openreach

Openreach's response to Ofcom's consultation

"Business Connectivity Market Review: Proposed leased lines charge control"

18 January 2019

NON CONFIDENTIAL VERSION

Contents

Foreword

On 2 November 2018, Ofcom published a consultation on the Business Connectivity Market Review (BCMR) setting out its proposals for the regulation of leased lines during the two-year period from April 2019 to March 2021. This document represents the response from Openreach Limited.

We are a wholly-owned subsidiary of BT looking after the fibres, wires and cables that connect tens of millions of homes and businesses to phone, broadband, and TV. We have our own Board, separate brand and 31,000 strong independent workforce, including the largest team of fibre broadband engineers in the country.

Our response comments on Ofcom's proposals which impact Openreach's wholesale Ethernet and Optical leased line services. Proposals relating to legacy and downstream business connectivity markets are addressed in the response from our parent company, BT.

Finally, Ofcom has also published consultation document on the new Physical Infrastructure Market Review and on downstream geographic markets in the future regulatory framework that Ofcom intends should come into force in 2021. Given the linkages between the two documents, this response contains references to Openreach's responses to the other two consultations. Whilst all three responses are free-standing, stakeholders may find it useful to read them in conjunction with each other.

1. Executive summary

1. We agree with Ofcom that given current price levels and the expected increases in competition safeguard regulation that prevents price increases for the next two years strikes the right balance between protecting consumers from the risk of higher prices, allowing Openreach the opportunity to recover its efficiently incurred costs and providing certainty and stability as we transition to the introduction of new, long-term downstream regulation for business and residential markets. It is perfectly reasonable for the bridging arrangements here, effective between April 2019 and April 2021, to be centered on these considerations.

2. The proposal to introduce a Dark Fibre for Inter-exchange Connectivity (IEC) seems somewhat incompatible with these central policy considerations of certainty and stability as it is a fundamental departure from the current regulatory framework. We have laid out in our response to Volume 1 of the Consultation [1] why we consider the Dark Fibre remedy is premature at best, especially as there is no conclusive evidence that competition will not emerge in the IEC based on the newly proposed unrestricted use of Duct and Pole Access.

3. Notwithstanding our objections to the introduction of Inter-exchange Dark Fibre Services (IEDFS), we consider that it would be more in keeping with Ofcom's overarching objective, of encouraging competition using unrestricted DPA (uDPA), if the price for IEDFS was set at on an active minus basis, similar to that proposed by Ofcom in the 2016 BCMR[2]. In the context of these proposals, where EAD 1G is to be used as the relevant starting point, we find that an IEDFS price set on that basis would be very similar to a correctly estimated FAC based price. Therefore, this is more a point of principle for Openreach; the commercial impact is likely to be similar whether an active minus or FAC based approach is adopted to IEDFS pricing.

4. We welcome, and agree with, the corrections Ofcom made to it IEDFS cost model[3] and the resulting increases to its proposed IEDFS prices. If Ofcom were to decide to impose an IEDFS remedy (contrary to our views of the proportionality of such remedy as set out in Annex B of our response to Volume 1 of the Consultation), we consider the overall approach adopted by Ofcom is suitable in principle.

5. Ofcom starts with the components Fully Allocated Costs that it assesses are solely to do with the passive elements of the EAD service and then adds in the Fully Allocated Costs (FAC) costs specific to an IEDFS.

6. In principle, the resulting IEDFS price should recover its direct costs plus a mark up to recover fixed and common costs. Although we have concerns that the duct and fibre costs for the IEDFS should more properly be de-averaged when setting charges, all other things equal, this seems to be a sound basis for setting a FAC based IEDFS price, resulting in Openreach being able to recover the same fixed and common costs as it would do with active remedies. This gives Openreach the same incentive to sell IEDFS as EAD, and is least likely to have unintended market consequences.

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[1] Paragraph 6 and section 2, Openreach response to BCMR Volume 1
[2] 2016 BCMR Statement, paragraphs 9.99-102.
[3] Ofcom, 19 December 2018, https://www.ofcom.org.uk/consultations-and-statements/category-1/business-connectivity-market-review

7. Whilst the approach is sound in principle, we consider the combined impact of the adjustments Ofcom has made to the EAD costs has resulted in IEDFS prices that are evidently too low and will not recover its direct costs plus a markup for recovery of fixed and common costs. In particular:

   a. Ofcom's approach excludes fixed and common costs that should be recovered in the Dark Fibre price. In particular,

      i. Ofcom does not include EAD Ethernet Electronics costs in its IEDFS cost stack; the implication being these costs are not incurred by IEDFS. However the EAD Ethernet Electronics costs includes costs such as vehicle and exchange costs that will not be avoided with the introduction of IEDFS. There's a risk these costs will not be recovered should IEDFS substitute for EAD active lines;

      ii. Ofcom's estimate of costs added is not always estimated on a FAC basis, for example, the equipment costs added (the new IEDFS patch panels) does not include a markup for fixed and common costs; and

      iii. The costs to be recovered should take into account that one IEDFS circuit could be a substitute for more than one EAD circuit.

   b. We also consider Ofcom uses parameters in its estimates that understate IEDFS cost, in particular;

      i. It would be more in line with the principle of cost causality for the IEDFS Sales and Product Management costs to be based on the expected FTE required to support IEDFS rather than the ratio of the IEDFS to EAD price as Ofcom propose;

      ii. The assumed IEDFS utilisation rates of Patch Panels is based on access utilisation rates estimated by Openreach in relation to its 2016 BCMR proposals. This fill rate assumption (50%)[4] is too high as the opportunity to fill patch panels in the IEC is much less than for Access due to the (generally) more remote exchanges and the greater level of aggregation expected on backhaul inter-exchange circuits and thereby understates costs. We consider 4% to 20% is a more reasonable assumption; and

      iii. The assumed costs for Birth Certificates on dual fibre circuits are 50% of what would reasonably be expected as Ofcom fail to take into account the technical requirement that both fibres are tested and that engineers will have only a single testing unit[5].

   c. An allowance above FAC should be made for Right When Tested (RWT) faults to encourage CPs to reduce the occurrence of these over time and thereby provide better efficiency incentives.

[4] BCMR 2019 Consultation, paragraph A20.59
[5] BCMR 2019 Consultation, paragraphs A20.61 – A20.70

8. In summary and based on Ofcom's approach, Openreach considers it requires Dark Fibre prices, as per Table 1 below, in order that the prices truly reflect a reasonable cost estimate.

Table 1 Required price for cost based Dark Fibre services

Service	Ofcom proposed price (19/12/2018)	Openreach proposed corrections	Corrected prices
Dark Fibre connection (per circuit)	£733	-£6	£727
Dark Fibre connection (dual fibre)	£1,334	£120	£1,454
Dark Fibre rental (per fibre per year)	£51	£173	£224
Dark Fibre main link (per metre per fibre per year)	£0.15	£0.07	£0.22
Dark Fibre cessation charge (per cessation request)	£192	-	£192 See note
Dark Fibre RWT charge (per cessation request)	£350	£105	£455

Note: Openreach thinks it is better that cease costs are recovered in the rental charge.

In section 2, we lay out in more detail our reasons for proposing these adjustments.

9. We lay out in more detail in our response to Volume 1 of the Consultation our expectation that VHB is already competitive (or will be due to new passive remedies).[6] In short, the scope of the currently competitive VHB market is greater than Ofcom propose i.e. no remedies are needed in those areas and, further, in the areas where VHB may not be currently competitive, there is a prospect of competition arising from upstream remedies. In light of this we believe the proposed price cap for VHB at CPI-CPI is a cautious backstop and competition should be allowed to play out.

10. In the face of this competition the critical consideration for Openreach, in relation to the pricing of VHB services, is the flexibility to reduce prices. A CPI-CPI cap on VHB wouldn't, in and of itself, materially restrict Openreach's flexibility in this respect and for that reason we support the proposed imposition of a CPI-CPI control as a practical measure.

11. We agree with Ofcom that the proposed CPI-CPI controls for active services best balances the two central objectives of providing certainty whilst protecting against consumer harm. We further agree with Ofcom that the benefits of pricing stability outweighs any potential over-recovery of costs by Openreach.

[6] Openreach response to BCMR Volume 1, Section 3 and annexes D to G.

12. In relation to active services at 1 Gbit/s and below, Ofcom have modelled costs over the review period and its analysis indicates that CPI-CPI is within its range of model outputs. We agree with Ofcom that this is the case and we outline why we think a CPI-CPI control is even more central to the potential range of outcomes than Ofcom's cross check implies.

