



Department for
Digital, Culture
Media & Sport

New Build Developments: Delivering gigabit-capable connections

Consultation document

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Department for Digital, Culture, Media and Sport

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Ministerial Foreword



There is a real opportunity for the UK to become a world leader in digital connectivity – increasing our competitiveness, boosting productivity and meeting future demands of consumers and businesses.

Over the past few years we have made significant progress; 95% of households are now able to receive superfast connections and we expect to reach at least 97% by 2020. We are driving innovation in 5G technology through the testbeds and trials programme¹ - that will help deliver faster and better mobile broadband and enable new applications in industry sectors like manufacturing, health and transport. We have set up the Local Full Fibre Network (LFFN) programme, which is providing public funding to bring ultrafast connections to local communities, because full fibre networks are faster, more reliable, and more affordable to operate than than copper-based networks. We are also delivering on our promise for a Universal Service Obligation, which gives everyone a legal right to request a broadband connection of at least 10Mbps.

We want to go further, faster and in the Future Telecoms Infrastructure Review, published in July, we set out our plans for 15 million full fibre connections by 2025 and nationwide coverage by 2033. I am of the belief that new fixed networks should be gigabit-capable² - most of the time this will mean full-fibre. I agree wholeheartedly with the Chancellor³ that in the 21st century, fibre networks will be the enabling infrastructure that drives economic growth.

New Build Developments are a clear case in which opportunities for progress are not being seized. I commend the examples we have seen from the most proactive developers and communications providers - developments with Fibre To The Premise (FTTP) connections are truly fit for 21st Century living - developments with no, or slow, connections are inexcusable. Poor connections have a disproportionate impact on residents and communities. When people cannot work from home, pay bills online or run small businesses it is not just the individual who suffers; slow, unreliable connections hamper innovation, stop collaboration between groups and make it harder for local economies and communities to thrive.

I am regularly contacted by new build home-owners who cannot receive a good connection. It is incredibly frustrating for a new home owner to realise, that having just bought a new

¹ <https://www.gov.uk/government/collections/5g-testbeds-and-trials-programme>

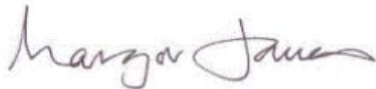
² A Gigabit is 1,000 Mbp/s. See: <https://Gigabitvoucher.culture.gov.uk/home/how-fast/> Today, in 2018 gigabit-capable networks available to consumers are almost exclusively full-fibre. Some Hybrid Fibre Coax (HFC) and Fixed Wireless Access (FWA) technologies are theoretically able to provide gigabit-capable connections, though consumers of HFC and FWA are not currently experiencing these kinds of speeds.

³ Chancellor Speech: CBI Annual Dinner 2018 (22 May 2018).
<https://www.gov.uk/government/speeches/chancellor-speech-cbi-annual-dinner-2018>

home, they do not have an adequate internet connection. There have been interventions by Government in the past, and the agreement brokered by my department between the Home Builders Federation (HBF) and Openreach, and the agreements between the HBF and Virgin Media and GTC, have yielded real results which I applaud. However, more can and must be done. Too often developers and operators blame each other for poorly connected sites, leaving residents isolated from our digital society.

This is why I want to cement two ambitions. Firstly, the UK must grow its fibre networks. Secondly, residents get connections that are fit for a digital age. To do this, we need to create a supportive legislative environment that delivers world class digital connections to new homeowners.

The proposals set out in this consultation aim to deliver gigabit-capable connections to new homeowners, reversing a trend of new build homes being associated with poor connections. The policy will also enable wider deployment of fibre across the UK. I encourage you to respond and help shape the UK's digital future.

A handwritten signature in black ink that reads "Margot James". The signature is written in a cursive, flowing style.

Margot James MP

Minister for Digital and Creative Industries

General Information

This consultation seeks your views on the requirement for all new build residential developments to be equipped with full fibre digital connections. This proposal was set out in the Government's [Future Telecoms Infrastructure Review](#).

The geographic scope of this consultation is the UK.

This is a public consultation.

The consultation period will run from 29 October 2018 to 21 December 2018 and a summary of responses will be published in due course.

You can submit responses and material for consideration by email newbuildconnectivity2018@culture.gov.uk

Responses or material sent to any other email addresses may not be taken into consideration.

If you cannot reply via email please respond by post:

New Build Development connectivity consultation
Digital Infrastructure Directorate
The Department for Digital, Culture, Media and Sport
100 Parliament Street
London
SW1A 2BQ

For enquiries about the consultation (handling) process only please email enquiries@culture.gov.uk, heading your communication 'New Build Development connectivity consultation'.

This consultation is intended to be an entirely written exercise but we reserve the right to follow up any responses to seek further information.

Please contact the data protection team 020 7211 2077 if you require any other format e.g. Braille, Large Font or Audio.

For enquiries about the handling of this consultation please contact the Department for Digital, Culture, Media & Sport Correspondence Team at the above address or email enquiries@culture.gov.uk heading your communication 'New Build Development connectivity consultation'.

Copies of responses may be published after the consultation closing date on the Department's website: www.gov.uk/dcms. Information provided in response to this consultation may be published or disclosed in accordance with access to information regimes (these are primarily the Freedom of Information Act 2000 ('FOIA'), the Data Protection Act 2018 and the Environmental Information Regulations 2004). If you want the information that you provide to be treated as confidential, please be aware that, under the FOIA, there is statutory Code of Practice with which public authorities must comply and which deals, amongst other things, with obligations of confidence. In view of this, it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information, we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department. The Department will process your personal data in accordance with the Data Protection Act 2018 (and the General Data Protection Regulation). The privacy notice can be found at Annex A at the end of this document.

This consultation follows the Government's Consultation Principles (published in 2013) which are available at:

<https://www.gov.uk/government/publications/consultation-principles-guidance>

Executive Summary

The Government is exploring legislative options to address concerns regarding the standard of connectivity in new build developments (NBDs). The purpose of this consultation is to present the Government's proposed legislative option and gather views and evidence on the proposed policy design.

