
# Consultation Response: Implementing the Broadband Universal Service Obligation

**Non - Confidential**

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# Executive Summary

Gigaclear welcomes the opportunity to respond to Ofcom's request for expressions of interest in serving as a Universal Service Provider (USP) for broadband.

Prior to this consultation, Gigaclear had expressed interest in playing a role in delivering the Universal Service Obligation (USO), albeit on a regional basis given Gigaclear's exclusively rural network footprint. This interest in facilitating delivery of the USO was, and remains, predicated on maximising the opportunity for the USO to support the delivery of 'future proofed' connectivity, as opposed to funding solutions that will quickly become obsolete and the delivery of which will frustrate the roll out of full fibre networks.

We believe this goal is shared by Government, particularly in light of the publication of the Department for Digital Culture Media and Sport's (DCMS) Future Telecoms Infrastructure Review[1] (FTIR) and its explicit commitment to aligning the USO to work alongside other policy interventions designed to facilitate a 'full fibre and 5G future'.

Following review of Ofcom's proposed USO design, Gigaclear is eager to see the Gigaclear network facilitating a USP/s when serving USO connections. However, given Gigaclear's exclusively rural full fibre footprint, Gigaclear's retail operation will be unable to express interest in being designated as a USP itself. Our submission then focuses on how alternative full fibre networks to that of the incumbent can play a role in serving USO connections.

Whilst we are fully aware that the legislative function of the USO is to provide a 'safety net' minimum standard and not to support the widespread expansion of gigabit capable full fibre connectivity, we believe that full fibre networks should still play a critical role in delivering the USO, particularly in geography where USO eligible premises are within close proximity of a pre-existing full fibre infrastructure.

Further, we believe it to be in the best interests of UK plc to see a USO that can support delivering full fibre connectivity where such a solution is an efficient means of providing the required service parameters.

In creating a USO that is designed to embrace this opportunity, we hope Ofcom can avoid the grossly inefficient outcome of the Universal Service function ultimately delivering services that will quickly become redundant as bandwidth demands continue to rise and legacy copper infrastructure is retired. Such an outcome would not only be an inefficient use of any USO industry fund but would also pull labour and resource away from full fibre rollout activity, thereby delaying the aspirations as set out by the Chancellor in his address to the CBI annual conference.[2]

To do this, we make two recommendations. First, that as part of the process of the USP selecting the appropriate technology to serve a USO request, the USP be obliged to consider utilising pre-existing open access full fibre network infrastructure where such a network is available within the relevant local authority boundary. Should the USP then seek to draw from the USO fund for delivering Universal Service connections in that area, it must then present evidence of considering using pre-existing network infrastructure.

[1] https://www.gov.uk/government/publications/future-telecoms-infrastructure-review

[2] https://www.gov.uk/government/speeches/chancellor-speech-cbi-annual-dinner-2018

Second, where such an open access full fibre network is available, Ofcom's definition of efficiency should give due consideration to the future proof nature of the bandwidth offered by full fibre connectivity, as these solutions will not need to be upgraded as the service quality parameters of the USO increase over time.[3] This could be expressed by permitting full fibre delivery as an efficient cost when the cost of delivery is within a defined percentage range of an alternative solution. To aid Ofcom is considering these proposals, we offer our own analysis of how we believe these recommendations would function across a local authority where Gigaclear has a substantial network presence.

We are also conscious that the USO will come into force as large broadband state aid programmes move into delivery phase; most notably those in Northern Ireland, Scotland and Wales. The Future Telecoms Infrastructure Review has also signalled that a further '£3billion to £5billion' will be made available to support full fibre delivery in commercially unviable areas. Further thought must then be given to how the USO interacts with these and other market interventions, such as the regulatory forbearance associated with the European Electronic Communication Code's 'digital exclusion' areas.[4]

If not considered as part of the USO's design, the delivery of the USO could radically undermine the rollout of full fibre state aid programmes and DCMS's 'outside in' delivery goal; ultimately reducing the number of premises that could be served with full fibre connectivity. This problem is most prominent where the USP for a given geography is a wholly separate entity to the network operator that has secured a full fibre state aid contract across the same location.

Many of these larger programmes come with delivery timetables significantly beyond 12 months.[5] This is often due to fibre delivery in rural areas requiring substantial works activity with an often-finite labour supply, an absence of viable backhaul (see Figure 6 on page 12) and a capped delivery speed due to highways access restrictions.

