physical infrastructure that enables a connection to super-fast broadband will already be provided. The in-building infrastructure costs outlined below are therefore already being met in the vast majority of cases.

1.23 These types of buildings do not feature in the following analysis which has therefore focussed on housing development.

1.24 In assessing the likely cost of the new requirements to business in Wales, we have based housing completion projections on a number of scenarios set out below, they do not show projections for flats as they will not be built without the necessary infrastructure for super-fast broadband, even in the absence of this EU Directive. Analysis of costs is based on projected completions 2016- 2026 given that Article 8 the directive applies to building permits (Building Regulation applications) submitted after 31st December 2016.

Table 1 – New House Completions in Wales

Scenario	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
1	5604	5922	6256	6606	6924	6924	6924	6924	6924	6924
2	5303	5450	5596	5751	5906	6069	6232	6403	6574	6753
3	5596	5881	6166	6452	6737	7022	7307	7592	7877	8162

- based on flats representing 18.50% of total completions (2014/15)

1.25 The first two scenarios are based on average 'pre-downturn' (2000-01 to 2007-08) house-building activity in Wales, with **Scenario 1** assuming that the number of completions continues to increase at the most recent rate (5.6%) until the pre-

downturn average of 8,500 homes is reached, after which point the number of completions levels off. In contrast, **Scenario 2** assumes that the rate of increase in completions will slow and that the pre-downturn average of 8,500 homes is only reached at the end of your appraisal period (this gives a 2.7% per annum increase in the number of completions in the period to 2026-27).

1.26 The Welsh Government statistics show that the number of completions recorded has increased by between 300 and 400 in the last 2-years and **Scenario 3** assumes that this continues throughout the appraisal period as a result the number of completions, by 2026-27, exceeds the pre-downturn average.

1.27 We have then considered how many self-builds are provided as a proportion of the overall projected housing delivery total.

1.28 Self-builds are single dwellings that are led by an individual who would contract out certain areas of the development. Custom build is a different approach, where larger housing developers offer a standard build but individuals have an input to the design and operation of the property.

1.29 For self-build it is the individual who is deciding whether to install in-building infrastructure for broadband. It is less likely that custom build developers would offer this kind of decision to the purchaser but there may be some occasions. Under both types of development there might be customers who would not opt for the necessary infrastructure for super-fast broadband in the absence of the EU Directive.

1.30 Within the Department for Communities and Local Government parallel consultation[2] for England they made an indicative estimate for projected numbers of self build properties. In this estimate, self build represents between 7% and 10% of total new houses in the UK[2].

1.31 There were 25 million UK residential fixed landlines in 2014[3], compared to 26.7 million households in the UK in 2014[4]. This means that 94% of homes in the UK have a landline. It has already been established that a basic copper phone line is capable of receiving super-fast broadband.

1.32 They have assumed it is reasonable to assume that the same proportion (94%, of self and custom build homes in England) would be constructed with the necessary in-building infrastructure for at least a basic phone line.

1.33 This would leave the following projected number of houses that may not be built

[2] http://researchbriefings.files.parliament.uk/documents/SN06784/SN06784.pdf
[3] http://media.ofcom.org.uk/facts/
[4] http://www.ons.gov.uk/ons/rel/family-demography/families-and-households/2014/families-and-households-in-the-uk--2014.html

with the necessary in-building infrastructure, but that may be required to under the EU requirements. This represents less than 1% of total housing delivered for England.

Table 2 – Projected number of single dwellings to be affected in England									
2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
673	727	785	847	915	988	1,068	1,153	1,245	1,345

1.34 National data on self build dwellings in Wales is not regularly collected. New housing completions for Wales were 6170 in 2014/15[5] of which 81.50% were houses compared with 65% for England. English total completions were 125,110 for the same period[6]. Using the new house completions in Scenario 2 (see Table 1 above) and assuming a) the same proportion of self-builds relative to total house completions as England and b) the same proportion of homes currently constructed without the necessary in-building infrastructure as England, this suggests that the number of new houses built in Wales without the necessary in-building infrastructure would range from 44 in 2016 to 72 in 2025.

1.35 To understand the potential costs to business, at this point it is necessary to look at the infrastructure costs for in-building infrastructure.

1.36 On the unit cost side, a European Commission report[7] to support the preparation of impact assessments for Member States provides such industry estimates. Figure 7.3 of the report estimates that ducting and wiring together will cost €250 per flat. This is about £181. But the EU Directive only necessitates the ducting, not the wiring. For Spain, it is approximated that ducting costs are about 75% of total cost of ducting and wiring. Applying that cost-split to the case in England, the unit cost for flats would be about £139.