We have examined the quality of connections in a number of new developments across the UK and we believe more can be done to give consumers the services they require. We propose how this can best be achieved in the most cost effective way, mindful of the Government's housing supply objectives. It is important that new homes are designed and built with good connectivity from the outset, avoiding any requirement to install digital infrastructure after developments have been finished, which is costly and disruptive.

In the coming decades, fixed and mobile networks will be the enabling infrastructure that drives economic growth. The Government is committed to providing the UK with world-class digital connectivity that is gigabit-capable, reliable, secure and widely available across the UK - and to do so at pace. We have set an ambitious target of making gigabit-capable networks available to 15 million premises by 2025, with nationwide coverage by 2033.

The UK is a world leader in superfast connectivity with more than 95% of premises covered. However, next generation Fibre to the Premises (FTTP) – or 'full fibre' – coverage is only 5%, where we lag behind current world leaders like South Korea (c.99%), and Japan (c.97%).

For the UK to be the best place to start and grow digital businesses, we need greater investment to build fixed and wireless networks that are fit for the future, and take advantage of the benefits of fixed and mobile convergence. The wide-scale deployment of these next generation technologies will underpin the UK's modern Industrial Strategy and the Grand Challenges in areas where the UK can lead the global technological revolution.

We want every part of the UK to be able to benefit from the significant economic developments that digital connectivity brings. When looking at the speed, resilience and reliability that consumers want and businesses need in order to grow, it is clear that gigabit-capable networks are the long-term answer. These technologies have the potential to transform productivity, and to open up new business models. gigabit-capable networks are faster, more reliable, and more affordable to operate than their copper predecessors.

In July 2018, the Government published its Future Telecoms Infrastructure Review (FTIR), which set out the changes that need to be made to the UK telecoms market and policy environment to help secure these goals. The FTIR concluded that the most effective way to deliver nationwide gigabit-capable connectivity at pace is to promote competition and commercial investment where possible, and to intervene where necessary.

The FTIR outlined the following strategic priorities to deliver the Government's connectivity ambitions:

1. Making the cost of deploying fibre networks as low as possible by addressing barriers to deployment. The Government set up a Barrier Busting Task Force to work with industry to identify and remove the biggest barriers to network deployment;
2. Supporting market entry and expansion by alternative networks operators through easy access to Openreach's ducts and poles, complemented by access to other utility infrastructure (for example, sewers);
3. Stable and long-term regulation that incentivises network investment;
4. An 'outside in' approach to deployment that means gigabit-capable connectivity across all of the UK is achieved by 2033, and no areas are systematically left behind; and
5. A switchover process to increase demand for full fibre services.

We believe that the construction of new homes is an opportunity for building developers and telecoms operators to deliver excellent connectivity. When homes are built without thought given to connectivity, new owners often experience delays, additional costs and frustration, at a time (having just moved) when access to online services is critical. Industry has the ability to ensure that consumers' needs are met and for high quality connections to be available from the first day that a resident owns a new home.

Government is proposing to intervene in order to ensure that NBDs have guaranteed access to high quality, reliable digital connections, allowing people to work from home, connect with family and friends and use internet services. Future-proof connections can best be delivered by gigabit-capable networks. We also believe it would be a missed opportunity if we were to not align two key government objectives - delivering on our commitment to create, fund and drive a housing market that delivers 300,000 homes a year on average by the mid-2020s, and having world class digital infrastructure.

We have seen some evidence that connectivity is an improving picture and that the building industry is embracing the importance of digital connections. The best developers - after engaging with communications providers - offer Fibre To The Premises (FTTP) wherever possible. However, despite this, new homes are still being built with no, or slow, connections as developers do not prioritise connectivity in the same way as other utilities.

We also believe there is a disparity between the connection quality of high value and lower value homes, where more expensive homes are more likely to receive full fibre connections. Our proposals will ensure a digital divide does not develop.

In order to achieve these aims we are proposing that developers and Telecoms network operators work together to deliver gigabit-capable connections. This would be achieved by:

- Government requiring developers to engage proactively with network operators as part of the engagement process with local authorities
- Capable operators contributing to the costs of connections up to commercial norms and developers contributing above the operators' commercial cost cap up to an ultimate threshold
- Requiring all developer's to pay for and deliver the physical infrastructure that supports gigabit-capable connections on their sites
- Understood processes being applied to ensure the timely and efficient connection of sites - so when a resident moves in - their internet connection works immediately

The policy proposals are designed to work as a regulatory back stop - with normal commercial agreements encouraged to be used in the first instance.

This consultation seeks views on how to deliver these proposals. The views of the following people and organisations would be particularly useful:

- Telecommunications providers and their representatives
- Builders and developers (small, medium and large) and their representatives
- Residents and their representatives
- Property professionals
- Trade organisations
- Local Authorities
- Consumer groups
- Academics and Think tanks
- Infrastructure providers
- legal professionals
- Members of the public