13. Ofcom has proposed a lower WACC (nominal, pre-tax) to 8.0%, compared to 9.8% in 2016 BCMR. Whilst we appreciate this has a very limited impact on Openreach prices up to March 2021, we nevertheless feel it is important to comment on these proposals as they will set stakeholder expectations regarding future returns.

14. Given the WACC assessment affects not only Openreach but the whole of BT our views on Ofcom's WACC proposals are outlined in the BT Group response. We consider the proposed WACC is too low and that 8.8% is more appropriate based on the evidence as set out in the BT Group response.

15. Lastly we have a number of detailed comments regarding the implementation of the charge controls and the drafting of the legal instruments which we consider would result in practical improvements to Ofcom's proposed implementation for the charge controls.

2. Dark fibre

Question 4.1: Do you agree with our proposals in relation to the design of a charge control for inter-exchange dark fibre? Please provide evidence to support your views.

16. An over-riding concern with Ofcom requiring us to supply dark fibre as a regulated service is that this inevitably results in a simplified, averaged approach to determining prices that downplays the complexities that would be considered where dark fibre is introduced on commercial terms. For example Ofcom's estimate of FAC is based on a cost allocation which is averaged across broader areas than the smaller, mainly rural exchanges where IEDFS is mandated. Fibre utilisation is lower than average in these areas resulting in higher than average costs. The resulting prices determined by Ofcom therefore significantly under-estimates the cost of the actual duct and fibre in use for the relevant dark fibre circuits i.e. the average cost (of an EAD service) used as a basis of pricing is lower than the specific costs of supplying the dark fibre circuit. A commercial offer would not afford CP customers the arbitrage opportunity implied by Ofcom's approach to setting IEDFS pricing implies.

17. Economically rational commercial terms would strike a balance between a range of complex factors relevant to the supplier and the purchaser – e.g. ensuring efficient use of existing fibre strands and deployment of new electronics equipment by the purchaser; ensuring the supplier can fully recover the costs of assets in place and is not left exposed as, for instance, the purchaser rationalises the number of fibre strands they utilise; etc. Our comments below are nevertheless made on the basis that Ofcom is looking to introduce dark fibre at standardised prices.

18. We believe, as Ofcom conclude[7], that it is self-evident that a basket control is not practical given the uncertainty of volume and demand for the IEDFS. We further agree in principle that the price should remain the same over the two year period to aid stability. In this section, we raise and support the following additional assertions:

    a. A Dark Fibre remedy is not proportionate;

    b. We agree the EAD 1G cost stack is a reasonable starting point for the scope of IEDFS;

    c. Ofcom's calculation of FAC for IEDFS is not sufficient to ensure cost recovery. The FAC based pricing approach has not been correctly implemented, and the FAC based prices that Ofcom has estimated require adjustment in order to reflect FAC costs; and

    d. Ofcom should make it clear that the Dark Fibre rental charge and Dark Fibre main link charge is to be applied to each fibre of a dual fibre circuit.

[7] BCMR 2019 Consultation, paragraphs 4.44 - 4.50

e. FAC is not an appropriate basis for pricing RWT as it sets inappropriate incentives and a fair and reasonable charges obligation for this ancillary would be more appropriate, or if Ofcom with to determine the price, then a price of FAC plus 30% would be more efficient; and

f. A cease charge is not appropriate and, rather than set a cease charge, Ofcom should spread cease costs across Dark Fibre rentals (consistent with its approach elsewhere).

19. We also note that our assessment is concerned with the appropriateness of a remedy in the BT only areas of the IEC market. If the Dark Fibre remedy were ever to be applied in any other markets, the appropriate charging approach would need to be considered from first principles to be specific for that market.

The Dark Fibre remedy is not proportionate or appropriate

20. As outlined in our response to Volume I, we consider that it is not appropriate or proportionate to impose a dark fibre access obligation because:

a. The scope of the remedy is not aligned with our understanding of Ofcom's intention and fails to minimise any impacts on fibre investment by Openreach and others;

b. Ofcom has not properly taken into account the potential impact of unrestricted Duct and Pole Access ("uDPA"), which Ofcom proposes should be available from around spring 2019

c. The proposed remedy undermines fibre investment incentives; requiring Openreach to supply passive-only services will act as an undesirable constraint on innovation and investment, contrary to Ofcom's general objectives

d. The proposed design of the remedy fails to reflect the topology of Openreach's NGA network rather than the legacy copper network, which will be withdrawn over the coming years;

e. The proposed design fails to minimise inefficient use of fibre and the risks of fibre exhaustion in the future; and

f. Insufficient time is provided for the remedy to be implemented.

The EAD 1G cost stack is a reasonable starting point

21. We consider that that it would be more in keeping with Ofcom's overarching objective, of encouraging competition using uDPA, if the price for IEDFS was set on an active minus basis, similar to that proposed by Ofcom in the 2016 BCMR[8]. In the context of these proposals, where EAD 1G is to be used as the relevant starting point, we find that an IEDFS price set on an "active minus" basis would be very similar to a correctly estimated FAC based price. Therefore, this is more a point of principle for Openreach; the

[8] 2016 BCMR Statement, paragraphs 9.99-102.

commercial impact is likely to be similar whether an active minus or FAC based approach is adopted to IEDFS pricing.

22. Ofcom propose to price IEDFS at FAC, having created a proxy FAC from the cost stack for "EAD 1G Other" from the Regulatory Financial Statements (RFS).[9]

23. In the Inter-exchange market, Openreach supplies different connectivity service; EAD services and EBD services being the key ones for the IEC exchanges where Ofcom assesses there is no choice other than BT.

24. Whilst EBD could be an alternative starting point for estimating an IEDFS FAC based price, our analysis shows that EAD 1G services make up the largest share of existing supply within the scope of the intended remedy. Therefore on balance, we think that EAD 1G is a reasonable starting point as the IEDFS costs (and prices) derived from EAD 1G services should be more reflective of the most representative Openreach service in the target segment of the IEC market. This should not set a precedent: if a Dark Fibre remedy was to be imposed in any other market, the appropriate cost proxy should be reassessed to be relevant for that market.

25. We also note that EAD Local Access (EAD LA) services are not supplied in this market and we therefore agree that if considering EAD as a starting point, Ofcom is correct to exclude EAD LA as that product, by definition, cannot supply inter-exchange connectivity.

26. For the reasons above, in the event that Ofcom ultimately decides a cost based IEDFS price is proportionate and appropriate, we consider the EAD 1G Other cost stack is a reasonable starting point.

The FAC based prices that Ofcom has estimated require adjustment in order to reflect FAC costs

27. In the event that Ofcom ultimately decides a mandated IEDFS is proportionate and appropriate, we consider the overall approach adopted by Ofcom to estimate FAC is suitable in principle. This section of our response predominately references annex 20 where Ofcom sets out in more detail how it estimates the FAC for Inter Exchange Dark Fibre Services (IEDFS).

28. Ofcom sets out the cost components of an EAD circuit, and if they apply to IEDFS.[10] We broadly agree with the classification of passive, active and shared, though we disagree that this means all costs in the active component should be excluded.

29. Ofcom's approach is to consider the costs that are appropriate in three parts (elements A, B and C), using the "EAD 1G Other" RFS component costs as the starting point for elements A and B and a bottom up approach for element C.

