

**Response to Ofcom Consultation**

**Wholesale Fixed Telecoms Market Review (“WFTMR”) 2021-26  
“Further consultation on certain proposed remedies”**

**By**

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## Introduction

Truespeed Communications Limited (“Truespeed”) provides gigabit services over its fibre to the premises owned network to residential, government, education and businesses in Somerset and the surrounding counties. Truespeed received an initial commitment of £75 million from Aviva Investors in 2017. Details coverage and packages offered can be found on the website at <http://www.truespeed.com/>

## Responses:

**Question 3.1: Do you agree with our revised proposals relating to calculating the shares of unit costs to be reflected in PIA rental charges? Please set out your reasons and supporting evidence for your response.**

We do not agree for the following reasons.

At 3.19 a calculation is laid out of 50% physical access and 50% market share producing a resulting 25% - at footnote 15.

We do not accept that the calculation of charges should be based on some notional idea of loss of market share of the incumbent. The principle that the incumbent is “rewarded” or somehow compensated for market entry by others is not compatible with the Common Regulatory Framework<sup>1</sup> or the new EECC. In addition, the relationship between the numbers of actual or potential customers only applies at the edge of the network, in, say, directly feeding telegraph poles supporting customer drops.

In a large proportion of areas where PIA is likely to be used, such as accessing settlements down narrow country lanes with no verges, the relationship between the subduct size and the likely penetration rate is at least tenuous. Likewise, the use of PIA to provide diversity into points of presence or data centres does not involve market share or multiple customer connections.

Ofcom’s objective is, as stated at para 3.18 is to allow “Openreach with an opportunity to recover its efficiently incurred costs.” The costs of maintaining a duct network is largely unaffected by the division of number of customers supported by this or that subduct contained within it. Market share largely affects revenues, not the cost of maintaining common infrastructure supporting those customers.

It *is* acceptable for the incumbent to be compensated for the actual costs incurred in the provision of facilities, including an appropriate, and objectively justified, apportionment of those costs. This is reflected, as noted above, in Art 13 of the Access Directive.

We think that the appropriate measure is the proportion of space occupied by the Other Communications Provider’s (“OCP’s”) subduct which is a reasonable measure of the loss of “utility” or economic value of the duct itself to the downstream Openreach activities.

This is already reflected in the cost structure in place with the occupation of a single bore on a given route giving rise to a higher rental than those involving routes with 2 or 3 bores in total at progressively lower rentals. This reflects the diminishing “deprivation” of value where additional space is available on the same route, and supports our apportionment based on cross-sectional area.

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<sup>1</sup> See Access Directive Art 13 <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32002L0019&from=EN>

In particular, it was the accepted method used in the Wholesale Local Access Review<sup>2</sup>, 28 March 2018. However, the methodology outlined in notes 491 – 495 of that review does not reflect the modern ability to pack ducts, or the increase in fibre cable densities.

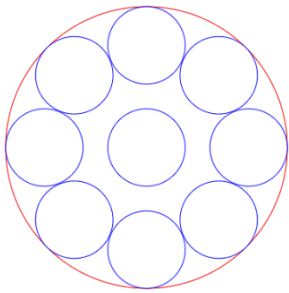
A traditional 4-inch glazed ceramic duct (also known as “pot ducts”), widely used in residential and long distance ducts until the 70’s use of HDPE plastic has an inside diameter of 3 5/8 ins, we are told by former BT “holes and poles” staff.

This is therefore 3.625 inches or 92.075 mm.

A 25 mm subduct thus consumes a proportion of:-

$$(25/92.075)^2 \text{ or } 625/8,477.8 = 0.0737 \text{ or in round terms } 7.4\%$$

Using an engineering tool for pipes within pipes<sup>3</sup> reveals a fit of 9 tubes, so a proportion of 11%. Looking at the picture below, it might be argued that there is insufficient space for installation due to friction. But it is also clear that even taking out 1 tube leaves probably 5 mm gap.