1. Background

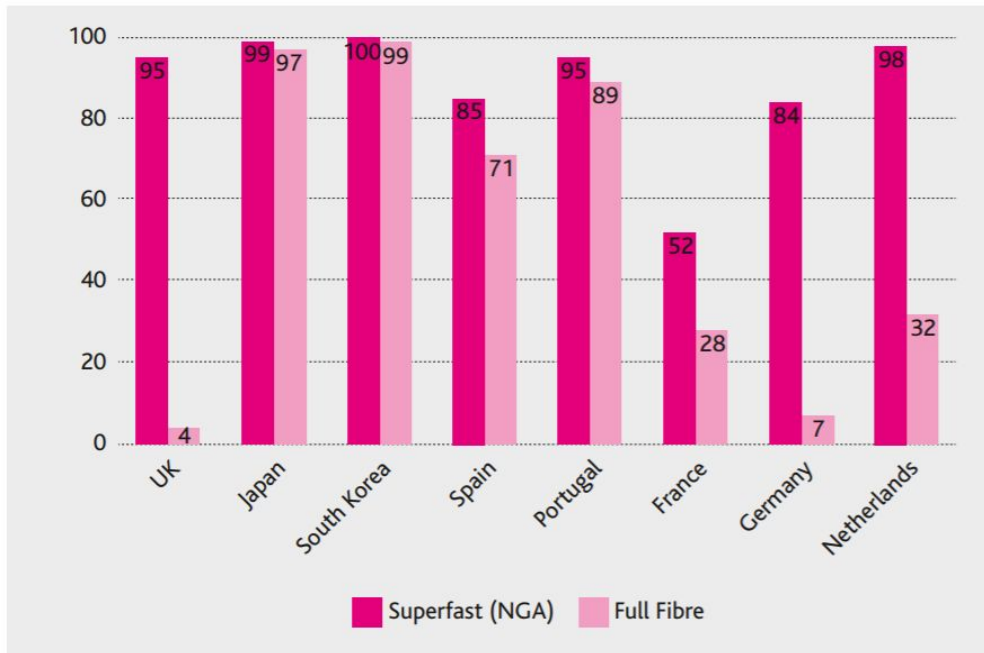
1.1 Improving connectivity for everyone is a key priority for this Government as it enables socio-economic growth. The Future Telecoms Infrastructure Review (FTIR) sets ambitious targets for fibre: 15 million premises to be connected to full fibre by 2025, with nationwide coverage by 2033. These targets will be met by industry and Government working together. Changes will also be necessary in the regulatory and policy environment, to incentivise the large-scale deployment of new networks in rural and urban areas across the UK. Throughout this consultation document the terms 'full fibre' and 'Gigabit' will be used to describe world-class networks - the kind of networks we believe new homes should be connected to. In both cases we would expect the connection to be capable of achieving 1,000 Megabits per second (Mbps) download speeds.

1.2 As the UK seeks to grow its fibre networks, and to realise the benefits they bring, there is a real opportunity for gigabit-capable infrastructure to be deployed to developments from the start (instead of retrospectively with the associated high civil works costs). A comprehensive fibre network will allow people and businesses to be more innovative and more productive. For the UK to remain competitive and harness the economic power of digital technology and enterprise, it must encourage a nationwide deployment of fibre networks. There a number of tools Government and industry can use to deploy such networks. Ensuring that all new homes are connected to FTTP would be a significant step forward in delivering world-class digital infrastructure to the UK.

Defining the problem - connectivity in new homes

1.3 Although the UK is making progress, and a number of infrastructure providers are now deploying fibre at a scale and pace not seen previously, we know the UK has some way to go to match the world's most successful countries in terms of FTTP deployment. The UK's penetration of full fibre is much smaller than many other countries - at ~5% of premises, the UK has amongst the lowest levels of FTTP penetration of the G7, OECD and EU countries, as shown by the chart at Figure 1.

Figure 1. Percentage of fibre subscriptions in total broadband connections – FTIR July 2018



Source: Ofcom (2017), 'International Communications Market Report; Ofcom (2018), 'Connected Nations Update'; European Commission (2018), 'Study on Broadband Coverage in Europe'

1.4 Ofcom the industry regulator, in their Spring 2018 update to Connected Nations,⁴ wrote:

'There have been further improvements in the availability of broadband services across the UK. However, more needs to be done to provide all consumers with access to decent broadband and to encourage further investment in more reliable, faster full-fibre broadband services.'

1.5 In their April 2018 report, the Independent Networks Cooperative Association (INCA, the industry group representing Altnets⁵) said that one of their top three challenges to network deployment, and ability to offer services to and acquire customers, was:

'Engaging with developers and/or local authorities on new build housing plans'

1.6 As fibre to the premise is normally deployed via underground ducts, the most opportune time for it to be deployed to new build sites is when civils works are taking place (i.e. when other utilities are on site). Although some developers are taking positive steps in this regard, too often new developments are built which do not provide the infrastructure required for gigabit-capable networks to be rolled out.

⁴ https://www.ofcom.org.uk/data/assets/pdf_file/0017/113543/Connected-Nations-update-Spring-2018.pdf

⁵ INCA define an Altnet as: '...an alternative network operator as an organisation deploying broadband infrastructure for wholesale and/or retail use, which is not part of either of the UK's incumbent operators BT Group or KCOM in Kingston upon Hull, and that is not Virgin Media as the national cable operator. This includes community groups, not-for-profit organisations, and privately funded companies.'

1.7 If, in 2018, a brand new home is sold without a future-proofed broadband connection, we believe that this could be seen as a market failure. A significant proportion of developments utilise: (i) modern building materials, (ii) technologically advanced appliances, (iii) smart meters, and (iv) high quality heating and insulation systems. In some developments, the internet connection does not match these modern systems which are now commonly seen as standard.

1.8 Citizens require the internet so they can be part of a digital society, for example they may need to use online public services. When new developments are built with no, or slow, connections consumers are let down. It is therefore incumbent on Government to ensure citizens are able to get online.

Data

1.9 Ofcom Connected Nations data⁶ includes information about the type of fixed broadband connectivity a premise has. A premise may have more than one technology type, but it is assumed that the highest speed technology would be used. Also, a premise which does not have a technology indicated has been excluded. This shows that, around 7% of new builds (as part of a development with less than 30 units) have access to ADSL connections, 48% have FTTC, 32% have Virgin Media cable, and just 13% have full fibre to the premise.