It is then likely that premises included within large state aid intervention areas will still be eligible for connectivity under the USO.[6] If a premises is then served by the USO as opposed to the full fibre state aid programme, it risks receiving an inferior connection and will also reduce the pool of premises eligible for delivery under the intervention, making aggregation harder and likely increasing the required level of state aid and/or result in further descoping due to higher costs per premises past.

To mitigate this problem, the cleanest solution would be to exempt premises due to receive a full fibre connection through a state aid programme from USO eligibility. Delivery timeframes would then be set by the state aid delivery timetable. Alternatively, we propose that USPs are obliged to first explore using the network infrastructure that has secured the state aid contract, when serving premises included within an intervention area. In this manner, the entity that has secured the state aid contract is given the opportunity to prioritise the rollout in order to serve it within 12 months.

[3] As set out within the Digital Economy Act 2017 – once 75% of premises take up 30Mbps broadband, the USO service parameters will be reviewed.

[4] https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=comnat:COM_2016_0590_FIN

[5] For example – see R100 Scotland tender https://www.gov.scot/Publications/2017/12/2810/1

[6] Due to the 12-month exemption within The Electronic Communications (Universal Service) (Broadband) Order 2018

# Background

Based in rural Oxfordshire, Gigaclear was established in 2012 to address the problems that rural homes and businesses had in getting access to fast, reliable internet connections. These issues originated from the very long lengths of copper cables being used to deliver broadband in rural areas and other network operators prioritising network investment in cities and urban towns with higher population densities.

This environment created the opportunity to use new Fibre to the Premises (full-fibre) network technology, where distance has effectively no impact on performance, to deliver a gigabit speed, future proof service to customers who were willing to pay for superior connectivity. Whilst our initial network builds were purely commercial, Gigaclear secured and delivered BDUK contracts in Essex, Berkshire and Gloucestershire; the first full-fibre contracts secured under the BDUK programme.

# Being a Universal Service Provider - Designation

Following review of Ofcom's proposed design of the USO, Gigaclear cannot express an interest in being designated as a USP. However, Gigaclear supports a USO that compels USPs to explore utilising an alternative operators' network where it is efficient to do so. There is then a critical distinction between designating a USP and consideration of the network infrastructure used to ultimately serve a request for connectivity made through the USO.

Within the consultation, Ofcom set out 3 core principles that will guide their decision making in the design of the USO. These being;

- To deliver the USO as quickly as possible, so consumers benefit as soon as possible;
- To ensure that any designated provider can deliver services that meet the USO specifications; and
- To ensure the cost of delivery, and therefore impact on industry and consumers, are minimized.

These requirements clearly cascade from the Universal Service Directive, which states that members state must use an '*efficient, objective, transparent and non-discriminatory designation mechanism whereby no undertaking is a priori excluded from being designated [and in regards to designation] where appropriate, taking into account the ability and the willingness of undertakings to accept all or part of the universal service obligations*'.[7]

Ofcom then express a preference for direct designation, on the grounds that this will allow the USO to be implemented more quickly than if a competitive tender process was utilised, with the caveat that this position may change dependent upon interested parties capacity for delivery. To support direct designation on the grounds of limited competitive interest, Ofcom highlights that '*there are few alternative providers to BT with existing networks in the areas likely to require USO connections and the alternative networks that are in place are largely in different geographic locations*'.

Whilst we agree with this assessment, Gigaclear is one of the few operators that does have network presence in areas likely to require USO connections. Whilst the rural nature of the Gigaclear network footprint creates undue cost to Gigaclear becoming a USP, we caution against Ofcom moving from the above assessment to assuming that exclusive use of BT's network infrastructures will always offer the most efficient solution.

On the contrary, it is likely that in areas across the Gigaclear network footprint, the most efficient solution will be for the USP to utilise Gigaclear's network infrastructure, rather than its own. Designation of USP must not then assume to designate the appropriate network operator for every USO connection.

The critical barrier to Gigaclear operating as a USP in its own right is the decision to use Local Authority boundaries as the smallest sub-national designation area. This designation structure draws boundaries across pre-existing BDUK lots and results in mixing urban areas with rural, ✂.

Figure 1: ✂

✂, USO eligible premises are broadly split across urban and rural locations, ✂. Whilst at first glance this may appear surprising, this is because many of the premises that would have been USO eligible were connected ✂ through the ✂ BDUK ✂programme which prioritised poorly-served rural properties.

