

Open Market Review

Dates: Running from 9:00 on 12th August 2021
to 17:00 on 13th September 2021

REQUEST FOR INFORMATION



Department for
Digital, Culture,
Media & Sport

PROJECT GIGABIT



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Introduction

The Government's ambition is to deliver nationwide gigabit-capable broadband as soon as possible. We recognise that there is a need for government intervention in the parts of the country that are not commercially viable, this is why the Government has committed £5bn for the hardest to reach parts of the country, ensuring that all areas of the UK can benefit. This will be spent through a package of coordinated and mutually supportive interventions, collectively known as Project Gigabit.

As part of this, BDUK is developing a procurement approach for funding contracts to suppliers delivering gigabit-capable wholesale infrastructure. This procurement approach will be a successor to the highly successful Superfast broadband programme.

We wish to work collaboratively with industry to maximise efficiency, minimise market distortion and achieve our objectives within a tight time frame. To do this, we must first identify the intervention areas which currently are not commercially viable, where no infrastructure exists or is planned to be built within the next three years (however, we are also interested in plans beyond this period, if available).

Once the eligibility of the premises has been assessed through an Open Market Review and validated through the subsequent Public Review stage, the premises identified by BDUK as eligible will be grouped into appropriately sized intervention areas to ensure that the right areas are targeted for government investment.

We invite suppliers to provide us with information about their infrastructure within the areas detailed below. We intend to put this together with data available through Ofcom's [Connected Nations](#) publication to allow us to carry out an assessment of existing and planned broadband connectivity.

Please can suppliers also include in their Annex A data submission, any existing or planned infrastructure you have gained with assistance from Government subsidy for example, vouchers, Superfast (NBS 2012 or NBS 2016) and hubs (Local Full Fibre Networks and Rural Gigabit Connectivity Programmes).

Forming the intervention areas will include taking information learned from Ofcom Connected Nations data; publicly available supplier information about build and planned build; information that we can gather through this Open Market Review (OMR) and the forthcoming Public Review.

In this way, working with suppliers, we hope to gradually build a comprehensive dataset across the UK, encompassing regions and counties. BDUK will use this information to inform the size and scale of the intervention areas (IAs). The IAs will be issued to the market so that suppliers can bid for funding to support delivery to those areas.



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These intervention areas have been broken down into three types of intervention areas which will deliver subsidised gigabit networks, consisting of Regional, Cross - Regional and Local Supplier areas.

Why should you as suppliers participate in this OMR?

Our goal is to ensure we target the parts of the country that need government support first. By working with us, you will help to maximise the use of public subsidy to help provide ever faster, better connectivity across all parts of the UK. You will help us to identify areas which will be left out because they are not commercially viable, thereby bringing significant benefits to the UK economy.

If you have existing network coverage, or plan to build infrastructure within the next three years, we actively encourage you to respond to this OMR, so that we can ensure we target the right areas for public subsidy, and avoid over-building commercial infrastructure.

If you have responded to a previous Project Gigabit OMR or PR please do consider making a formal response to this one too, in order to provide us with your latest dataset. We are aware that deployment plans change frequently and we require the latest data to evaluate your coverage accurately. If your plans haven't changed since your last submission please respond to confirm that your previous submission should be re-used, assuming it is still valid (i.e. it remains accurate in terms of your coverage claim, technology deployed, or planned to be deployed, financing arrangements and deployment plan timescales). Without confirmation of this, BDUK will be unable to use submissions from previous processes.

Project Gigabit - Progress to Date

The Project Gigabit intervention has made significant progress to date in shaping the strategy for delivery, including the procurement approach. To get this right, we have carried out significant market engagement, talking to many suppliers since 2019.

The first OMR was launched in November 2020 and PR in February 2021 in the County of Cumbria. This has been followed in quick succession with further phases, which have been outlined and described within the Project Gigabit Delivery Plan collectively referred to as Release 1A and 1B areas.