Table A: Proportion of new build units by connection

Size of development		ADSL	FTTC	Virgin	FTTP
Very small	1-2 units	6%	58%	32%	3%
	3-4 units	6%	48%	40%	6%
Small	5-9 units	6%	47%	36%	10%
Medium	10-29 units	7%	47%	27%	19%
Large	+30 units	8%	30%	22%	40%
Average (all developments)		7%	45%	29%	19%
Average (1-29 sized developments)		7%	48%	32%	13%

Note: based on the adjusted sample and excluding premises with unknown connections. Source: New Builds model using Ofcom Connected Nations data

1.10 The 7% of new residential premises that have ADSL connections may experience poor connectivity which are likely to degrade over time. Across ADSL connection types, the 'peak time' (20:00-22:00) mean average speed is 7.8 Mbps. Taking 215,000 new premises as an average annual number of new builds built across the UK, we can identify a figure of 17,200 new homes which at 'peak time' cannot access a connection above 10 Mbps. UK

⁶ This is based on information provided to us from Ofcom that showed the type of connection for habitable residential premises added to the Connected Nations database between Epoch dates 49 and 55. Ofcom (2017), 'Connected Nations 2017: data analysis' https://www.ofcom.org.uk/_data/assets/pdf_file/0016/108511/connected-nations-2017.pdf

premises require a download speed greater than 10Mbps to fulfil the basic needs of the average UK household⁷. This is a significant finding. It shows that without intervention new homes will continue to be built with poor connections, many of which are costly and time consuming to upgrade and do not provide the levels of speed and reliability which consumers require.

1.11 This can be compared with other estimates of broadband connections for new builds, most notably from thinkbroadband (Table B)⁸. This is based on average download speed, so is not directly comparable with the above data on the specific type of connection technology. Nonetheless, making assumptions about the download speed of each technology⁹, some simple comparisons can be made. On this basis, the Ofcom data is broadly in line with thinkbroadband for FTTC (30-100 Mbps) connections, but estimates proportionally more Virgin/FTTP (more than 100 Mbps) and proportionally less ADSL (less than 30 Mbps).

Table B: Thinkbroadband estimates of new build (all units) download speeds

Year	Less than 10 Mbps	10 to 30 Mbps	30 - 100 Mbps	More than 100 Mbps
	≅ ADSL	≅ ADSL	≅ FTTC	≅ FTTP / Virgin
2016	10%	10%	50%	30%
2017	12%	12%	43%	33%
2018 (partial)	14%	16%	33%	37%

1.12 The proportion of premises receiving full fibre has been increasing and this trend is likely to continue. In Ofcom’s Spring Connected Nations¹⁰ update, they reported that over one million premises had access to full-fibre broadband (up from 840,000 in the December 2017 report). Since then, their October update shows this has risen again to approximately 1.4 million (around 5% of total premises). This increase is a result of investments from both smaller and larger communications providers. The Government has set clear, ambitious targets for the availability of full fibre and 5G networks. We want to see 15 million premises connected to full fibre by 2025, with coverage across all parts of the country by 2033.

1.13 It is apparent that a number of developers do not help consumers make informed choices when considering the internet connections in their new home. This can be seen when examining the sales websites of a number of the largest developers in the UK. Although developers often describe the local area in detail including pubs, parks and schools, and also describe the various elements of the property and development including insulation, kitchen upgrades, etc, there is often no information about what type of connection is available.

⁷ Source: Ofcom (2016), ‘Connected Nations 2016’

⁸ Thinkbroadband (2018), ‘More new build homes means lots more without decent broadband’ <https://www.thinkbroadband.com/news/7969-more-new-build-homes-means-lots-more-without-decent-broadband>

⁹ Virgin and FTTP can deliver 100 Mbps or more; FTTC can deliver between 30 and 100 Mbps; and ADSL (including ADSL2+) can deliver less than 30 Mbps.

¹⁰ https://www.ofcom.org.uk/data/assets/pdf_file/0019/122194/connected-nations-october-2018.pdf

1.14 In a February 2017 report entitled 'Creating Britain's new communities', one of the UK's biggest housebuilders (Redrow), asked 2,000 residents what were the most important factors in building communities that created social well-being. Ranked second amongst a range of traditional services was high speed broadband, higher than local shops and open spaces.

1.15 In practice, consumers often find it hard to value broadband provision when buying a property. This is because there are a number of other important considerations for consumers when buying a home¹¹, including negotiating price, location, school provision etc. We also believe consumers can suffer from a lack of information, especially if a sale has been agreed before connectivity has been provided. It can therefore be difficult to make informed decisions when assessing a new build homes level of connectivity.

Figure 2 : Redrow - what creates social wellbeing?

Rank	Community feature	Indicated as being important		
		National	City/Town	Hamlet/Village
1	Doctor's surgery	99.5%	99.4%	99.9%
2	High speed broadband	98.1%	97.9%	98.3%
3	Open space / Recreation ground	97.6%	97.7%	97.4%
4	Local shops (Butcher etc)	97.2%	97.7%	96.2%
5	Bus route	95.7%	96.6%	93.9%
6	Hospital	95.1%	95.3%	94.7%
7	Park / Village green	94.7%	94.8%	94.6%
8	Post office	94.2%	94.4%	93.8%
9	Coffee shop / Tea room	91.3%	92.6%	88.7%
10	Health visitor / District nurse	90.3%	90.5%	89.9%

Consultation question 1.

Do you have any further evidence on the state of New Build Development connectivity in the UK?

Interventions related to New Build Development connectivity

1.16 The following interventions, including regulatory and legislative, are related to improving the connectivity of NBDs.

1.17 The Universal Service Directive (the Directive¹²) was one of four pieces of European Telecoms legislation required to be enacted by the UK in 2003. The Directive was transposed to UK legislation in the form of the Universal Service Order (The Order). The

¹¹ <http://www.nhbc.co.uk/media-centre/articles/pressreleases/priorities-of-new-home-buyers/>

¹² Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services ('the Universal Service Directive').

Order was implemented by the regulator and required Universal Service Providers (USPs) to provide certain services. One defined service was a requirement for USPs (BT and one other) to provide 'functional internet access' (this would apply to new homes when a resident made a service request).

1.18 The suggested minimum speed designated by Ofcom (now Ofcom) was 28.8kbit/s (or 0.0288 Mbits/s). Therefore the average speed in November 2008 (3.6Mbits/s) was 125 times faster than the suggested minimum required for 'functional internet access'. By all measures, 'functional internet access' requires speeds well beyond 28.8 kbit/s today. Ofcom reviewed the Universal Service order in 2005 and decided against any increase in suggested minimum speeds¹³.