[9] https://www.btplc.com/Thegroup/Policyandregulation/Governance/Financialstatements/index.htm
[10] BCMR 2019 Consultation, Table A20.1

30. In summary, the proposed Ofcom treatment and our response with regard to element A and element B is as follows:

    a. Element A - Costs relating to the passive infrastructure required for an inter-exchange dark fibre circuit:

        i. Include the full unit FAC of the Ethernet Main Links component that is attributed to the EAD main link service - we agree this is appropriate, but believe the translation from EAD to IEDFS has not be fully considered;

        ii. Include the full unit FAC of the Routing and Records component that is attributed to the EAD connection service - we agree this is appropriate;

        iii. Do not include the costs of the EAD Access Direct Fibre component that are attributed to the EAD rental service in element A of the inter-exchange dark fibre rental service - we agree this is appropriate[11]; and

        iv. Do not include the costs of the Ethernet Excess Construction component that are attributed to the EAD connection service - we disagree with Ofcom and do not consider this to be appropriate where capacity constraints require Openreach to install a new fibre cable, unless Openreach are able to recover build costs in the form of ECCs alongside the IEDFS connection charge.

    b. Element B – other costs required for, but not specific to, an IEDFS circuit:

        i. Include the unit FAC of SLG Ethernet Provision and SLG Ethernet Assurance costs albeit at levels in line with Ofcom's proposed treatment of SLG costs – we agree this is appropriate;

        ii. Do not include any costs attributed to the Ethernet Monitoring Platform – we agree this is appropriate;

        iii. Include the unit FAC of the Openreach Service Centre – Provision Ethernet component that is attributed to the EAD connection service – we agree this is appropriate;

        iv. Include 91% of the unit FAC of the Openreach Systems and Development (Ethernet) component that is attributed to each EAD service within the unit FAC of element B of its corresponding inter-exchange dark fibre service - we agree this is appropriate[12];

[11] This is on the basis that: (1) the scope of IEDFS is restricted to BT building to BT building circuits only; and (2) there is no requirement to build new capacity to switch customers from an active services to a dark fibre service.
[12] Note we expect the unit allocations of these costs, between EAD and IEDFS, to converge over time.

v. Include an estimate of costs for Revenue Receivables allocated to IEDFS based on the relative charges for IEDFS and EAD - we agree this is appropriate[13];

vi. Do not include the costs of the Ethernet Electronics component that are attributed to the EAD rental service - we disagree with Ofcom and do not consider this to be appropriate as the component includes costs that will not be avoided with the introduction of IEDFS;

vii. Include 26% of the unit FAC of the Openreach Service Centre (Assurance Ethernet) component that is attributed to the EAD rental service – we disagree that 6% of RWT are passive and assert that the figure should be 26% with the cost uplifted accordingly;

viii. Pro-rate the Openreach Sales Product Management (SPM) costs to be included based on relative EAD and IEDFS charges[14] – we disagree and assert that the allocation should be 20% of Openreach SPM costs which would better reflect the cost of the FTE supporting the IEDFS; and

ix. Include an estimate of costs for the Ofcom Administration Fee allocated to IEDFS based on the relative charges for IEDFS and EAD – we disagree, logically on Ofcom's basis the fee will not reduce but the total contribution from EAD plus IEDFS would.

31. When considering additional costs that will be incurred for IEDFS there is, owing to this being a new service, no RFS costs that could directly be used as a basis for Ofcom's proposals. Ofcom instead adopt a bottom up costing approach. In summary the proposed Ofcom treatment and our response with regard to element C are as follows:

c. Element C - New costs specific to IEDFS:

i. Labour rate used: we agree this is appropriate;

ii. Patch Panel costs: we disagree with Ofcom's use of an utilisation rate of 50%, and we believe 4% to 20% is more appropriate. Further, the costs should be estimated on a FAC basis rather than on the incremental basis proposed; and

iii. Birth certificates: we disagree that this cost would only be incurred once on a dual fibre installation i.e. Ofcom's view that only a single testing activity is required. Both circuits need to be tested, engineers will have only a single testing unit and so the costs need to be double for dual fibre circuits.

[13] The allowed cost will need to increase once the rental charges for IEDFS have been amended to reflect our comments.
[14] BCMR 2019 Consultation, paragraph A20.40; Ofcom include 50% of the Openreach Sales Product Management EAD unit costs for connection services, 2% for rental services and 97% for main link services

32. In summary, we consider the prices in Table 2 below are more appropriate and in keeping with the evidence and Ofcom's approach.

Table 2 Required price for cost based Dark Fibre services

Service	Ofcom proposed price (19/12/2018)	Openreach proposed corrections	Corrected prices
Dark Fibre connection (per circuit)	£733	-£6	£727
Dark Fibre connection (dual fibre)	£1,334	£120	£1,454
Dark Fibre rental (per fibre per year)	£51	£173	£224
Dark Fibre main link (per metre per fibre per year)	£0.15	£0.07	£0.22
Dark Fibre cessation charge (per cessation request)	£192	-	£192 See note
Dark Fibre RWT charge (per cessation request)	£350	£105	£455

Note: Openreach thinks it is better that cease costs are recovered in the rental charge.

33. We now provide more detailed comments regarding the most impactful changes required for each of elements A, B and C to ensure the prices set by Ofcom are more appropriate, being better aligned with the evidence and Ofcom's approach to setting a FAC based price for IEDFS.

Element A - Ethernet Main Links

34. Ofcom has included the fully allocated cost for Ethernet Main Links by taking the value allocated to an EAD 1G circuit. The cost per metre of mainlink in the RFS is calculated by taking the total cost of Ethernet Main Links and sharing across all (radial) metres. By using the same £0.15 per metre as allocated to EAD 1G, Openreach should make the same recovery towards the common Main Link cost. However, multiple EAD circuits on the same route are likely to be substituted for a single IEDFS circuit in the future (as dark fibre can have greater capacity). This means the £0.15 cost allocation to reflect the EAD circuit substituted by IEDFS would not result in the same absolute contribution to the common cost by IEDFS.

35. We have analysed the active circuits currently in place on these routes in the footprint of the IEDFS remedy (excluding wavelengths) and calculated how many circuits an individual CP has on each route. On average there are 1.48 circuits per CP per route. This means that for 1.48 active Ethernet circuit, there is likely to be only one IEDFS circuit. To ensure the same common cost recovery, the £0.15 allocation for main links should be increased to £0.22. We propose that the IEDFS main link charge should be increased to this amount. This does not take into account further consolidation of active circuits in the event of a CP wholesaling using a IEDFS circuit, so can be considered a conservative proposal.

Table 3 – potential for aggregation in the scope of the IEDFS remedy

	Sum of circuits (excluding wavelengths)	**Sum of CP routes**	**Average circuits per CP route**
Circuits on routes in scope of IEDFS remedy	✂	✂	1.48

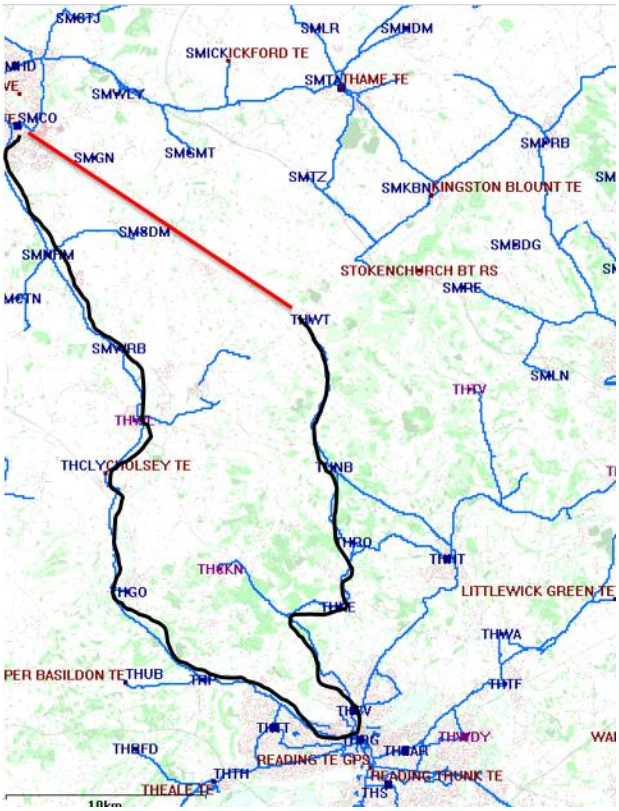
36. We would also question if it would be more appropriate and proportionate to charge the mainlink on the basis of the route distance rather than the radial distance for IEDFS circuits.

37. Currently, active Ethernet products with distance based charges are calculated based on the radial distance (as the crow flies) between the two service exchanges. This is appropriate for active products which are designed around the Openreach network infrastructure, particularly in areas with high concentration of demand where circuits are likely to only travel a short distance to a point of backhaul aggregation.

38. For the IEDFS product, the remedy as proposed (per the legal instrument) will allow a CP to go from a BT only exchange to any location to which the CP wishes to backhaul traffic. On that basis we believe it is reasonable to assume CPs will seek to design their networks as they see fit but without regard to the physical topology of Openreach's existing network infrastructure. The logical implication is that CPs are likely to require fibre between two Openreach exchanges where no direct fibre routes currently exist. Even where the "crow flies" distance is apparently short, routing between the exchanges would require a physical route where the first leg connects the first exchange back to the nearest common node e.g. a core node, and then a second leg from that core node to the second exchange. There is no incentive for CPs to design their networks based on the location of Openreach's existing infrastructure and we believe therefore that CPs will request Dark Fibre for these types of connections, generating very long fibre routes for IEDFS compared to the EAD service.