These geographical areas include:



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Release 1A

- Durham, Tyneside and Teesside areas (Lot 4)
- Cambridgeshire and adjacent areas (Lot 5)
- Cumbria (Lot 28)
- West of Cornwall and Isles of Scilly (Lot 32)
- East of Cornwall (Lot 33)
- Northumberland (Lot 34)
- Essex (Local Supplier Contract)
- Dorset (Local Supplier Contract)

Release 1B

- Suffolk (Lot 2)
- Norfolk (Lot 7)
- Worcestershire (Lot 24)
- Shropshire including Telford and Wrekin (Lot 25)
- Hampshire and Isle of Wight (Lot 27)

Further information can be found via the Project Gigabit Delivery Plan - Summer Update published in August 2021 [here](#).

Geographical Scope for Phase 2 - First Release

For more information about current coverage in these areas, please refer to the Ofcom Connected Nations report, which contains more information about connectivity, including speed data. BDUK will endeavour to publish on a rolling basis the coverage information which can be found at this web link: [Digital Connectivity Portal](#).

This Request for Information (RFI) will allow us to identify potential Intervention areas for Government subsidy . This OMR RFI is concerned with the following areas as shown below:

- Oxfordshire and West Berkshire (Lot 13);
- Kent (Lot 29);
- Buckinghamshire, Hertfordshire and East of Berkshire (Lot 26);
- Staffordshire (Lot 19); and
- West Sussex (Lot 1).

Please note, Lot areas are not restricted to Local Authority (LA) boundaries, and in some cases a small number of premises in neighbouring Local Authorities may be included in the Lot. Therefore if you are operating in a neighbouring LA, please consider responding to this OMR too.

BDUK will supply blank templates for the OMR (as outlined in Annex A), showing the UPRNs across the nation that we consider relevant to the OMR process. For easier working, these



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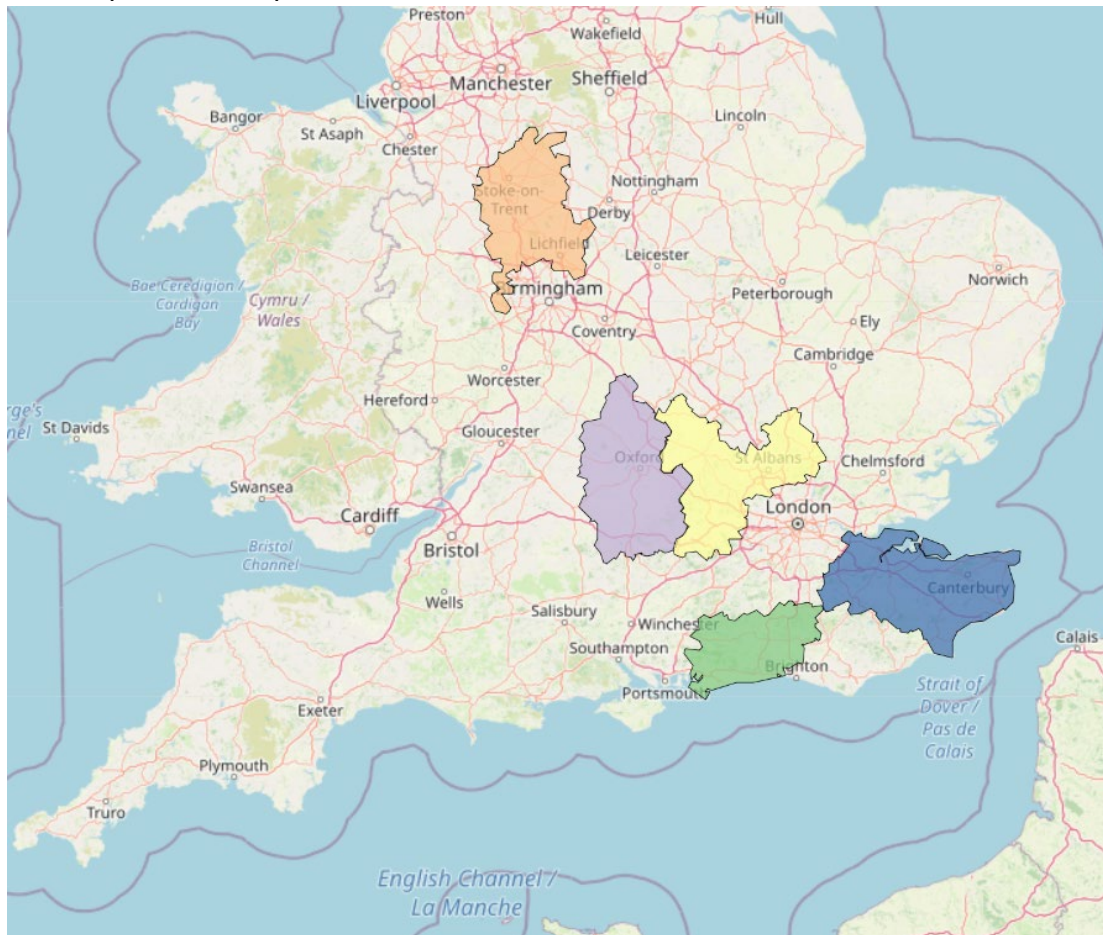
have been divided into eight separate templates, covering: Wales, Northern Ireland, North West, North East, Central East, Central West, South West and finally the South East ¹.