1.19 The Universal Service Obligation (USO) for broadband is part of a commitment to ensure that the UK has world-class digital connectivity and inclusion. The new USO is a UK-wide measure to deliver broadband connections to the hardest to reach premises in the UK. The USO is intended to provide a legal right to request a broadband connection of at least 10 Mbps download speed, up to a reasonable cost threshold. Ofcom is now responsible for implementing the USO. They expect to make their final decisions on who will be designated a Universal Service Provider by Summer 2019, after which consumers will be able to make requests for connections. The USO is designed to be a 'safety net' for premises in the most isolated and remote areas; it should not be viewed as a solution to NBD connectivity issues.

1.20 The National Planning Policy Framework (NPPF). The NPPF sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced. The revised NPPF was published in July 2018 and states¹⁴:

"Policies should set out how high quality digital infrastructure, providing access to services from a range of providers, is expected to be delivered and upgraded over time; and should prioritise full fibre connections to existing and new developments (as these connections will, in almost all cases, provide the optimum solution)."

1.21 Although the NPPF is a material consideration for Local Authorities (LAs) to take into account when developing their local plans and determining planning applications. The NPPF is Government policy rather than law. As such, it cannot require that all new developments are provided with Gigabit capable connections.

1.22 In 2016 Government brokered an agreement between the HBF and Openreach¹⁵, where Openreach would provide full fibre connectivity for new developments, provided that threshold conditions were met. Originally, the threshold was for developments of 250 units or above, then lowered to 100, and is presently 30.

¹³ https://www.ofcom.org.uk/data/assets/pdf_file/0021/34266/statement.pdf

¹⁴ MHCLG (2018), 'National Planning Policy Framework', section 10
<https://www.gov.uk/government/publications/national-planning-policy-framework--2>

¹⁵https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/498103/DCMS-DCLG_FIN_AL.pdf

1.23 The Building Regulations 2010¹⁶, Approved Document Part R (Physical Infrastructure for high-speed electronics communications networks) transposed the requirements of The European Parliament and The Council Directive 2014/61/EU into English law. The guiding principle of Directive 2014/61/EU is to contribute to a reduction of the future costs and obstacles to deploy superfast broadband. Part R requires that all new buildings are adequately equipped with the necessary infrastructure to support a connection to superfast broadband rather than provide the connection itself. Part R ensures that termination points in buildings can *support* superfast (and above) connections - it does not guarantee those connections.

1.24 These interventions have had a positive impact on the connectivity of NBDs. However, even taken as a whole these initiatives will not deliver the guaranteed gigabit-capable digital infrastructure needed across the country. Based on the evidence we have seen and our research, it is apparent that further policy interventions may be required to deliver better digital connectivity.

Why Government wants to intervene

1.25 Some developers are already recognising the importance of fibre connectivity. Berkeley Homes' Chief Executive, Rob Perrins has said:

“For new home buyers, high-speed broadband has almost become a given now – it is like the power steering on a car – no one asks whether the car they’re buying has it anymore...if we weren’t able to offer fibre, I think there would be the real prospect of some people walking away from property sales. It is definitely a factor in the decision making process for people buying new homes.”¹⁷

Berkeley Homes has worked with Openreach to ensure almost all of their developments are connected to full-fibre. Unfortunately this type of approach is not consistent across the building industry. A number of developers have not contacted infrastructure providers in time for fibre connections to be made. In other cases developers have refused to contribute even nominal sums in order for developments to be connected to full fibre. It is for these reasons that Government is considering intervening: even though some parts of the market are working well, others are clearly failing and consumers are being let down.

1.26 Government is proposing to intervene to ensure that new homes are built with high quality, reliable and future proof connections. We believe that gigabit-capable networks will offer far greater socio-economic benefits to communities than legacy copper networks. FTTP will allow people to connect faster and do more online (for example start a business, or work from home). Increased fibre deployments will also contribute to Government’s wider aims of promoting economic growth.

¹⁶ S.I. 2010/2219.

¹⁷

<http://www.mynewsdesk.com/uk/bt/pressreleases/berkeley-group-says-ultrafast-broadband-is-now-a-must-have-f-or-new-home-buyers-2079977>

1.27 We believe far more new homes could be connected to gigabit-capable networks if developers were willing to financially contribute to those connections. Network operators have told us they routinely offer FTTP packages to developers but these are often only installed when the cost to the developer is nil. Although these developer costs are relatively modest and could be mitigated (for example, passed to original landowners, home buyers, or absorbed), some developers are reluctant to change their known practices, especially if any change includes an increase in costs, however nominal.

1.28 When developers are unwilling to contribute to the cost of providing high quality connections, this in turn impacts upon an operator's ability to deploy that network. Without a contribution from a developer, operators will only deploy networks which are commercially viable. In practice, this may mean that although over time more new homes are built with future-proof connections - without any obligation on industry to provide such a connection - a segment of the new homes market will remain poorly connected.

Impact on build out of homes

1.29 We are conscious that any intervention should not adversely impact the increased build-out of new homes. Having considered the main reasons build-out can be slowed, we have concluded that delivering gigabit-capable connections would not degrade the speed at which developments can be built or the number of new homes built. This is principally because we assess that the increased costs borne by developers would be small in almost all cases and the proposed cost threshold is set at a level which would not have a negative impact. The issue of cost is explored in greater detail in the Impact Assessment that accompanies this consultation.

Consultation question 2.

Do you have any information or evidence to suggest that the costs developers would incur under the proposed policy would prevent homes being built?

Market failures

1.30 It would appear that a complex set of supply-side and demand-side market failures are leading to the under-provision of future-proofed connectivity in new developments.

Supply-side

1.31 **Information failure - developers.** Not all developers are fully aware of the extent of the benefits that delivering gigabit-capable connections could bring them. In other words, not all developers seem to understand the premium that consumers may place on a fast, reliable internet connection, which in turn developers could charge for. For many years developers have had to facilitate the installation of a copper phone line (which would provide functional¹⁸ internet access). In practice, this meant a relationship was built up between developers and

¹⁸ Though not by today's standards (see paragraph 1.10).