[7] Article 8 (2) https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32002L0022:EN:HTML

Designation as a USP would then require not only Gigaclear connecting rural premises adjacent to the pre-existing Gigaclear network, but also in urban areas where Gigaclear has no pre-existing network footprint.

As the Gigaclear business model primarily targets delivering full fibre to locations where only a single full fibre operator would be commercially viable (rural locations), where pre-existing speeds are extremely low across the expected network footprint, the delivery of full fibre connections in urban areas would be unlikely to be deemed an efficient means of delivering the USO, given that more cost-effective technologies could be used to serve these premises, such as upgrading pre-existing BT Openreach infrastructure.

The only viable means for Gigaclear to operate as a USP is then for Gigaclear to function as an Internet Service Provider over the Openreach network when connecting urban USO requests. This would result in Gigaclear utilising Openreach infrastructure to (in most scenarios) deliver non-FTTP solutions.

Connecting the relatively small number of premises that would require this solution (when compared to Gigaclear's wider network footprint) does not justify the cost, complexity and ✂.

To evidence this point, ✂.

Figure 2: ✂

✂.

✂.

✂.

# Being a Universal Service Provider - Obligations & Funding

Whilst Gigaclear does not then seek designation as a USP, Gigaclear is supportive of the Gigaclear network being utilised to serve USO requests where appropriate. In geographic areas where USO relevant premises are within close proximity to pre-existing full fibre network infrastructure such as Gigaclear's, the most affordable and efficient means of connection is likely to be 'in filling' the alternative network footprint, as opposed to extending the BT Openreach network or investing in a fixed wireless solution to serve a small number of premises.

Using this solution would also bring the added benefit of providing a future proofed connection that would not have to be revisited as bandwidth demand increases[8] and would better align the USO to UK Government's full fibre aspirations – an explicit goal within FTIR.[9]

To highlight this opportunity, ✂.

Figure 3: ✂

✂. As Gigaclear is already providing services that meet (and substantially exceed) the USO parameters in the immediate vicinity, it is likely that connecting these premises to the pre-existing Gigaclear infrastructure would be the most cost effective solution and would require little contribution from the USO fund, as the cluster of premises all eligible for the USO would result in a cost per premises past that may be acceptable on a commercial basis (dependent upon site survey and costings) and high propensity of take up given the low pre-existing speeds.

A USO that captures these circumstances and facilitates the expansion of full fibre connections not only then provides a USO connection but aligns to the wider UK government ambition to see full fibre network coverage increased and delivery accelerated.

Whilst the benefits of identifying and exploring if pre-existing full fibre networks can be used to facilitate USO connections are then significant, we are concerned that Ofcom has not designed a process that will identify where such opportunities are present. From what is presented within this consultation, Ofcom has not set out any rules by which it would consider the presence of alternative networks when assessing the efficiency of the USP's selected technology when serving a USO connection.

To rectify this omission, we propose that Ofcom oblige the USP to consider utilising pre-existing open access infrastructure when such a network is available within the local authority boundary.

As Government has not legislated as to specify the technologies to be used in serving the USO, the USP will need to decide on the most appropriate means to deliver a connection meeting the required specification.

Ofcom then set out two considerations that they believe will govern this decision:

- Which service can deliver the connection within the required timeframe
- If the selection can be considered efficient in order to be eligible for drawing funds from the USO fund to compensate delivery.

We propose that another core consideration within this decision will be;

- The presence of alternative infrastructures within the region.

[8] As acknowledged within the Digital Economy Act 2017

[9] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/732496/Future_Telecoms_Infrastructure_Review.pdf

USPs are not passive actors, but entities operating within a commercial competitive environment. Part of the USPs decision making process regarding appropriate technology will then be to explore leveraging the role of USP to gain commercial advantage. This will be particularly important where an alternative open access network is present.

Whilst Ofcom may hope that the selection of technology (USP owned or alternative) would be purely down to consideration of cost, timeframe and service quality provided, Ofcom would be naïve not to acknowledge that the USP may allow matters of network infrastructure competition to play a role in this decision.

For instance, should BT Consumer operate as the USP across much of the United Kingdom, in some scenarios BT Group will have a competitive incentive to utilise its own infrastructure; most likely in rural areas where the delivery of a full fibre connection will secure future incumbency. ✂. As this incentive may compel the USP to prioritise using its own infrastructure over that of the alternative network – Ofcom should then put checks in place to ensure that consideration of alternative networks is an integral part of any claim from the USP to draw from the USO fund.