These UPRNs have been sourced from Address Base Premium Epoch 82, from Ordnance Survey published February 2021. Even though we are, at this stage, specifically focussing on data for the 5 areas listed above, for the purposes of our broadband planning we would be grateful for your full broadband plans, including premises that are outside of these geographic areas, and/or outside of the premises base provided in the template files.

To access this information you will need to sign an [Ordnance Survey End User Licence](#) to access this data. You can download the Public Sector Geospatial Agreement (PSGA) at this link - [Ordnance Survey End User License Template](#). This is also available as an attachment in the documents sections.

We also require suppliers to sign a Non Disclosure Agreement (NDA) with BDUK, if this is not already in place, please email ukqigabit@BDUK.Zendesk.com to initiate this process.

This map shows the planned lot boundaries:



¹ The OMR Response template will be released to providers once BDUK has received the signed Ordnance Survey Public Sector End User Licence Form which can be found at the end of this document

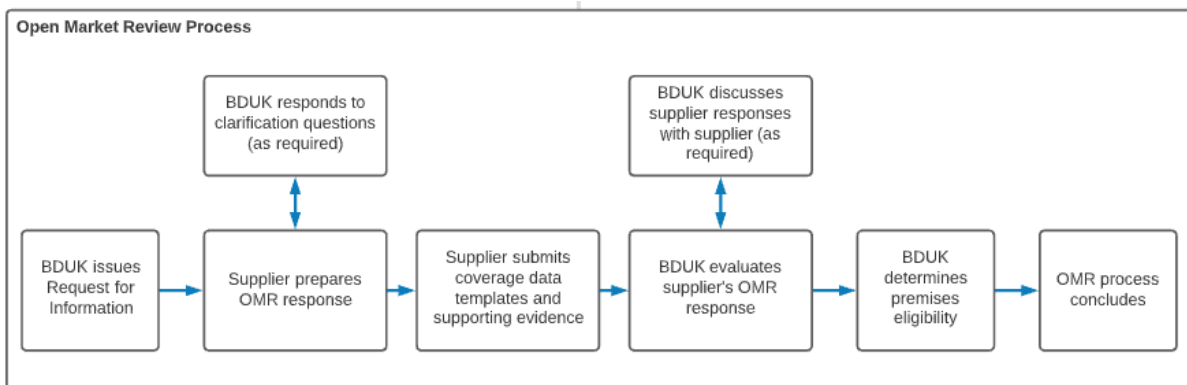


Purpose of this Open Market Review Request For Information

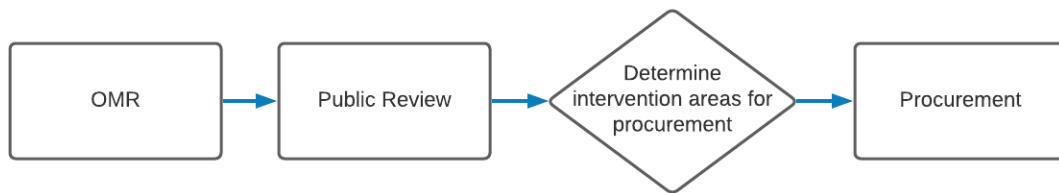
We are launching this Open Market Review (OMR) Request for Information (RFI) to establish existing and planned coverage of broadband services with the aforementioned geographic areas outlined above over the next three years. We seek responses from all existing and prospective broadband infrastructure suppliers that operate, or are planning to operate within the geography over the next three years.