(in the majority of cases) BT group; with copper connections - and laterly FTTC - providing the technological solution.

1.32 We believe developers are not fully aware of the range of technological solutions available and as such routinely request a copper or FTTC connection from operators even when a Gigabit solution could be viable. Conversely, some developers *may* be aware of the kind of technologies they could facilitate, yet will not contribute to the cost of the best connections available as they do not believe these costs can be recouped. Developers - especially ones operating under tight profit margins¹⁹ - are therefore unwilling to contribute to the cost of better connections, perhaps believing that they cannot pass on these costs.

1.33 **Averts future negative externality.** In the future, residential premises will transition from solely copper or FTTC connections to FTTP²⁰. This will cause cost and disruption (e.g. street works) to people living within an area. Installing fibre infrastructure during the construction of new developments will avoid these future costs and disruption. However, these future benefits will not be captured by today's developers.

Demand-side

1.34 **Information failure - home buyers.** Prior to purchasing a premise a home buyer has insufficient information to accurately assess the quality of broadband available in the property. This is especially true for home buyers purchasing new build properties as they are the first people to use broadband in the property. In other words, prospective home buyers of new build properties are not able to accurately judge the value of the internet available at a property prior to purchasing. This could significantly lower the incentive for house builders to provide high quality broadband to a property.

External benefits

1.35 When considering purchasing a home with a (poor, good or excellent) broadband connection, consumers may not consider the external benefits to wider society in their decision. As a result, consumers and end-user firms may not demand the socially optimal level of infrastructure and therefore infrastructure providers do not invest to the optimal level. The benefits include:

- **The environmental benefits** not fully recognised through consumer choice, where increased cloud use and reduced travel (related to increases in working remotely and

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[https://www.ey.com/Publication/vwLUAssets/UK_Construction_Industry_-_Margin_matters/\\$FILE/ATTJK71P.pdf](https://www.ey.com/Publication/vwLUAssets/UK_Construction_Industry_-_Margin_matters/$FILE/ATTJK71P.pdf)

²⁰ 'As full fibre networks are rolled out, maximising the number of end users will secure the full benefits of the technology. This will involve customers switching to new fibre networks ('switchover') and retiring the legacy copper networks ('switch-off'). It is realistic to assume that switchover could be underway in the majority of the country by 2030, but the timing will ultimately be dependent on the pace of fibre roll out and subsequent take-up of fibre products'. FTIR, July 2018.

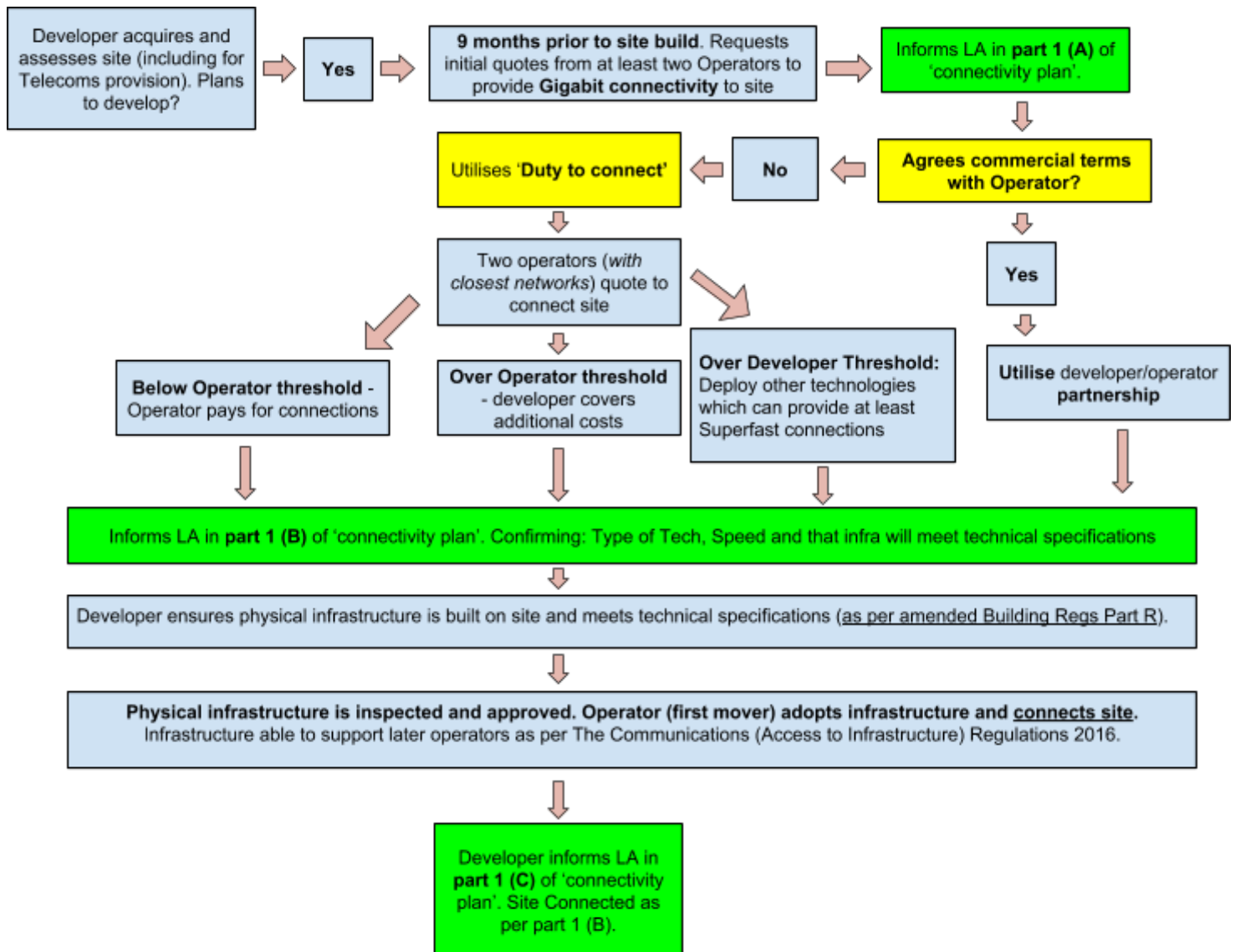
increased use of online services) leads to less pollution and reduced carbon emissions;