39. In diagram 1 below, the map shows the area around Stokenchurch, Buckinghamshire. A CP may wish to build in the area due to high value end customers, look at the map and decide to serve customers in the area by taking a fibre from Watlington exchange (THWT) to Cowley, Oxford (SMCO). This inter exchange dark fibre distance as the crow flies (red line) seems a reasonable c20km. However, there is no network directly between these two exchanges (shown by the blue lines) so the route distance is around 65km (black line) and goes via Reading.

Diagram 1 - connecting Watlington (THWT) to Cowley, Oxford (SMCO)



40. This highlights the issue with the remedy as defined (in the legal instrument), and suggests that distance and route limits, as we outline in our volume 1 response, would support a better defined remedy as it would help efficient use of fibre infrastructure.

41. However if Ofcom proceed with the remedy as currently defined we believe it would be more appropriate to charge mainlink per route metre (not radial) to send an economic signal to use infrastructure efficiently. In the case above, it could encourage the CP to consider Watlington to Reading, or Stokenchurch to Cowley instead.

Element A - Ethernet Excess Construction

42. With the costs of excess construction excluded, the rental price of IEDFS makes no recovery towards excess construction. Therefore, it follows that any exchange construction costs that could ever be required on an IEDFS circuit should be chargeable in full, with no concept of an ECC exemption, as exists on EAD.

Element B – Removal of Ethernet Electronics

43. While it seems logical that Ethernet electronics should be an active cost component and excluded from the costs of IEDFS, it is not that simple as the costs of Electronics in the RFS includes allocated costs that will not be avoided by the IEDFS.

44. In the published 2016/17 RFS, the unit FAC of the Ethernet Electronics component in the EAD 1G cost stack is £584. Of this unit FAC, only £✂ relates to the equipment and its installation with another £10 attributable to the maintenance of the equipment. The remaining £✂ relates to indirect costs allocated to the circuit. These costs included diverse items such as procurement costs, costs relating to engineer tools, engineer vehicle costs, exchange rent, work manager task allocation systems, and general overheads. These costs will still be required in an IEDFS world and we contend that it would be appropriate and proportionate for IEDFS to include the same attribution of these costs as EAD. This would result in a FAC based price as Ofcom proposes in the Consultation and thereby allow Openreach to make the same recovery towards fixed and common costs as EAD. At the very least, a proportionate allocation on IEDFS should be made to convert the currently estimated equipment costs from direct cost to FAC.

45. In our analysis on the published 2016/17 RFS, £99.46 of costs in the Ethernet Electronics component in the EAD 1G cost stack relates to items that are not specific to active equipment. These costs will still be incurred by Openreach and it is reasonable that they should be recovered by the substitute IEDFS service. We therefore propose that these cost should be recovered by IEDFS, as a replacement product.

46. The replacement is unlikely to be one IEDFS for one active circuit (as shown above in table 3). On average there are 1.48 circuits per CP per route. This means that for 1.48 active Ethernet circuits, there is likely to be only one IEDFS circuit. To ensure the same common cost recovery, the £99.46 of unavoidable costs (per the published 2016/17 RFS) should be scaled up by 1.48 to be £147.20. We propose that the IEDFS rental charge should be increased by this amount, included in the FAC for the patch panel.

Element B – Openreach Service Centres - Assurance

47. Ofcom estimate the appropriate cost of Openreach Service Centres costs to include in the IEDFS price by excluding those elements of the EAD costs that are not to do with the IEC fibre part of the circuit. To do this they establish what it considers the appropriate fault rate for IEDFS and pro rates the EAD costs accordingly.

48. We agree it is appropriate to exclude Local Access (LA) lines from their assessment of fault rates as these circuits are not to do with IEC services. Further, we agree with the general categorisation of which faults would be passive or and which would be active.

49. Our key disagreement with Ofcom's approach is that they exclude too many RWT faults when estimating the appropriate costs. In the 2016 BCMR and 2017 Dark Fibre Consultation Ofcom excluded 80% of RWT faults in the calculation of the Dark Fibre Access price, which has now increased to 96%. Since then there has been no change to the occurrence of these faults that would support a departure from the assessments in 2016 and 2017.

50. In the negotiations to agree the Dark Fibre Reference offer in 2017, Openreach and CPs agreed that of all faults referred to Openreach, 6% of RWT faults referred to Openreach would be without charge being raised. The rationale for this was that it would be possible for faults to be referred to Openreach in error and 6% was allowed as a small margin of diagnostic error. This 6% represents an amount negotiated between parties as the proportion of all fibre faults that can be RWT without the RWT charge being raised. It was never discussed as a proportion of RWT faults that relate to fibre faults.

51. Ofcom's key rationale for including only 6% of RWT faults appears to rely on a mistaken belief that the 6% figure negotiated back in 2016/2017 represents the proportion of RWT faults that relate to fibre faults. As it was evidently not intended that this estimate represented the proportion of RWT faults that relate to fibre faults, it appears that Ofcom have taken this figure and used it out of context and in an inappropriate way in estimating the service assurance costs for IEDFS. We consider a 6% allowance for RWT faults is an error and not supported by any evidence.

52. In our response to the 2016 BCMR proposals we laid out why we considered the proposed 80% of RWT faults (then categorised as active related, and thereby disallowed from the fibre fault costs) to be an overstatement. Our position was and is that the behaviour from CPs suggests the volume of RWT faults will not reduce substantially with the introduction of dark fibre (IEDFS).

53. We can evidence that the behaviour of CPs today is to raise faults to Openreach even where we can see with our active electronics that there is no fault on the line. The 'no fault' report is displayed onscreen to the CP as the fault is raised. Given CPs raise faults today in the full knowledge that the equipment monitoring system reports no fault at all, we see no reason why the CPs will stop raising faults in similar circumstances (the fault report will not change).

54. Further, in circumstances where CPs have any uncertainty as to the nature of the fault then they have an incentive to raise a fault with Openreach immediately to start the repair clock "ticking". We believe thereby that CPs are likely to have a positive incentive to continue to raise faults where the equipment reports no fault condition.

55. Therefore, we strongly disagree with the mis-applied 6% allowance as adequate. We acknowledge that there is an absence of data since Dark Fibre services have not been launched yet. In the absence of any better data on the proportion of fibre related RWT charges we propose that the rational course of action would be for Ofcom to use the same 26% split being applied to the "other" clear codes.

Element B - Sales Product Management, Ofcom Administration Fee

56. In the RFS the costs of the Openreach Sales and Product Management team are allocated to products based on how the Directors apportion the time of their teams. When included in the RFS, IEDFS would be treated no differently and would have time allocated to it in a similar manner.

57. It was on this basis that Openreach proposed that 19% of the costs currently allocated to Ethernet would instead be allocated to Dark Fibre Access when setting prices based in the 2016 BCMR[15]. We believe this is still a fundamentally sound approach, as it seeks to replicate how Dark Fibre would be allocated a cost in the RFS.

58. In the Consultation Ofcom has taken the costs for Ethernet and pro-rated the amount IEDFS would be allocated based on rental charges. This approach does not appear to be justified by Ofcom as being in any sense cost causal. We consider there is good evidence to suggest the resulting costs allowed by Ofcom will be understated.

59. Let us assume volumes are in line with Ofcom's estimates during the charge control period i.e. there are 1,000-5,000 IEDFS circuits. At the top end of Ofcom's range, this would result in £50k of cost recovered for Sales and Product Management costs by IEDFS as per Table 4 below.

Table 4 – SPM cost recovery for IEDFS

	Volumes		Cost Recovery per unit		Total Cost recovery		
	Connection Count	Rental Mid-year system size	Connection £	Rental £	Connection £	Rental £	Total £
Year 1	2,500	1,250	8.56	0.72	21,400	900	22,300
Year 2	2,500	3,750	8.56	0.72	21,400	2,700	24,100
Total	5,000				42,800	3,600	46,400

60. It is clearly the case that IEDFS is a product that will require a product manager, pricing support, sales and account support and regulatory assessment. Regardless of the level of volumes or the amount of revenue, there is a minimum level of SPM support that this product will need.

61. A sum of £50k would fund less than a quarter of a senior product manager. This does not reflect the effort that will be required on this product across sales (network design), product management, pricing and regulation. We would expect at least 4 FTE to support dark fibre in these functions, with costs of over £250k pear year, meaning that the cost recovery allow by Ofcom is at least £450k too low. Ofcom should therefore increase the SPM costs allowed in their current charges by a factor of five.