This OMR process will be followed by a formal Public Review (known as the Public Consultation, under the Superfast Programme, a former broadband coverage subsidy intervention). BDUK applies a best practice approach that includes an OMR and a Public Review. We consider that early market research at this stage is an important part of our market engagement to shape public investment plans. The results of the OMR will assist us with understanding the broadband infrastructure (whether NGA, ultrafast or gigabit-capable) already in place and where there are plans for investment in such infrastructure in the forthcoming three years. The RFI will enable us to make a significant step in the design of the areas to be targeted by the new procurements and contracts.

We will request and then evaluate the suppliers' responses. During the evaluation exercise, we may engage with suppliers further to discuss and confirm their coverage claims. Following this, we will be able to determine the eligibility of the premises for government subsidy. The flowchart below shows a summary of how the OMR process works.



We will then conduct a Public Review to validate the results of the OMR, including seeking validation of the eligibility of the premises for subsidy. The Public Review will take place over the period of at least one month, and once concluded will confirm the eligibility of the premises for procurement(s). The full details of these procurements will follow the conclusion of this OMR and Public Review. The flowchart below shows the order of processes, from OMR to procurement.



Key Eligibility Requirements for Subsidy

The outcome of this OMR and the forthcoming PR will be shown in terms of 'White', 'Grey', 'Black' and 'Under Review' premises. We will only subsidise build to premises which have been designated as White.

- **White** - indicates premises with no gigabit network infrastructure and none is likely to be developed within 3 years. Annex C provides information on the technology 'qualifying' as gigabit capable
- **Black** - premises with two or more qualifying gigabit infrastructures from different suppliers being available, or will be deployed in the coming 3 years
- **Grey** premises - a single qualifying gigabit infrastructure from a single supplier is available, or is to be deployed within the coming 3 years
- **Under Review** - premises where suppliers have reported planned commercial broadband coverage, but where those plans have been judged through the OMR as potentially being at risk of not being completed.

Premises categorised as Under Review will be subject to continued monitoring and verification of supplier plans within the three-year period by BDUK. BDUK may request commitment from the supplier that significant progress is made within three years. In the event that these commercial plans fall away, these premises will be mapped as eligible and form part of the proposed intervention area and so eligible for intervention via this aid measure. We request that suppliers inform us regarding all plans, including plans beyond the initial three-year period.

BDUK classifies premises on the basis of their existing or planned broadband infrastructure, as set out in Annexes B and C. The OMR and PR data analysis of supplier's broadband coverage claims is undertaken at UPRN (premises) level.

What are "step change" requirements?

BDUK also requires that public intervention should be able to ensure a 'step change' in broadband availability from that currently available as well as credible planned networks. This is demonstrated by:

- Generally, download speeds must be at least doubled and upload speeds substantially higher as a result of the intervention when compared with existing download and upload speeds



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- Significant new investments in the broadband network are undertaken (i.e. investments that must include civil works and installation of new passive elements)
- The new infrastructure brings significant new capabilities to the market in terms of broadband service availability, capacity and speeds and or competition.

The 'step change' in broadband availability shall be compared to that of existing as well as credible planned networks.

Commercial Process

BDUK will budget an appropriate amount of public funding from the Project Gigabit Programme for each intervention, at the procurement stage. The budget will be specified within the Invitation to Tender (ITT) documentation, following the Public Review. Details of any restrictions on the use of public subsidy will be explained in the tender documentation. It is BDUK's intention to procure gigabit-capable solutions – those capable of achieving a minimum of 1Gbps download speed - for the identified areas in scope for gigabit-capable deployment.

Suppliers have the opportunity, during the OMR and Public Review processes, to share with BDUK any firm and credible investment plans that may mean that public subsidy will not be warranted. It will be important for this OMR and the Public Review to establish these plans. Please see Annex B for guidance on how supporting evidence is used to assess coverage.