- **The wider benefits to the economy and society** of equality in access to information, commercial and public online services provided by access to better broadband. Benefits stemming from better-functioning markets, better health outcomes and increased employment will not be fully incorporated into individual consumer choices; and
- **The spillover effects** associated with gigabit-capable networks. This includes reducing the costs to deploy gigabit connections to nearby premises by bringing the network closer or sharing sunk costs like civil works across a larger number of premises. It also includes the enabling effects of supporting the deployment of the next wave of technological advances like 5G.

1.36 It is the Government's view that intervention may be necessary to address these market failures and secure the benefits of future-proofed connectivity in new build developments.

2. Policy proposal

Figure 3. How the policy will work in practice



2.1 The proposed policy process is shown in a flow chart at Figure 3 (above). The key elements of the proposal are:

- That operators are able to identify sites which require connections in good time. That a developer submits an iterative 'site connectivity plan' to Local Authorities (LAs) throughout the site's development.
- That if commercial terms between developers and operators cannot be agreed, a developer can impose a 'duty to connect' provision upon operators. Operators will be

responsible for the backhaul network to connect the development under this 'duty to connect' provision

- That developers request quotes from at least two network operators, in order to promote fair competition
- That under a 'duty to connect', operators will contribute to connection costs up to a commercial norm (*cost-cap could be between £500-£1000 per premise, depending on consultation feedback*)
- That if the operator cap is exceeded, developers will contribute the funds (*up to a maximum total cost-cap of ~£3000 per premise, depending on consultation feedback*),
- Developers will be responsible for ensuring the physical infrastructure (e.g. ducting) on site is capable of supporting gigabit-capable networks and;
- That having utilised an amended Building Regulations Part R, sites have gigabit-capable infrastructure. Developers inform LAs that the site is connected to gigabit-capable connections.

2.2 The policy proposal is designed to place the best practice we see today from the most proactive developers and operators on a statutory footing. It will act as a regulatory backstop - targeting those developers who build homes yet make no provisions for high-quality connectivity, whilst allowing commercial agreements that deliver gigabit-capable connections to continue. It is right that operators and developers both contribute to the costs. Operators will gain from the ability to sell the services to households and avoid the cost of having to later upgrade the network. The cost to developers should be limited in almost of cases and can be mitigated, for example, passed to original landowners, home buyers, or else absorbed. We believe this approach is necessary as good connectivity is increasingly important and should be viewed as a necessity similar to water and energy (which developers and operators already contribute to the cost of).

Consultation question 3.

We propose that developers would be obliged to provide a simple connectivity plan for their developments to LAs. This plan would demonstrate that developers had consulted with at least two network providers to provide gigabit-capable networks and inform LAs when a site is connected. Do you have any comments on this proposal for a connectivity plan?

2.3 Delivering future-proof connectivity to all new build developments requires both infrastructure within the development and a connection from the development to the backhaul and core fibre networks. We believe the first of these (the development site) is relatively simple to control - on the basis that the developer has control over the development site.

2.4 We propose requiring developers to deploy, and pay for, the necessary infrastructure (ducts, etc) from the in-building connections to the boundary edge of the development - this will ensure one or more operators can deploy infrastructure quickly within the site.

Consultation question 4.

- (a) Do you agree with the assumption that deploying the necessary infrastructure to deliver gigabit-capable networks is best achieved when the site is being built?
- (b) What technical specifications should the physical infrastructure (ducts etc) have?
- (c) Do you agree that developers should deploy, and pay for, the necessary infrastructure from the in-building connections to the boundary edge of the development?

2.5 If a developer comes to a commercial agreement with an operator to provide a gigabit-capable connection then we propose that the policy will allow the operator to deploy the infrastructure required to enable gigabit-capable networks, as well as the fibre itself.

2.6 Connecting from the site to the onward network is a more complex issue to resolve. We believe that if a development cannot be connected solely by the developer (some developers are now connecting premises to fibre using their own subsidiary companies), or connected via a commercial agreement between developer and provider (which should be the default), then the obligation should be shared.

2.7 We propose to place an obligation on the developer to engage with at least two operators to provide gigabit-capable infrastructure to their developments on a commercial basis. This, along with other measures will enable commercial agreements to deliver the majority of connections. We believe this will need to be enshrined in legislation.

Consultation question 5.

- (a) Do you agree that developers should have to engage with at least two network operators who can provide gigabit-capable connections to the development?
- (b) What further measures could we consider to promote the availability of networks from multiple providers at an early stage to minimise costs and disruption?

Funding and aggregation

2.8 We propose that if a commercial agreement cannot be made then a developer will be able to oblige a provider to connect homes under a 'duty to connect' provision. The policy could be based on a tiered, cost per premise regime. For example, using illustrative costs, an individual premise costing up to £1,000 to connect would be covered by the operator. The

amount over £1,000 and up to £3,000 (a maximum of £2,000) would be covered the developer.

2.9 We explore in detail the costs that could be attributed to developers and operators in the accompanying Impact Assessment.

Consultation question 6.

Taking £3,000 as a suggested aggregated cost cap per premise, how should costs be divided between developer and operator?

2.10 Cost aggregation has been suggested as a metric for identifying developments in scope. However, we understand that some stakeholders would find this difficult in administrative and logistical terms, and would prefer developments to be in scope based on number of premises (for example more than 5).

Consultation question 7.

What information and evidence can you provide to help refine the 'in scope sites' policy design choice - aggregated cost cap or number of premises?