[15] 2016 BCMR Statement, annex 33

62. We believe Ofcom should, at the very least, adopt the previous approach and allow 20% of EAD SPM costs to be included in the IEDFS cost, and have factored this in our proposed price in table 2 above.

Element B - Ofcom Administration Fee

63. Ofcom allocate a cost relative to the difference in charges between EAD 1G and IEDFS. We do not consider this is an appropriate basis for estimating these costs for IEDFS as it logically results in less costs being allocated in aggregate to all services than the total costs of the Ofcom Administration Fee.

64. IEDFS will be a substitute for an active circuit. For each circuit substituted there will be one unit of the EAD allocated cost forgone. Ofcom's proposal is to reduce the allocation of cost to the replacement service i.e. IEDFS. In this situation, all other things equal, the total aggregate cost allocated across all EAD and IEDFS services reduce whilst the total cost remains the same.

65. We accept this is of a relatively small value at the current Ofcom estimation of 1,000-5,000 IEFDS circuits during the charge control period. However, it would be simple to correct this and for that reason we believe it would be appropriate for Ofcom to reflect the average cost of Ofcom Administration Fee allocated to EAD in the IEDFS price.

Element C – Patch panels

66. Patch panels need to be added to the IEDFS cost stack as they do not feature in the EAD cost stack and are required for the IEDFS. Ofcom estimate the cost of patch panels on a bottom up basis. We disagree with two key assumptions Ofcom make. Firstly, the utilisation assumptions Ofcom makes are unrealistic and too high. Secondly, the equipment costs estimated only include direct costs and no mark up for fixed and common cost.

67. Ofcom have retained the 50% utilisation assumption that Openreach considered appropriate for Dark Fibre Access as defined in the 2016 and 2017 BCMR consultations.[16] We do not consider this is an appropriate assumption for IEDFS in BT Only exchanges as the opportunity to fill patch panels in these exchanges is a fraction of the opportunity to fill patch panels with access circuits. The 2016 DFA product assumed far higher volumes and the assumption that the 24 port patch panels in exchanges would be 50% utilised on average reflected a large volume of access circuits (including Local Access) terminating in an exchange where there was a concentration of businesses. The IEDFS Ofcom define here is expected to be used in relative lower volumes as, firstly, it is in exchanges with a lower concentration of demand (which is inherent in the fact they are BT only exchanges) and secondly, inter exchange will be single backhaul circuits with the potential for unlimited bandwidth meaning all traffic can be aggregated on to a single fibre per CP (and if they wholesale, traffic from multiple CPs can be aggregated over a single fibre). As IEDFS is currently defined, there is neither the total volume nor the concentration of backhaul circuits that would support a 50% utilisation rate.

[16] 2016 BCMR Statement, annex 33

68. To provide nearly unlimited capacity on each backhaul route an individual CP would only every need to use two fibres. About 2,400 of the target BT only exchanges have no CPs present; c340 have a single CP present; c1,280 have two CPs present; and c370 with three CPs present. To achieve a 50% utilisation rate across every patch panel on average would require six CPs to be located in in every exchange with equipment, and for each of them to buy a dual fibre into every exchange (resulting in 12 fibres on a 24 port panel). This is clearly an unrealistic level of utilisation given the definition of the target market segment, even in the long term.

69. We believe that in the period of this review a one or two fibres per exchange on average would be reasonable (4-8% utilisation), and 10-20% could be a more realistic longer term[17], which would assume one or two dual fibre circuits, or two to four single fibre circuits per patch panel. Making an adjustment to 15% (as a midpoint of the longer term utilisation) would increase the recovery of patch panel costs in the annual rental from £8.71 to £29.04, which has been assumed in Table 2. Using the midpoint of the likely utilisation in this review period (6%) would increase the cost recovery per patch panel to £72.60.

70. In considering the bottom up costs, Ofcom takes the incremental cost of equipment and the fully allocated cost of the labour to install it. As such, there are fixed and common costs, associated with the direct equipment costs, which are not included in Ofcom's estimate. For this reason the Ofcom estimate does not reflect the fully allocated costs off the patch panels as Ofcom intend.

71. Patch panel equipment housed in an exchange would be expected to make a contribution towards exchange accommodation costs, exchange security costs and a host of other overheads. As Ofcom have removed all of the cost allocated by excluding the Ethernet Electronics cost component in full from the IEDFS cost stack (see paragraphs 43 to 46 above), Ofcom should include overhead recovery of £147.20.

Element C – Birth Certificates

72. We agree that the estimate of the birth certificate costs for single fibre circuits capture the right activities and are reasonably appropriate.

73. Ofcom assume that when installing a dual fibre service the Birth Certificate costs would be incurred once on a dual fibre installation[18], which implies that either both fibres are tested with one set of travel, or only a single fibre would need to be tested. There is a need for two sets of travel in order to conduct the necessary test of both fibres. We disagree that this cost would be incurred only once on a dual fibre installation.

74. It is not the case that a single fibre can be tested, with the assumption that the second fibre will perform similarly as the results of the test are critically determined by the quality of the fibre splices throughout each fibre which can and do result in variations in performance between fibres. Both fibres would need to

[17] These assumptions include an allowance for some level of resilient routing
[18] BCMR 2019 Consultation, paragraph A20.67

be tested as testing only one fibre will not test that the quality of the other fibre's splices is adequate or sufficient.

75. Further, these tests are critically important especially where CPs use the dual fibres in order to provide WDM services. WDM services will only work if the fibre circuits are performing within defined tolerances of each other. These tolerances cannot be calculated without both fibres being tested.

76. In short, in order to understand circuit performance and be sure of offering an IEDFS product that will function as required, both fibres must be tested. This will require the additional tasks for Dual fibre circuits, as outlined in Table 5 below.

Table 5 - Specific breakdown of tasks, for a single and dual fibre is show below.

	Single Fibre	**Dual Fibre**
Put on Light source at A end on first fibre	0.25 hours	0.25 hours
Travel to B end	1 hour	1 hour
Run OTDR test on first fibre	0.25 hours	0.25 hours
Return to A end to remove light source	1 hour	1 hour
Put on Light source at A end on first fibre		0.25 hours
Travel to B end		1 hour
Run OTDR test on first fibre		0.25 hours
Return to A end to remove light source		1 hour
Total	**2.5 hours**	**5 hours**

77. It is unclear whether Ofcom implicitly assumes the travel time can be avoided based on the mistaken assumption that both fibres can be tested at once. Although this could potentially save 2 hours of travel it would require the engineer to have two testing units (and result in a corresponding increase in cost). The testing units are expensive and we assess that the outlay on extra testing units, to allow two fibres to be tested in one visit, would not be justified as the aggregate travel cost savings would be less than the extra costs, during the charge control period[19]. For this reason, we believe testing the fibres individually is the most appropriate and cost effective method.

[19] even if we assume Ofcom's top end volume assumptions

78. The costs of the additional 2.5 hours required to test both fibres with a single testing unit, using Ofcom's estimated labour rate[20], would be £128.50. Therefore the Dark Two Fibre Connection[21] price should be increased by £128.50 to reflect the costs outlined above.

FAC is not an appropriate basis for pricing RWT, it sets inappropriate incentives

79. We acknowledge that the costs Ofcom calculated for the RWT charge reflects a suitable average cost to respond to a RWT fault when performed within working hours. We disagree that FAC is an appropriate basis to charge for this product[22].

80. The use of Openreach engineers to attend a RWT fault is due to a failure on the part of the CP to correctly identify the location of the fault on their network. For every RWT fault directed to Openreach, an Openreach engineer will be dispatched that would not otherwise be dispatched (as Openreach would have their own diagnostics available from active equipment). By responding to IEDFS RWT faults, our engineers will not be available to respond to genuine customer impacting Openreach faults resulting in poorer recovery delivery or a higher cost to repair e.g. more use of overtime to repair faults. This would serve to imbed inefficiency. Whilst it is possible for Openreach to recruit and train more engineers over the long term to account for the time and resource required for such a task, in the short and medium term, Openreach engineers are a scarce and finite resource.