The Role of Local Bodies

BDUK will work with the relevant local bodies to answer questions, evaluate supplier responses, assess data accuracy, support the build phase and engage with the local community. Sharing the premises data set out within each location and intervention areas, during the OMR and Public Review stages, will help us gain further confidence that the proposed interventions are eligible for subsidy.

BDUK will maintain a central dataset and will work with authorities to assess and review the data in the areas relevant to the respective local body and intervention areas. BDUK will be responsible for the data and local bodies are required to sign a non-disclosure agreement prior to gaining access to the data.

This Request for Information is being carried out independently of any activities that local bodies may be undertaking, for example, under the [National Broadband Scheme 2016](#) known as the Superfast Programme.



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Making a Data Response

To submit a data response, please follow the steps below, as well as referring to the guidance provided in Annex A:

- Sign the Public Sector Geospatial Agreement (PSGA) End User Licence Agreement, which will be required before downloading the data. Please return this, as soon as possible, to [ukgigabit@bduk.zendesk.com].
- Once you have done this, we will provide you with login details to our secure file transfer portal where you will be able to download the response templates.
- You may seek clarification, on making a data response, at any time from 12th August 2021 to 13th September 2021. Please send these questions to us at [ukgigabit@bduk.zendesk.com].
- You should make your data submission to us via the secure file transfer portal. Please upload the data response template and any further supporting evidence you feel you should send.
- Please do not assume that we will use a previous submission for this RFI. If you wish for a previous submission to be treated as your return for this RFI, please get in touch to confirm this.
- Please include all current and planned premises coverage, including premises that are outside of the geographic areas, and/or outside of the premises base provided in the template files in Annex A.

Please note that the data you provide in your response will be treated as commercially confidential, albeit that it may be necessary to share some/all of your response data with our professional advisors and/or local bodies, Ofcom and BEIS Subsidy Control Branch. We will use this information to define the intervention areas (only) following the Public Review.

Please ensure that you engage with us as soon as possible to confirm whether you would require BDUK to put in place a non-disclosure agreement (NDA) enabling us to share data between each other as part of this OMR process.

It should also be noted that it is a requirement to use this information to produce maps to define 'White', 'Grey', 'Black' and 'Under Review' areas for gigabit-capable broadband. However, the published maps will show the aggregated 'White', 'Grey', 'Black' and 'Under Review' broadband areas, not the data provided on a per-operator basis. The final maps and UPRNs that will be used for procurement purposes will be published shortly after the conclusion of this Public Review and once approved by the National Competence Centre.



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If you have any questions about any of the above, please contact ukgigabit@bduk.zendesk.com.

Submission Requirements

Responses to this OMR RFI must include the following:

1. A data submission that should cover your current and planned premise coverage (i.e. premises served by your network, or planned to be served by your network) as per the format outlined in **Annex A**:
 - The required data templates will be provided through the secure file transfer portal.
 - Please include all current and planned premises coverage, including premises that are outside of the geographic areas, and/or outside of the premises base provided in the template files.
 - Additional guidance can be provided to suppliers if required, please contact ukgigabit@bduk.zendesk.com for support.
2. **Your completed Supporting Evidence template**, which must include a response to the questions outlined in **Annex B** (This template can be found as an attachment in the documents section of the gov.uk page).

Please note that where your coverage claims are for gigabit-capable networks, then your response detailing your proposed network design and architecture must consider the technical definition as outlined in **Annex C**.

Evidence to demonstrate how planned investments are viable

There are three essential areas against which BDUK will evaluate your planned coverage claims to ensure the overall viability of your planned investment. Our assessment will be based on the suite of evidence you provide BDUK in the Annex B: Supporting Evidence Template and will include: whether the **technology** you intend to deploy is gigabit capable and meets the technical criteria as outlined in Annex C: Technical Definition; **deliverability**, and whether your deployment plans are in line with the phases / premises passed outlined in your business plan, with the key build stages and processes outlined; and **commercial viability** - whether you have viable commercial plans such as sufficient access to capital and whether the drawdown of your funds aligns with your deployment plan and build programme. The information you provide should be consistent across these elements to support a joined-up evaluation of your responses.

Further information is included in Annex B and the Supporting Evidence Template.



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Date for Return

Please submit responses to this Open Market Review by the closing date of 13th September 2021 at 5pm. BDUK plans to publish the subsequent maps showing the proposed Intervention Areas, following the close of the assessment and evaluation period.