2.11 Even if a minimum number of premises is used to identify sites in scope as an alternative metric, we believe that cost aggregation is still likely to be used for developments as a whole rather than individual properties. For example; if a site of 5 units had individual connection costs of; £1,000, £1,000, £1,000, £1,200 and £800, all homes would be connected by the operator, as the operator cost cap is still £1,000 per premise.

Process for ensuring consumers are connected

2.12 Overall responsibility to connect developments would be the developers. We envisage the following steps (*1-5 below*) to ensure the timely and efficient connection of developments.

- 1). The site for the development would need to be viable for gigabit-capable connections to be deployed unless the total cost threshold is exceeded, whereupon alternative technological options (for example FTTC or Fixed Wireless Access) would need to be considered.
- 2). The developer would need to share the details of its plans for gigabit-capable connections with the appropriate LA and update throughout the process.
- 3). The developer remains responsible for the connection of the site and would be expected to pay for and facilitate the deployment of the physical infrastructure to support gigabit-capable connections.
- 4.) If a duty to connect provision was invoked by a developer, a network operator would be responsible for making the connections from home to network and would adopt the physical infrastructure.

5.) At the retail level we expect that consumers would pay a price in line with local norms and we would consider action if we were concerned about consumer harms.

Consultation question 8.

- (a) Do you agree that developers should have the overall responsibility to ensure Gigabit connectivity for their developments (allowing for the fact that developers can oblige operators to connect using the 'duty to connect' provision).
- (b) How would this policy affect small housebuilders?

Type of vehicle required and existing legislation.

2.13 To mandate full fibre for all NBDs in the manner we propose, we consider that primary legislation is likely to be required. We are minded to pursue legislative options, pending the outcome of this consultation, and when parliamentary time allows. We would welcome views from stakeholders on this approach, particularly any alternative suggestions that could deliver the same outcomes.

Consultation question 9.

Do you have any comments on the proposed legislative approach? Do you have an alternative solution that would deliver gigabit-capable connections to NBDs?

3. Consolidated list of questions

Consultation question 1.

Do you have any further evidence on the state of New Build Development connectivity in the UK?

Consultation question 2.

Do you have any information or evidence to suggest that the costs developers would incur under the proposed policy would prevent homes being built?

Consultation question 3.

We propose that developers would be obliged to provide a simple connectivity plan for their developments to LAs. This plan would demonstrate that developers had consulted with at least two network providers to provide gigabit-capable networks and inform LAs when a site is connected. Do you have any comments on this proposal for a connectivity plan?

Consultation question 4.

- (a) Do you agree with the assumption that deploying the necessary infrastructure to deliver gigabit-capable networks is best achieved when the site is being built?
- (b) What technical specifications should the physical infrastructure (ducts etc) have?
- (c) Do you agree that developers should deploy, and pay for, the necessary infrastructure from the in-building connections to the boundary edge of the development?

Consultation question 5.

- (a) Do you agree that developers should have to engage with at least two network operators who can provide gigabit-capable connections to the development?
- (b) What further measures could we consider to promote the availability of networks from multiple providers at an early stage to minimise costs and disruption?

Consultation question 6.

Taking £3,000 as a suggested aggregated cost cap per premise, do you agree with the the proposed how should costs be divided between developer and operator?

Consultation question 7.

What information and evidence can you provide to help refine the 'in scope sites' policy design choice - aggregated cost cap or number of premises?

Consultation question 8.

- (a) Do you agree that developers should have the overall responsibility to ensure Gigabit connectivity for their developments (allowing for the fact that developers can oblige operators to connect using the 'duty to connect' provision).
- (b) How would this policy affect small housebuilders?

Consultation question 9.

Do you have any comments on the proposed legislative approach? Do you have an alternative solution that would deliver gigabit-capable connections to NBDs?

4. Next steps

A summary of responses, including the next steps, will be published within three months of the consultation close date. Please make it clear to us in your response if your comments are commercially sensitive. Paper copies will be available on request. If you have questions about this consultation please contact:

newbuildconnectivity2018@culture.gov.uk

or:

New Build Developments: Delivering gigabit-capable connections
Digital Infrastructure Team
Department for Digital, Culture, Media and Sport
100 Parliament Street,
London
SW1A 2BQ

5. Privacy notice

The following is to explain your rights and give you the information you are be entitled to under the Data Protection Act 2018. Note that this section only refers to your personal data (your name address and anything that could be used to identify you personally) not the content of your response to the consultation.

1. The identity of the data controller and contact details of our Data Protection Officer: The Department for Digital, Culture, Media and Sport (“the department”) is the data controller. The Data Protection Officer can be contacted at dcmsdataprotection@culture.gov.uk.

2. Why we are collecting your personal data: Your personal data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

3. Our legal basis for processing your personal data: The Data Protection Act 2018 states that, as a government department, the department may process personal data as necessary for the effective performance of a task carried out in the public interest. i.e. a consultation.

4. With whom we will be sharing your personal data: We will not share the personal data obtained through this consultation outside of the department. Copies of responses may be published after the consultation closing date on the Department’s website: www.gov.uk/dcms. If you want the information that you provide to be treated as confidential, please be aware that, under the FOIA, there is a statutory Code of Practice with which public authorities must comply and which deals, amongst other things, with obligations of confidence. In view of this, it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information, we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department.

5. For how long we will keep your personal data, or criteria used to determine the retention period: Your personal data will be held for three months after the consultation is closed. This is so that the department is able to contact you regarding the result of the consultation following analysis of the responses.

6. Your rights, e.g. access, rectification, erasure: The data we are collecting is your personal data, and you have considerable say over what happens to it. You have the right:

- to see what data we have about you
- to ask us to stop using your data, but keep it on record
- to have all or some of your data deleted or corrected

- to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law.

You can contact the ICO at <https://ico.org.uk/>, or telephone 0303 123 1113.

7. Your personal data will not be sent overseas.
8. Your personal data will not be used for any automated decision making.
9. Your personal data will be stored in a secure government IT system.