For example, Ofcom may stipulate that USPs must give due consideration to alternative open access networks where such networks are available within the local authority area – and that any claims made to the USO fund must include a costing valuation that evidenced consideration of the alternative network. Such consideration would not be cumbersome, as consideration of a cheaper means of delivery should be part of any assessment of efficient delivery. Further, the data provided to Ofcom through the Connected Nations information request would enable the USP to identify where such alternative networks were available.

With that said, as the current Connected Nations data requests occur tri-annually, there can be a gap of multiple months in between a service being provided and that service being captured within the subsequent Connected Nations report.

As many customers are often unaware of the full suite of services available to their premises and may then request connection through the USO, there is then a risk of inadvertently overbuilding a premises that was recently connected by an alternative operator and so should not be eligible. To mitigate this risk, Ofcom may wish to consider updating how Connected Nations coverage data is collected.

Rather than be delivered through tri-annual information requests, it may then be preferable to develop a live database held by Ofcom, which each operator is obliged to update as part of the service activation process. This would then mitigate the risk of errors in eligibility. It would also provide Ofcom with a more dynamic view of network coverage – so that it could more effectively regulate and negate the need to manage the tri-annual information requests to industry members.

If Ofcom does not consider this option, it is reasonable to expect the USP in scenarios such ✂ to seek to avoid using the Gigaclear network and instead wish to deliver its own technology, to avoid customers churning from its current legacy infrastructure and losing incumbency in that location. Further, the USP may also see the USO fund as an opportunity to subsidise build that could limit the expansion opportunities of alternative networks.

In areas where FTTP expansion is led by where the pre-existing incumbent speeds are poor (such as in rural areas), the USO presents an opportunity for the USP to essentially subsidise the rollout of a technology that can more quickly deliver a service that provides the eligible speed, but also limits the business case for expanding pre-existing full fibre networks.

To evidence this risk, ✂. The USP could then actively encourage requests for connection through the USO around potential areas of growth for alternative networks, thereby leveraging the USO to stifle the growth of competitor infrastructures.

The USP then has both incentive and capability to undermine the expansion of alternative rival networks. We then urge Ofcom to build consideration of alternative infrastructures into any claims against the USO fund.

Ofcom may instead consider that the appeal process for claims against the USO fund would appropriately protect against the USP selecting technology for competitive purposes and still seeking to claim that this choice is efficient. However, such an assumption would be shifting the responsibility to regulate from Ofcom and onto alternative network operators.

✂.

# Defining Efficiency

Whilst the above recommendation then ensures that USO delivery in areas such ✂ will reveal where the use of alternative networks is more efficient, there are other cases that are not as clear cut; where both the alternative operator and incumbent network could reasonably be seen to be offering an efficient connection.

✂.

Figure 4: ✂

Within this geography, ✂.

It is then likely that full fibre or fixed wireless connectivity are the only viable means to deliver a connection to these premises that meets the USO service requirements.[10] Capital costs for delivering full fibre or fixed wireless solutions to both premises may then be comparable.

This then raises the question of deciding which technology is most appropriate. As currently drafted, Ofcom have remained neutral on this topic, leaving it for the USP to decide which technology it believes to the most efficient in light of the parameters Ofcom has set out:

- To deliver the USO as quickly as possible, so consumers benefit as soon as possible
- To ensure that any designated provider can deliver services that meet the USO specifications; and
- To ensure the cost of delivery, and therefore impact on industry and consumers, are minimized.

To put this bluntly, Ofcom then deems the most efficient form of delivery to be the solution that delivers the required service parameters, within the defined timeframe, at the lowest cost to the USO fund. This does not then offer any guidance where alternative solutions (across different operators) are of comparable cost and could both be delivered within the required timeframe.

We believe that this scenario presents an opportunity to align the USO to the goals set out within DCMS' FTIR. Should Ofcom be empowered to consider the longevity of full fibre connections (in light of expected future data demands), Ofcom could incentivise the USP to utilise full fibre connections where appropriate.

For example, in cases where the capital required to deliver a full fibre solution is comparable to an alternative technology, Ofcom could be empowered to account for the longer life span and 'future proof' bandwidth of full fibre and create a formula that permits full fibre to be chosen over the alternative solution. For example, when delivery capital costs are within a 'x%' range higher of the alternative solution.