This will be followed by the launch of the Public Review, allowing suppliers, members of the public and other stakeholders the opportunity to provide their input to the proposed Intervention Areas in question.

Thank you.

BDUK Case Management Team



Annex A: Data Submission Format

Introduction

BDUK require certain fields of data for each pertinent UK address as identified by the Unique Property Reference Number (UPRN) in order to monitor the current and future delivery of Gigabit broadband capable services. This is done by requesting data on current and future connections from relevant suppliers. The below describes the format of the BDUK request file and how to format the data to return to us. If you require any additional support, guidance or clarification with this, please get in touch with us at ukgigabit@bduk.zendesk.com

File formats

BDUK will supply blank templates for the OMR, showing the UPRNs across the nation that we consider relevant to the OMR process as well as the standard columns that we require. For easier working, these have been divided into eight separate templates, covering: Wales, Northern Ireland, North West, North East, Central East, Central West, South West and finally the South East .

These UPRNs have been sourced from Address Base Premium Epoch 82, from Ordnance Survey published February 2021. Even though we are, at this stage, specifically focussing on data for the 5 areas listed in this RFI, for the purposes of our broadband planning we would be grateful for your full broadband plans, including premises that are outside of these geographic areas, and/or outside of the premises base provided in the template files.

Please do not pre-filter your data based on the template files, instead please provide us with your entire UPRN dataset.

If you are using the template files as the starting point for your return, please remove any UPRN rows which are not part of your current or planned network.

The information that we provide against each property/premises is as follows:

	Description	Format
strUPRN	The UPRN (see below) prepended with "STR", this is a mitigation against certain spreadsheet tools treating the UPRN as a large number and removing significant digits	Text
UPRN	The unique property reference number	Number
Single_Line_Address	Comma delimited single line address	Text



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	eg 1, Acacia Avenue, Anytown	
Postcode	Standard postcode	Text
Local_Authority_District	The local authority district	Text
Longitude	Longitude in the decimal degree format	Number
Latitude	Latitude in the decimal degree format	Number

The information that we ask for against each property/premises is as follows:

	Description	Format
Current_Technology	The technology you use for supplying that particular premises, examples of this could be ADSL, FTTP, FTTC etc	Text
Current_Max_Download_Speed	The maximum download speed in Mbit/s that you are able to supply to this property.	Number
Current_Max_Upload_Speed	The maximum upload speed in Mbit/s that you are able to supply to this property.	Number
Future_Technology	The technology you intend to use for supplying that particular premises, examples of this could be FTTP, FTTC etc	Text
Future_Max_Download_Speed	The maximum download speed in Mbit/s that you intend to be able to supply to this property.	Number
Future_Max_Upload_Speed	The maximum upload speed in Mbit/s that you intend to be able to supply to this property.	Number
Date_of_Future_Rollout	The date that you intend to supply this property.	Date - DD/MM/YYYY



Additional columns

Aside from the standard columns above, you may wish to add additional columns to provide additional information about your network, for example to provide clarity on the level of detail you have reached in planning your future build for example highlighting those UPRNs where you have reached a specific design stage such as Low Level Designs, those UPRNs with committed funding or UPRNs where you have already started the network build.

If you have any existing or planned infrastructure you have gained with assistance from Government subsidy, for example, Vouchers, Superfast (NBS 2012 or NBS 2016) and Hubs (Local Full Fibre Networks and Rural Gigabit Connectivity Programmes), please add an additional column at the end of your data return to indicate this so that we can identify these premises.

Annex B: Supporting Evidence

Please provide details and additional supporting evidence of any current or planned investment in broadband infrastructure (Next Generation Access broadband, ultrafast and gigabit-capable) in the identified geography using the Supporting Evidence Template provided.

In the case of planned investment, we are particularly interested in plans for the forthcoming three years.