This alone shows the original Openreach 2.5 times 25mm fit in a 100mm duct to be at least highly pessimistic, or a result of poor engineering practice.

It might be argued that a subduct consumes more practical space than its cross section or the packing above, represents, but this is largely based on the “traditional” use of ducting. A 100 mm plastic duct used to be filled with 4 x 40mm sub ducts, in each of which originally a single 48 fibre cable would be installed. The total fibre count in the early 90’s would be 192 fibres, or a fibre per 41 sq mm of cross section.

These days, that “traditional” arrangement can itself be packed in the air spaces with loose blown fibre tubes<sup>4</sup>. Cables of some 3,456 “spider” construction can have an outside diameter of under 31 mm<sup>5</sup>. That represents fill of a fibre per 0.23 square mm or a density increase of 178 times the traditional arrangement. A series of loose packed blown micro-duct may not achieve quite the same densities but are still substantially higher than the original. OFS, a major fibre cable manufacturer, supply micro-cables of up to 72 fibres that can fit into a 10/8 micro-duct – that is an outside diameter of 10 mm, and an inside diameter of 8 mm. That is a density of 1.1 sq mm per fibre – still some 37 times the packing density of a 1990’s approach.

The pipe packing tool shows 63 10/8 micro-ducts can be packed into a 91mm ID “pot duct”.

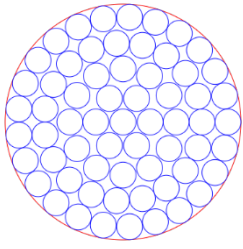
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<sup>2</sup> [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0023/112469/wla-statement-vol-3.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0023/112469/wla-statement-vol-3.pdf)

<sup>3</sup> [https://www.engineeringtoolbox.com/smaller-circles-in-larger-circle-d\\_1849.html](https://www.engineeringtoolbox.com/smaller-circles-in-larger-circle-d_1849.html)

<sup>4</sup> See narrative here:- [https://www.stl.tech/optical-interconnect-products/optical-fibre-cable/pdf/Micro\\_Cables\\_Application\\_Ducts\\_Accessories\\_Equipments\\_Installation1.pdf](https://www.stl.tech/optical-interconnect-products/optical-fibre-cable/pdf/Micro_Cables_Application_Ducts_Accessories_Equipments_Installation1.pdf)

<sup>5</sup> [https://www.fujikura.co.jp/eng/products/optical/opticalfibers/02/\\_icsFiles/afieldfile/2017/09/04/SpiderWebRibbonFlyer.pdf](https://www.fujikura.co.jp/eng/products/optical/opticalfibers/02/_icsFiles/afieldfile/2017/09/04/SpiderWebRibbonFlyer.pdf)



That would give a total fibre capacity of 4,536 fibres,

So, the packing densities referred to above in the footnotes to the WLA Review of only 2.5 times a 25 mm duct are, in our view, a substantial underestimate of the practical capacity of a duct. Whilst it would be argued that these illustrations are at the upper end and might not be practically achievable, a “real world” version would still be substantially higher than the basis that Ofcom has used.

Densities have also risen recently due to a decrease in fibre cladding from 250 to 200 microns<sup>6</sup>.

We accept that there is a management and therefore cost overhead in having separate infrastructure in the same ducts system where the processes historically have been oriented around a single end user and vertically integrated control and ownership. However, in accordance with the Access Directive, these costs need to be properly enumerated.

There seems little objective reason for a level of 25% as per table 3.2. against the 7.4% based on cross sectional area above. Allowing for a packing “loss” of 100% still only gets to under 15%.

We can see no justification for either the increase proposed, or indeed the base levels themselves, now we have undertaken the analysis above.