The relevance of such a policy should not be underestimated. Alternative operators account for c50% of all FTTP connections across the United Kingdom.[11] Many of which have secured significant investment to further expand and accelerate their build plans in the years ahead.

✂.

Note: ✂.

Figure 5: ✂

[10] A fixed wireless solution is unlikely to see high levels of take up across the wider geography, due to pre-existing superfast coverage.

[11] https://www.inca.coop/sites/default/files/Altnet-report-INCA%20April-2018.pdf

Consideration of where multiple solutions have similar costing and timeframe delivery should then prompt Ofcom to consider a deeper definition of ‘efficiency’ to acknowledge the lifespan of the product delivered, considering the findings of the FTIR and the NIC’s own analysis.

# Network Access Agreements

Regarding the wider set of obligations that fall upon the USP, Ofcom highlights that the Statutory Instrument's direct reference to '12 months' specifically concerns exempting publicly funded properties from USO eligibility.[12] It then reserves its right to consider a shorter timeframe for service delivery from the point of connection request to the USP. To justify this position, Ofcom points to network build times and previous feedback.

However, this evidence base is where demand is already aggregated, and relevant permissions are secured. Ofcom appear to have overlooked one of the most common causes of delay, that being securing access agreements with landowners.

Without exempting the securing of access agreements from the timeframe for USP service delivery, the USO introduces a Grampian delivery condition on the USP – obliging the USP who cannot reasonably control the delivery timetable, due to elements of delivery being wholly within the gift of an alternative party. Whilst DCMS's barrier busting team are committed to improving the process to securing access agreements and the updated Electronic Communication Code offers a tribunal mechanism to address access disagreement, progress is slow and the tribunal mechanism remains untested. Whatever Ofcom then chooses to be the appropriate delivery timeframe, it should only commence once required access agreements are secured.

[12] http://www.legislation.gov.uk/uksi/2018/445/made

# USO Alongside Wider Interventions

We are conscious that the USO will come into force as large broadband state aid programmes move into delivery phase; most notably those in Northern Ireland, Scotland and Wales. The Future Telecoms Infrastructure Review has also signalled that a further '£3billion to £5billion' will be made available to support full fibre delivery in commercially unviable areas, as part of DCMS 'outside in' intervention programme designed to accelerate full fibre rollout. Further thought must then be given to how the USO operates across this suite of market interventions.

For example, the European Electronic Communication Code will introduce the prospect of regulatory forbearance in designated 'digital exclusion' areas, whereby a single network operator may be afforded some monopoly powers in order to incentive increased rollout in that area. In both this scenario and across more conventional state aid intervention areas (such as those designated through the BDUK programme), the delivery of the USO could radically undermine the rollout of full fibre network coverage.

This problem is most prominent where the USP for a given geography is an alternative entity to the network operator that has secured a full fibre state aid contract and/or a digital exclusion area across the same location.

Many of these larger programmes come with delivery timetables significantly beyond 12 months[13]. This is often due to fibre delivery in rural areas requiring substantial works activity with an often-finite labour supply, an absence of viable backhaul options (see ✂) and a capped delivery speed due to highways access restrictions. It is then likely that, as currently designed, premises included within large state aid intervention contracts will still be eligible for connectivity under the USO.

If a premises is then served by the USO as opposed to the full fibre state aid programme, it risks receiving an inferior connection and will also reduce the pool of premises eligible for delivery under the intervention, making aggregation more difficult and increased distances between each covered premises, thereby increasing the required level of aid or resulting in descoping premises from improved coverage due to increased costs per premises past (CPPP).

To mitigate this problem, we propose that premises due to receive a full fibre connection through a state aid programme be exempt from USO eligibility. Delivery timeframes would then be set by the state aid delivery timetable, as agreed with the national competency centre for state aid broadband, rather than the stipulated timeframe within the USO.

Alternatively, USPs could be obliged to first explore using the network infrastructure that has secured the state aid contract/digital exclusion area, when serving premises included within that geography. In this manner, the entity that has secured the state aid contract is given the opportunity to prioritise the rollout in order to serve it within 12 months.[14]

Figure 6: ✂

[13] For example, see https://www.gov.scot/Publications/2017/12/2810/1

[14] Thereby making the premises ineligible for support through USO.