Any information provided in response to this request should include but not be limited to:

- An appropriate demonstration/explanation as to how your broadband infrastructure or suppliers' service(s) meets with minimum standards where these claim to be Next Generation Access, ultrafast or gigabit.
 - For information only, capability definition is consistent with the definitions set out in Ofcom Connected Nations Reports, e.g;
 - decent (10 Mbps and above),
 - superfast (30 Mbps and above),
 - ultrafast (300 Mbps and above), and
 - gigabit-capable broadband, which can offer speeds of 1 Gbps and above.
 - *Note:* where a supplier's service offer is limited to passive services only (e.g. dark fibre, duct access, mast access), this would not generally be considered to be an Next Generation Access, ultrafast or gigabit-capable broadband network, unless the supplier provides a description of how an active services provider is technically and



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commercially able to support Next Generation Access, ultrafast or gigabit-capable services over the infrastructure.

- Nevertheless, if a passive infrastructure supplier is offering access to infrastructure in the identified geography, it is encouraged to provide further details of its location in order that bidders for any future procurement process might consider its use in designing their solutions.
- Within each broadband category (Next Generation Access, ultrafast or gigabit-capable) please indicate: (i) what level of take-up is expected in total; and (ii) what level of take-up can be sustained by the network design and dimensioning.
 - For example, a fixed wireless supplier may only be expecting 10% take-up of premises covered by its superfast network, and only be able to support a total of 20% of all premises passed converting to customers without significant capacity upgrades to the network.
- Please indicate the “normally available” and “minimum” speeds for the customers of each service e.g.

Service	Download “normally available”	Download “minimum”	Upload “normally available”
100Mbps	100Mbps	40Mbps	20Mbps
330Mbps	300Mbps	120Mbps	60Mbps
1Gbps	980Mbps	330Mbps	200Mbps

Please refer to the full text of the Ofcom’s [Voluntary Code of Practice](#) for Better Broadband Speeds (March 2019), however, these definitions can be summarised as follows (summary extract from Ofcom Voluntary Code of Practice):

“Normally available” speed is defined as the speed a customer could expect to receive during peak times - measured as 8-10pm for residential services and 12-2pm for business services and reflecting when customers are most likely to use the service.

“Minimum speed” is defined as the minimum guaranteed speed a customer should expect from the service, which would trigger the customers right to exit the contract if speeds fall below this minimum level and are unable to be resolved within a 30-day period.



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- Appropriate indicators of quality of the service e.g., contention ratio and/or bandwidth allocation per end user, together with a technical explanation of how these will support the achievement of the normally available and minimum speeds for all users.
- A description of the technical architectures that demonstrate how the claimed data speeds and performance will be maintained end-to-end across the deployed infrastructure. This could include, for example, network connectivity diagrams, deployment/coverage maps, design/dimensioning rules for network elements, backhaul capacity information, types and quantities of equipment, technical specifications, network performance measurements etc.
- Description of all services/products offered over the infrastructure including any wholesale provision to any retail service providers currently offered and any planned extension to these services within the next 3 years. Please indicate which retail service providers are using these services and what services are being taken?
- Installation and rental tariffs for those services/products clearly identifying whether they are inclusive or exclusive of VAT.
- Confirmation from an authorised signatory that all information provided is of suitable accuracy.

In order for BDUK to evaluate any planned investment and coverage claims provided as part of the OMR process, please provide evidence within 'Part D: Planned Investments' of the Supporting Evidence Template.

You should as a minimum include an outline Business Plan, a detailed calendar deployment plan and evidence of adequate financing for each stage of the proposed build.

We would also like information about company structure (for example parent company), evidence of adequate capital (or your plans to raise capital), dependencies and assumptions associated with financing (for example revenue from an existing network or assumptions on GBVS voucher revenue) and other financial and commercial information to enable BDUK to understand the viability of your planned investment.

In assessing whether planned investments are viable, BDUK may:

- review the business plans and calendar deployment plans to ensure these are consistent and in sufficient detail for each phase of the planned build.
- require evidence to demonstrate credible and plausible character of the planned investment which as a minimum should include a business plan, a detailed calendar deployment plan, proof of adequate financing and proposed technical architecture.