Again, following the above analysis we have looked at the use of 25mm OD subduct and concluded that in many circumstances, for the reasons given above about improved fibre densities, we could use 16 mm. On that basis, we think it appropriate that 16mm subduct be charged at a discount to the headline number (whatever is ultimately decided upon) for 25 mm subduct by the following proportion:-

$$(16/25)^2 = 256/625 = 0.4096 \text{ or in round terms } 41\%, \text{ a discount of } 59\%.$$

We note that the proportions for joint boxes and manholes are nearer to our calculations above and are content to accept those as they are.

In conclusion, we can see no justification for the increases proposed, and our analysis to support that raises issues as to whether the originally proposed costs were based on objectively justified principles and fully took into account the packing densities that can be achieved with modern duct and fibre.

Ofcom is also proposing annual increases over the regulatory period.

The cost of maintaining a largely copper based local network, which dominates overall duct costs, is significantly higher than a predominantly fibre based ones, due to the number of connections. The traditional copper connections, of which there are typically 5 or more between an exchange and end user are far less reliable than fibre splices or modern fibre connectors. In addition, fibre runs can be considerably longer than the 2,000 ohm copper limit, again reducing the number of connections.

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<sup>6</sup> <https://fiber-optic-catalog.ofsoptics.com/documents/pdf/200-Micron-Fiber-Enables-New-Cable-Designs.pdf>

The maintenance cost of at least the access infrastructure is therefore likely to reduce materially over the next decade. Some industry estimates are that fibre based access maintenance costs could be 50% less than copper.

There is therefore in our view no justification for the CPI + increases proposed in table 3.3.

The above analysis raises a further issue – and that is the inherent conflict between Openreach the passive supplier and Openreach the down-stream consumer of those passive services.

If the regulatory future is going to be increasingly largely based on up-stream passive remedies – poles and ducts – it raises the significant issue of whether Openreach is actually properly structured. Should there not be a separation between passive and active, and the passive part must supply on a non-discriminatory basis to all downstream consumers?

In particular, the current Openreach has no real incentive to optimise the use of its existing infrastructure, which in the long term is against the interests of the sector as a whole.

We invite Ofcom to reconsider its pricing proposals, and give some consideration to the structural issues which PIA and passive remedies give rise to.

***Question 4.1: Do you agree with our revised proposals relating to dark fibre pricing? Please set out your reasons and supporting evidence for your response.***

No, as we think the structure of the remedy is flawed.

The objective of an upstream passive remedy twofold. Firstly, to constrain the price of the downstream product, and secondly to allow market access to that downstream product by allowing competitive access to an “essential facility”<sup>7</sup> which gives rise to SMP.

For the remedy to function as intended, the downstream consumer of the remedy must see a lower price for, in this case the upstream passive input, than that compared with the downstream product or service with the passive product contained within it from the SMP provider.

As Ofcom knows full well, the effective price that an operator sees for the use of the passive input of dark fibre is not the price of supply from Openreach. To that must be added business rates, which is substantially higher for smaller operators.

Ofcom is well seised of this, as the CMA<sup>8</sup> required it to modify the pricing of the last attempt at a dark fibre remedy.

Ofcom itself had already understood the issue in the design of that round of dark fibre remedy construction, which was reflected in its analysis in 2016 Business Connectivity Market Review at Annex 21 and in particular

A23.110 “We have reviewed the concerns raised by stakeholders. Our concern is that any differences in the non-domestic rates payable by different CPs in using the same

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<sup>7</sup> [https://en.wikipedia.org/wiki/Essential\\_facilities\\_doctrine](https://en.wikipedia.org/wiki/Essential_facilities_doctrine) and <http://www.oecd.org/competition/abuse/1920021.pdf>

<sup>8</sup> [https://www.catribunal.org.uk/sites/default/files/1259%3B1261\\_BCMR\\_CMA\\_Final\\_Determination\\_100417.pdf](https://www.catribunal.org.uk/sites/default/files/1259%3B1261_BCMR_CMA_Final_Determination_100417.pdf) - the “CMA Determination”

regulated dark fibre circuit from Openreach could frustrate the design of the dark fibre remedy we have decided to introduce”.