81. This also shifts the burden of greater engineer resourcing on to Openreach. Setting the charge at FAC, all other things equal, will make CPs more likely to send an Openreach engineer to diagnose the fault than their own. With the existing national engineering workforce, Openreach are likely to have a shorter travel time (and therefore lower overall cost) than the CP's own engineers. This point was debated in the reference offer discussions with regard to Dark Fibre Access in the 2016 BCMR and CPs responses indicated that even with the higher charge being discussed at the time (c£600) they would rely heavily on Openreach engineers to conduct on site diagnostics. We believe CPs will be in a similar situation in exchanges were IEDFS services are available and it is thereby likely that a CP will send an Openreach engineer rather than scale up their own workforce unless they have an incentive to do otherwise.

82. Further, we have a concern that CPs will raise a fault with Openreach, even if they can see from their own diagnostics that the fault is likely not to be a fibre fault, as it will start the clock ticking if it subsequently transpires they do need an Openreach engineer to fix the Dark Fibre fault i.e. there is an option benefit from raising faults if the RWT charge is priced at FAC even when the CP's diagnostics suggest there isn't a fibre fault.

83. If the RWT charge is at FAC the CP decision to raise an Openreach fault when one doesn't exist does not take into account the extra cost to Openreach and its customers of this decision i.e. the impact of lower service level or higher cost to service for other Openreach customers. In this respect the use of Openreach

[20] BCMR 2019 Consultation, paragraph A20.49
[21] BCMR 2019 Consultation, Annex A23 condition 10B.1
[22] BCMR 2019 Consultation , paragraphs 4.41 - 4.43

engineers to attend a RWT fault is inefficient and the price does not account for all the economic costs incurred.

84. In order to discourage inefficient and inappropriate use of Openreach engineers where not needed, and provide an incentive for CPs to improve their own diagnostics (improving efficiency and customer experience), we believe there is strong justification to set this charge in excess of FAC, with a premium of somewhere between 20% and 40%. This charge could be set under a Fair and Reasonable charges obligation, or, given the prices will be reviewed in 2021, if Ofcom wish to determine a price that remains fixed for this review period we would suggest the charge proposed by Ofcom of £350 should be increased by at least 30% to £455.

85. Further, as the charge calculated by Ofcom takes only the hourly cost of labour in standard working hours into account, we interpret the costing approach to mean that where a RWT is taken out of hours, the standard published supplementary charges for out of hours work would be raised in addition. These supplementary charges can be found on the TRC price list.

A cease charge is not appropriate or proportionate and cease costs should be recovered in the rental charge

86. Ofcom propose a cease charge should be raised when the circuit is disconnected.[23] In response to the 2016 Consultation and for the proposed Dark Fibre Access product that was never launched, Openreach proposed to recover cease costs in the Dark Fibre Access product rental charges. We still believe that this is the best approach for the following reasons:

    a. It would be consistent with the approach adopted for treating cease costs for the vast majority of other regulated Openreach services.

    b. The CP is not faced with an additional charge that might act as a barrier to switching, a barrier which would contribute to undermining Ofcom's key remedy for market entry (Duct and Pole Access).

    c. A cease charge would require Openreach to create a new cease product which is not required for Ethernet today. This will incur additional development costs of roughly c£65k (rough estimate) which will not be ready for implementation until potentially Q3 2019/20.

87. We believe that it would be more consistent with Ofcom's current approach to cease costs for other related services, more consistent with its focus on infrastructure competition and more proportionate to recover cease costs through the rental price.

[23] BCMR 2019 Consultation, paragraph 4.16

3. Charge controls and pricing

Question 2.1: Do you agree with the proposed form of charge controls? Please provide evidence to support your views.

88. Ofcom expects to see increasing competition in the provision of all BCMR services on the back of the proposed introduction of unrestricted DPA i.e. Ofcom expects that there will be increased investment in competing multi-functional full fibre networks.[24] If all usage restrictions are lifted, there is also the risk that we will see targeted use of uDPA by network providers focused on the supply of high value business connectivity services. In the face of such entry, prices and volumes will come under downward pressure. We agree with Ofcom that under the circumstances, it is not appropriate to impose 'cost-based' charge controls across our existing portfolio. This runs the risk of restraining technical and commercial innovation across services and/or price structures, deterring investment/market entry and limiting our commercial flexibility in responding to competition.

89. We therefore agree in principle with Ofcom that keeping prices stable strikes the right balance between protecting consumers from the risk of price increases (while allowing Openreach the opportunity to recover its efficiently incurred costs) and providing certainty and stability as we transition to the introduction of new, long-term downstream regulation for business and residential markets. It is appropriate that the charge controls should be light touch focusing on these central objectives.

90. In relation to active services at 1 Gbit/s and below, Ofcom have modelled costs over the review period and its analysis indicates that CPI-CPI is within its range of model outputs. We agree with Ofcom that this is the case and we think a CPI-CPI control is even more central to the potential range of outcomes than Ofcom's cross check implies.

91. Ofcom's proposals will achieve its objectives to a great extent and we agree with most of the proposals, most notably:

    a. We agree that a CPI-CPI control is appropriate for EAD services at 1G and below and for EAD and WDM services over 1G. We also support the flexibility offered by a basket with a sub cap that allows some rebalancing between products, particularly to support migration away from legacy services;

    b. Our preference is for longer charge controls as these generally promote certainty and investment. But given the upcoming review across all markets from 2021, we agree that at this time the appropriate duration of the control is 2 years as a bridge to that review.

[24] BCMR 2019 Consultation, volume 1 section 10

c. For Accommodation Services, ECCs and TRCs we agree charge controls on these services are appropriate, but we have some comments about the levels for these controls which might better meet Ofcom objectives.

92. There are some refinements that we think would more closely met Ofcom's objectives, notably:

a. We believe that the Cablelink price is below cost and that there is little risk of excess pricing[25] if the Cablelink sub basket is removed. Such flexibility would at least allow limited price increases (CPI+5% price increases) to deal with a Cablelink price that is misaligned with the costs of supply;

b. TRCs are unlikely to benefit from productivity improvements over the period, being a charge for a set number of hours of labour and as such it is likely that a price that tracks wage inflation more closely would be more appropriate and proportionate. For this reason, it might be better if the control for TRCs was set at CPI-0 rather than CPI-CPI; and

c. Ofcom proposes two separate controls on the same two ECC items (Overblow and Fibre Cable). We would prefer that the control was set consistent with the predominant mode of delivery.

Question 3.1: Do you agree with each of our proposals in relation to the design of charge controls for active services at 1 Gbit/s and below? Please provide evidence to support your views.

CPI-CPI control is even more central to the potential range of outcomes

93. In its Strategic Policy Position, Ofcom set out how it plans to reform the way in which it carries out competition assessments in telecoms markets to further support network investment in the long term. In 2021 it will align the reviews of business and residential markets and seek to vary regulation by geography depending on the level of competitive intensity.[26]

94. We agree with Ofcom that at this stage, the path that future prices might take under Ofcom's revised approach is not clear and that, with greater geographic differentiation in regulation, and the short timescale of this review, it is sensible to place the greatest weight on price stability and regulatory certainty over other factors.[27] We also believe that although Ofcom's focus is on maintaining price stability, it has, in the main, appropriately balanced the potential benefits to customers from explicitly requiring prices to be more tightly aligned to costs, with ensuring BT has a fair opportunity to recover efficiently incurred costs. In this respect we believe a charge control of CPI-CPI is appropriate and proportionate.

95. As a cross check, Ofcom have considered a reasonable range for key input parameters (as it normally would if it were consulting on a range for the X), and concludes that CPI is in the range of what it might reasonably expect the value of 'X' to be if it were consulting on a range for the X. The range it estimates for

[26] Ofcom, 2018. R*egulatory certainty to support investment in full-fibre broadband – Ofcom's approach to future regulation*. https://www.ofcom.org.uk/__data/assets/pdf_file/0025/116539/investment-full-fibre-broadband.pdf.
[27] BCMR 2019 Consultation, paragraph 2.6

the notional X is between -9.75% and -1.25%[28]. We believe that the reasonable range for this notional X, on Ofcom's terms, would more correctly be between -6.50% and 3.25% for the following reasons:

a. Ofcom say that in its cost modelling it anticipates that BT will face significantly higher Cumulo costs going forward compared to the costs BT incurred in 2016/17[29]. Ofcom appear to have inadvertently taken the 2016/17 cumulo costs as the cumulo costs in all future years of its cost modelling without reflecting these forecast increases;

b. In modelling the range we would expect Ofcom to consider the upper and lower bounds of the parameters it proposes. In this respect, it proposes that the Asset Volume Elasticity (AVE) for the EAD Fibre component is between 0.6 and 0.8[30]. Ofcom's notional range of -9.75% and -1.25% only reflects the lower bound of this parameter i.e. 0.6; and

c. We believe Ofcom's method of calculating an average 2018/19 service price and then adjusting that to estimate start prices (P_0) for key services within the charge control baskets[31] materially overstates start prices. It is evident that if the actual published prices were used instead, the range would shift further and CPI would be more central to that range.