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- ensure calendar deployment plans include the key build stages and when suppliers expect to undertake significant activities within their build programme such as design, surveying, acquisition, network build, network installation etc or the key processes involved in your build plan approach for design phase, survey phase, road notices/ wayleaves etc.
- test that funding availability is sufficient for each phase of the planned build and that the capital allocated for the specific OMR area is sufficient and is consistent with the deployment plan.
- review the terms of any financing arrangements and any dependencies and assumptions associated with the financing including assumptions and dependencies around public subsidy such as GBVS vouchers or regional subsidy schemes.
- ensure that the network design and dimensioning information provided is in line with the projections made in the Business Plan regarding customer connections and growth expectations

Please supplement the attached Supporting Evidence Template with other documentation as you consider appropriate (e.g. public websites, published reports, etc). If you require any additional support, guidance or clarification with any of this, please get in touch with us at ukgigabit@bduk.zendesk.com

Annex C: Technical Definition

The UK will review the criteria for gigabit-capable networks within three months of the launch of the Dynamic Purchasing System, based upon the consultation with industry, and the UK regulator, around the criteria below. In the meantime BDUK will work with the following technical definition:

Infrastructure that can support gigabit-capable downstream services directly or via third-party providers without restriction, as set out below:

- a) wholesale infrastructure capable of supporting gigabit-capable downstream wholesale and retail services directly or via third-party providers without restriction, as set out below.
- b) connections that are gigabit-capable (capable of delivering 1000Mbps or more download speeds) at the time of delivery of the connection without the need for future hardware upgrades or modification² i.e. gigabit capability to be available from day one and if the consumer takes a slower speed it must be soft

² This principally applies to CPE but also backhaul/other network upgrades.



upgradeable without undue delay. At least one wholesale product with a download speed capability of at least 1Gbps and an upload speed of at least 200Mbps with busy hour performance as laid out below.

- c) products with a clear and comprehensible explanation of the minimum, normally available³ and maximum advertised download and upload speeds⁴.
- d) low data latency in accordance with Ofcom regime or codes of practice, recent industry norms and Industry Standards for the requirements of real-time services (or otherwise, in the absence of prevailing standards 10 ms and below for ninety-five per cent (95%) of the time).
- e) supports real-time services (e.g. voice/video calling, telematics, telemedicine etc.) with performance indicators (e.g. jitter, packet loss etc.) in line with recent industry standards, norms or in the absence of industry standards, i.e. 2ms for jitter, zero point one percent (0.1%) for packet loss for ninety-five per cent (95%) of the time.
- f) actual data speeds and performance during the busiest hours of the day (not more than 4 out of every 24), that do not degrade to less than 33% of the headline download speed and an upload speed equivalent to 20% of the minimum download speed and providers' service specifications (note: for performance where lower values are better, such as latency, jitter and packet loss, then a factor of 100% above would apply instead).
- g) actual data speeds and performance that do not degrade outside of the busiest hours below 95% of the higher of the download and upload speeds set out above. In the event that such minimum download speeds are regulated by a new minimum set by the Regulator, such new minimum download speeds shall apply for the duration of this Agreement. On becoming aware of the new minimum download speeds, the Supplier shall promptly provide confirmation of such to the Authority for its written approval.
- h) actual data speeds and performance that do not degrade as take-up of services approaches 100% of the addressable market (including any part arising from switch-off of legacy networks), to be demonstrated by firm commercial and technical (including capacity upgrade) plans to be submitted at the contract bid stage and to be based upon forecasts of up to 7 years.

³ Normally available and minimum download speeds may include the usual framing and packet overheads of the technologies used, provided that they amount to no more than a few percent of the total traffic i.e. data speed is defined as (user data traffic + overheads) / time

⁴ As defined by Ofcom



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- i) where service offerings and performance vary by locality e.g. as a result of subscribers' distances from infrastructure, gigabit capability to be maintained for all potential customers.
- j) order fulfilment and rectification within typical industry timescales, supported by demonstrably efficient wholesale service management processes;
- k) maintenance of customer service levels and network availability in line with industry norms, ideally supported by Service Level Agreements;
- l) service provision that does not unfairly discriminate against particular types of services, providers, subscribers or third parties (e.g. via traffic shaping or Quality of Service measures).
- m) offering of wholesale access products on open and non-discriminatory terms in line with the principle of technological neutrality, to enable the interconnection to the subsidised network of any technology which other communications providers and/or retail providers may reasonably consider appropriate in accordance with the wholesale access requirements.