1.37 For single dwellings, the ducting is not a necessary part of the in-building infrastructure. Instead, a hole in the wall connecting an external access point to the network termination point inside the house is required. As such the unit cost for houses will be much lower, potentially half of that for flats, or £70.

1.38 Applying that cost to the number of single dwellings we consider under scenario

[5] https://statswales.wales.gov.uk/Catalogue/Housing/New-House-Building/newdwellingscompleted-by-period-tenure

[6] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/428601/House_Building_Release_-_Mar_Qtr_2015.pdf

[7] Support for the preparation of an impact assessment to accompany an EU initiative on reducing the costs of high-speed broadband infrastructure deployment – Final Report. Available from here.

2 will be affected by the EU Directive in Wales would produce annual costs of £3,060 to £5,020 over the 10 year review period. This represents an average annual cost of £3,970 and a present value of £32,500 over the period.

Familiarisation costs

1.39 There will be a familiarisation cost with implementing the EU Directive. The know-how of installing the necessary infrastructure is well-established knowledge in the building industry. The only familiarisation cost is to know about the requirement and related guidance within the Approved Document. This will be publicised through the Welsh Governments updated website, seminars run by various industry bodies, articles in trade magazines, and the Building Control Bodies.

1.40 Architects, building control surveyors and building surveyors are the main professions that would have to be aware of this new part of the Building Regulations. The consultation Impact assessment considered that this is a simple requirement and would take about 5 minutes for each profession to familiarise. However, feedback from the consultation was that 5 minutes was an unrealistic for Building Control Bodies, therefore we have considered this and re-estimated that 30 minutes per Building Control Officer is sufficient to cover familiarisation/training time. The costs associated with this are in table 3 below.

Table 3 – Building Control Surveyor familiarisation cost of implementing the EU Directive

	Familiarisation/training time	Hourly rate[8]	Estimated number of Building Control Surveyors	Total
Building Control Surveyor	30 minutes	£32.10	202	£3,240

1.41 Therefore **a one-off transitional cost of £3,240 is estimated for the familiarisation costs to Building Control Bodies.** The Building Control function on a development could be carried out by a Local Authority or a private approved contractor.

Implementation Costs

1.42 The consultation also highlighted that no allowance had been made within the consultation stage Impact Assessment for the additional time for Building Control Bodies to plan check and inspect the requirements of Part R. The costs associated with this are in table 4 below.

[8] Market rates are derived from Welsh Government National Procurement Service (NPS) consultants framework.

Table 4 – Building Control Surveyor costs for implementing the EU Directive				
	Additional Plan check &inspection time/ building	Building Control Surveyor Hourly rate[9]	Estimated number of new Buildings/dwellings	Total
Scenario 2 **2016/17**	10 minutes	£32.10	6,364	£34,050
Scenario 2 **2025/26**	10 minutes	£32.10	8,104	£43,360

1.43 The Welsh Government does not collect data for the number of new non domestic buildings in Wales, therefore for the purposes of this impact assessment, we have estimated that for every five new dwellings there is one new non domestic building (i.e.20%). It is considered that this is an overestimate of the number of non domestic buildings.

1.44 Therefore we have added 20% to the number of single dwellings considered under scenario 2 from table 1 above, as an estimate for the number of buildings that Building Control will be required to check/inspect. This would produce annual costs of £34,050 to £43,360 over the 10 year review period. This represents an average annual cost of £38,700. The present value of this cost over the 10 year period is £333,100.

Exemptions from the policy

1.45 The Directive allows for each Member State to put forward the case for exemptions from the regulatory requirements. The justification would need to be whether there are disproportionate costs involved. The consultation document explored the case for exemptions. Any exemptions from the policy have not been considered as part of our analysis. If they were quantified, it would reduce the overall cost to business outlined above.

Summary

1.46 The Welsh Government therefore proposes to proceed with implementing the EU Directive through the Building Regulations so that all new builds and buildings with major renovation would be required to have super-fast broadband infrastructure at an average annual cost to business and Building Control bodies of **£42,670 with one-off transitional costs of £3,240.**

1.47 We propose to make Regulations implementing the Directive which will apply to Building Regulation applications made/submitted after 31 December 2016.

[9] Market rates are derived from Welsh Government National Procurement Service (NPS) consultants framework.