96. The impact of adjusting for these factors would be a notional range as shown in Table 6 below.

Table 6 – More correct range of notional X's

	Low Cost Scenario	**High Cost Scenario**
Ofcom's proposed range for low bandwidth basket	**-9.75%**	**-1.25%**
Correct Formula Error for forecast Cumulo Costs	2.00%	2.50%
Represent proposed AVE range in the scenarios	-	0.75%
Select Price List Price as Start Price Input	1.25%	1.25%
Corrected range for low bandwidth basket	**-6.50%**	**3.25%**

97. On this basis alone we believe that CPI is more central to a reasonable range for a notional X and that this gives further support to Ofcom's proposal for a CPI-CPI charge control.

98. We would have concerns regarding the levels of other parameters Ofcom outline in annex 18, annex 19 and annex 21 e.g. volume forecasts, efficiency, WACC and cost adjustments, if it were consulting on a range for the X. To lay out a response to these factors here would be to address issues upon which Ofcom is not consulting and therefore we do not outline our views on these parameters for the purpose of this consultation response.

[28] BCMR 2019 Consultation, paragraph A18.5
[29] BCMR 2019 Consultation, paragraph A18.75
[30] BCMR 2019 Consultation, paragraph A18.66
[31] BCMR 2019 Consultation, paragraph A18.96

Design of charge controls for active services at 1 Gbit/s and below

99. We agree with Ofcom that the benefits associated with broad baskets[32], such as giving BT the flexibility to set efficient charging structures, respond to changes in demand and costs and encourage efficient migration should be maintained especially given the dynamic nature of the leased lines market. We also agree with Ofcom that the proposed sub-baskets and sub-caps provide sufficient protection to address any competition concerns.[33]

100. Consistent with our previous practice for leased lines, we continue to consider that there are benefits associated with broad baskets, such as giving BT the flexibility to set efficient charging structures, respond to changes in demand and costs and encourage efficient migration.

101. Prior year revenue weights are a tried and tested approach to assessing basket compliance, a key benefit being that there is certainty on compliance at the point that price reductions are made. When applied to broad baskets, composed of services with very different relative rates of growth rates, such arrangements can risk gaming that would not be in the market interest i.e. there is an incentive to focus price reductions on services which have declining volumes. Ofcom's proposal, which moves away from the current concept of "Accrued Revenue", could introduces a higher risk of such outcomes. We consider that by proposing a broad basket with flat pricing and restrictive sub caps, Ofcom has limited the potential for these outcomes.

102. So whilst we believe the current use of Accrued Revenue to assess compliance, applied since 2013 with no issue, is a superior method for BCMR services, this is not an issue for us during this review period given the proposed CPI-CPI basket design.

103. We have a number of comments that might improve the operation of the controls, notably;

a. We would ask Ofcom to widen the definition of a Three Year Term product to include any product where the charges over three years are the same as the standard one year term product and without the restriction that this does not include a connection charge;

b. We would ask that Ofcom remove all ancillaries such as cancellations and migrations from the basket control and instead make then subject to a CPI-CPI cap on each item; and

c. We would ask that Ofcom remove the sub basket constraint from Cablelink, which would mean that CPI+5% increases would be possible on Cablelink, allowing prices to be closer to direct incremental cost by the end of this review period.

Three Year and Five Year Term

104. In the 2016 BCMR Ofcom included the concept of a Three Year Term and Five Year Term product in the legal instrument. The Three Year Term allows the price changes to count towards the basket as long as the

[32] BCMR 2019 Consultation, paragraph 3.3
[33] BCMR 2019 Consultation, paragraph 3.5

product has the same charges over a three year period as the standard product (one year term) but with a connection charge of zero. The Five Year Term works on the same principle but over five years.

105. We have not launched a product along these lines yet but we have had a customer request for a similar product i.e. one which has the same charges over a three year period, but with higher initial connection charges and lower ongoing rental charges.

106. To support what is evidently a sensible customer requirement we would ask Ofcom to widen the definition of a Three Year Term product to include any product where the charges over three years are the same as for the standard one year term product, without the restriction on not including a connection charge.

107. We believe this will benefit customers as we can offer them alternative commercial arrangements whilst still providing them with the certainty of a product protected by regulated price controls.

Ancillary Services

108. Ofcom included ancillary services in the basket in BCMR 2016 and BCMR 2017, as long as the revenue across the services was over £1m. Otherwise they are subject to a sub cap that prevents price increases. The purpose of these exempt Ancillary services was to reduce the administration of managing the basket by excluding low revenue services. Over the last three years, the majority of the ancillary services have been exempt (for example in 2017/18 only Cancellations were above £1m revenue). As such they have little impact on the basket revenues. Ofcom proposes to include Ancillary services in the basket for control, purposes.

109. We would ask that Ofcom remove all ancillaries such as cancellations and migrations from the basket control and instead make them only subject to a CPI-CPI cap on each item. This has the benefits of:

    a. Reducing administration identifying revenues on a significant number of marginal items (in order to prove revenues are under £1m, administrative work still needs to take place);

    b. Provide adequate protection for customers in the form of a sub cap (which would match the CPI-CPI control of the main basket); and

    c. Not significantly impact the financial impact of the controls the immateriality of the revenues.

110. We believe the inclusion of Ancillary Services in the basket is disproportionate and that a CPI-CPI sub cap on each charge would provide the protection required.

Cablelink

111. We believe that Cablelink prices are at or below Openreach's direct costs. We do not think the RFS is currently a robust source of financial data to assess the costs of Cablelink. We have identified a number of

potential issue with the RFS treatment of Cablelink and there are a number of methodology changes being investigated that might lead to a more accurate costing of Cablelink in the RFS going forward.[34]

112. For the purpose of this response, we have instead considered the direct costs of delivery from Openreach's management accounts data. This data is sourced from the Openreach management accounts for the first half of 2018/19, and is summarised below. Costs include installation labour (including controls), stores and planning labour (including first line manager costs). For external variants, civils costs are also relevant. There are no cell site variants in the table below as no volumes have been delivered in H1 2018/19. This reflects our actual, direct costs of delivery. The output is shown in table 7 below:

Table 7 – Direct costs of Cablelink delivery

Price	External 24	External 48	Internal var 1	Internal var 2	Internal var 3
Connection	£2,000	£2,150	£760	£875	£900

Cost	External 24	External 48	Internal var 1	Internal var 2	Internal var 3
Delivery (BCD B009 & External for Cell sites)	£✂	£✂	£✂	£✂	£✂
Planning	£✂	£✂	£✂	£✂	£✂
Field Stores	£✂	£✂	£✂	£✂	£✂
Civils	£✂	£✂	£0	£0	£0
Less ECC charges*	(£✂)	(£✂)	£0	£0	£0
Total Connection Cost	**£2,311**	**£2,220**	**£814**	**£1,490**	**£841**

*Not all external variant charge for surveys

Connection Volumes H1 18/19	✂	✂	✂	✂	✂

[34] We understand that Ofcom have raised questions on the cost allocation in the RFS (which also includes BTL, which makes the cablelink cost position harder to understand).

113. The Cablelink price is designed to recover the installation costs of the service. As per Table 7 above, the current prices are below the current average direct costs to deliver for the majority of internal and external volumes. To cap these prices at CPI-CPI, when prices are so far below costs plainly sends very poor pricing signals.

114. It would arguably be appropriate to increase prices to cover Fully Allocated Cost (FAC) but given Openreach's support for Ofcom's focus on certainty and stability, we would instead propose that Ofcom remove the sub basket constraint from Cablelink, which would mean that CPI+5% increases would be possible on Cablelink, allowing prices to be closer to direct incremental cost by the end of this review period.

Question 3.2: Do you agree with each of our proposals in relation to the design of charge controls for active VHB services? Please provide evidence to support your views.

Charge controls for active VHB services

115. We agree with Ofcom that the benefits associated with broad baskets, such as giving BT the flexibility to set efficient charging structures, respond to changes in demand and costs and encourage efficient migration should be maintained especially given the growing competitive nature of the leased lines market.