Nothing has changed. Although the rates burden on BT has increased in the new 2017 rating list, part of that increase was already contained in the calculations in table 4.2, and 4.3 of the 2017 CMA Determination.

Ofcom may prey in aid the current rates moratorium. But that only applies to “new fibre” and that moratorium ends in March 2022, during this regulatory cycle.

The effect of rates can be seen from the following calculations.

Table 4.1 of the current consultation shows a main link price of between £0.11 and £0.22 per metre, or £110 to £220 per km per annum.

A small operator, or any operator without a contiguous national network (see Table 4.1 and 4.2 of the CMA Determination) would face a rateable value per km of £250, or a cash charge, in round terms of £125 per km.

That is an increase on the lower rental link charge of 114%. (£235/£110)

At table 4.1 in the CMA Determination the difference between a lit service and the passive input is shown to be around 26%. (£657/£2,541). Even allowing for the higher costs of higher capacities, the effect of the business rates charge is clearly again to frustrate the remedy.

Some commentators have said that because this round of DFA is based on bottom up pricing, rather than the 2016 “top down” active minus calculations, that this in some way exculpates Ofcom from considering the effect of business rates.

But however the price is derived does not affect the result – and that is that the remedy fails.

The only solution to this is to revert to the proposal that Ofcom consulted on following the CMA Determination, and that is to require Openreach to “band” the DFA and DFX prices depending on the size and likely tax charge applicable to the operator using the remedy.

***Question 5.1: Do you agree with our revised proposals relating to DFA implementation? Please set out your reasons and supporting evidence for your response.***

Our only comment on this is the sooner the better. We are wary of any process related excuse of Openreach for delay.

***Question 6.1: Do you agree with our proposal that the maximum charge for the SOGEA 40/10 service should be equal equivalent to the maximum MPF charge plus the maximum VULA 40/10 charge? Please set out your reasons and supporting evidence for your response.***

Our only observation on this is to repeat the comments in our earlier submission. In general, a rise in price of any service with a copper component improves the case for full fibre, in line with Government objectives.

We cited *inter alia* Spain which now has one of the largest full fibre take-up rates, and where copper based prices were increased at higher than inflation.

**Question 7.1: Do you agree with our proposed interpretation of the basis of charges obligations for PIA ancillaries related to network adjustments and other PIA ancillaries and contractor ECCs?**

Our general comment on ECCs and associated processes is that we would ask Ofcom to give consideration to the scheme used in the electricity industry.

Firstly, we would observe from the experience of our staff in prior companies that BT ECC charges tend to be high.

We have several examples where the “arms-length” costing of the equivalent work was half that quoted by BT.

In the electricity industry the work to extend or reinforce (increase the capacity) of part of the DNO<sup>9</sup> network is categorised as “contestable” or “non-contestable”. The contestable work<sup>10</sup> is work which anyone suitable can undertake – meaning in electricity terms in most cases, not on a “live” network.

This means that a customer can bid out the contestable work and get a market rate. We think such a mechanism can be applied to Openreach ECCs. It would “mark to market” such charges and ensure more transparency.

We have examples again from prior companies where work which would have otherwise fallen under an ECC schedule was undertaken by a third party and then rights for its use passed back to BT, at a considerable cost saving.

**Question 7.2: Do you agree with our proposed changes to the legal conditions related to PIA ancillaries related to network adjustments and other PIA ancillaries?**

No comment.

**Question 7.3: Do you agree with our proposal to require BT to provide us with cost information on i) PIA ancillaries related to network adjustments and other PIA ancillaries and ii) contractor ECCs as part of its regulatory reporting requirement?**

No comment.

For and on behalf of Truespeed Communications Ltd



Patrick Mulcahy

Company Secretary

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<sup>9</sup> <https://www.nationalgrid.com/uk/electricity-transmission/who-is-my-distribution-network-operator>

<sup>10</sup> <https://ukpowersolutions.co.uk/contestable-works/>