116. In our response to Volume 1 of the Consultation, we argue strongly that the demand and supply conditions are different for VHB and services at or below 1G and that this supports a bandwidth break.[35] For this reason we agree with Ofcom it is right and proper to have two separate baskets.

117. We agree with Ofcom that the expected demand for VHB services to continue to grow as networks expand[36] and data consumption increases. We also agree that Ofcom's proposals for duct and pole access will lead to an increase in competition, which is likely to focus on higher speed services. Further, Ofcom's proposals in relation to IEDFS will foster more competition for VHB services. In the face of this competition the critical consideration for Openreach, in relation to the pricing of VHB services, is the flexibility to reduce prices.

118. A CPI-CPI cap on VHB wouldn't, in and of itself, materially restrict Openreach's flexibility in this respect and for that reason we support the proposed imposition of a CPI-CPI control as a practical measure.

119. We believe flexibility is beneficial and support the CPI+5% sub cap. With a number of high bandwidth services being withdrawn (such as BES 10G and WES 10G) it is important to be able to re-balance prices to drive the right behaviour in the market to migrate to strategic services. Further, and more importantly, we

[35] Openreach response to BCMR Volume 1, Section 3 and annex G.
[36] BCMR 2019 Consultation, paragraph 1.5

lay out in our response to Volume 1 of the Consultation that additional flexibility[37], to compete for external VHB services, is required in terms of how Equivalence of Input obligations will apply during this control.

Question 3.3: Do you agree with each of our proposals in relation to the design of charge controls for accommodation services, Excess Construction Charges and Time Related Charges? Please provide evidence to support your views

Charge controls for Accommodation services

120. We agree with the CPI-CPI control on each service, and that items relevant for LLU and Ethernet providers should only be regulated only once (under the WLA currently) as Ofcom propose[38].

Charge controls for Excess Construction Charges

121. In common with the other baskets, Ofcom propose a CPI-CPI control for Direct ECCs and a sub cap of CPI+5%. Further, Ofcom propose no change to the price regulation of Contractor ECCs and propose they should be priced in relation to the cost of supply as they are currently.

122. We are broadly in agreement with Ofcom's proposals but have some specific comments to make about:

a. Direct ECCs priced below cost;

b. The same ECC charges regulated twice;

c. Amendment required to the timing of the ECC Balancing Charge Notification; and

d. Clarity required in relation to the notification period that applies to the ECC Balancing Charge.

Direct ECC prices below costs

123. We agree with Ofcom that Direct ECCs reported costs are higher than reported revenues[39], and all other things equal, a substantial price increase would be required to align prices and costs. To illustrate, Table 8 is an extract from the 2016/17 ECC AFI.

[37] Openreach response to BCMR Volume 1, Section 3 and annex G.
[38] BCMR 2019 Consultation, paragraph 3.65
[39] BCMR 2019 Consultation, paragraph A3.78

Table 8 –2016/17 ECC AFI extract

Activity (a)	Direct costs per Direct labour		Other	BT Stores cost	Wayleaves	Overheads @✂%	Unit cost	List price	Margin
Blown Fibre	✂		0	✂	0	✂	✂	2.52	✂%
Cable Delivery Surcharge	✂		0	✂	0	✂	✂	4.53	-✂%
Blown Fibre tubing in duct	✂		0	✂	0	✂	✂	3.11	-✂%
Internal cable	✂		0	✂	0	✂	✂	5.7	-✂%

124. Ordinarily, we would be concerned if Ofcom proposed not to address this issue because:

a. There would be a risk of under-recovery of Openreach's efficiently incurred costs; and

b. It could potentially result in poor economic signals or cause competitive distortion.

125. We acknowledge that the proposal to control the two main baskets at CPI-CPI should, all other things equal, mitigate the risk of an overall under-recovery of costs for EAD, WDM and ECC services in combination and deals with our first concern. Therefore, we do not object to Ofcom's proposed CPI-CPI control for Direct ECCs for this period on the basis that the prices for EAD and WDM services are controlled on a CPI-CPI basis.

126. In relation to our second issue we take comfort from the fact that Ofcom has clearly recognised that prices are likely below costs but that its view is that it is proportionate and appropriate to set a control at CPI-CPI (and a sub cap at CPI+5%) even in these circumstances.

Same charges regulated twice

127. In common with our views on charge controls for Accommodation services, we agree it is a sound principle that individual services are subject to only one set of controls, otherwise it is possible that to comply with one form of regulation requires a breach on the other.

128. Ofcom include two ECC services (Overblow and Fibre Cable) in both the ECC basket, and the list of Contractor ECCs regulated separately. This is because they can be delivered either by direct labour or indirectly by contractors, which depends on resource availability.

129. There is a material risk that to comply with one control would breach the other control. For example if the external costs of fibre cable provision increase beyond the CPI+5% cap, then we would need to breach either condition 10D.7 or 10D.9.

130. Therefore, we would instead suggest these two services are regulated under the category which reflects the predominant method of delivery:

a. Overblow as Indirect ECCs; and

b. Solid Fibre Cable as Direct ECCs

Amendment to timing of the ECC Balancing Charge Notification

131. The legal instrument as written requires the balancing charge for the relevant year to be based on data from the prior year[40]. For a new balancing charge to be in effect would require the charges to be notified 28 days, or potentially 90 days, earlier (subject to the query below on notification periods).

132. Prior to this we would need to gather relevant data, calculate the new charges and have a paper approved through our governance process. This means that for the Balancing Charge to be in place on 1st April the analysis would need to be started three to five months earlier. This would be before the Prior Year is complete and the relevant data is available. As a result, as written, it is impossible to have the balancing charge in place for the start of the relevant year.

133. We would request that Ofcom amend the wording on the Balancing Charge, requiring that it is notified within three months of the start of the relevant year.

Clarity on the notification period that applies to the ECC Balancing Charge

134. The ECC Balancing Charge (known in Openreach documentation as the ECC Fixed Fee) is not a price in itself, but a component of the published and billed connection charge. We would welcome greater clarity from Ofcom on the notification period required in the change to the ECC Fixed Fee. For example, if the ECC Fixed Fee increases, but this is offset by a reduction in the underlying connection price, then is 90 days' notice required for the change in ECC Fixed Fee (even though there is no change to the change paid by the customer).

Charge controls on Time Related Charges (TRCs)

135. TRC costs are separately accounted for and not included in the costs for the main baskets. TRCs are unlikely to benefit from productivity improvements over the period, being a charge for a set number of hours of labour and as such it is likely that a price that tracks wage inflation more closely would be more appropriate and proportionate.

136. For this reason, it might be better if the control for TRCs was set at CPI-0 for labour based services rather than CPI-CPI. We agree that a control of CPI-CPI is appropriate for non labour based services.

[40] BCMR 2019 Consultation, condition 10D.12

4. Implementation and legal instruments

Question 5.1: Do you agree with each of our proposals in relation to the implementation of charge controls? Please provide evidence to support your views

137. We broadly agree with Ofcom's proposals regarding implementation but we have a number of specific comments to make where we would appreciate if Ofcom could amend its proposals in order to make implementation more practical and make compliance less burdensome and more definitive.

138. Our key comments are as follows:

a. We disagree with the proposal to base compliance on the November CPI and believe it would be more appropriate to reference the October CPI. October CPI as a reference would facilitate the implementation of price increases for the start of the regulatory year (to the extent of any sub cap);

b. We would ask Ofcom to reconsider exclusion of time limited discounts from the compliance calculation as these can provide welcome flexibility for commercial purposes and are unlikely to result in much pricing instability;

c. We would ask Ofcom to continue its approach to exempt ancillary services from the basket control as to do otherwise would be costly and of little practical value resulting in disproportionate regulation;

d. We would ask that Ofcom provide clarifications on the legal instrument text where there are inconsistencies and unclear text;

e. The prior year price used for the sub cap test for services above 1Gb should be defined as the price on 1 October 2018 (rather than the prior year weighted price) to be consistent with the controlling percentage calculation; and

f. We think it is unduly burdensome and disproportionate in the case of these specific basket services to expect Openreach to repay providers if revenues are in excess of those allowed by the control.

November CPI

139. Ofcom propose using November CPI to set the controlling percentage for the following year[41]. We disagree with proposal and request that the October CPI be used instead.

140. Where only price reductions were possible under the current LLCC, Openreach generally commenced its analysis to support price proposals scheduled for the start of the regulatory / financial year in preceding

[41] BCMR 2019 Consultation, paragraph 5.10

December to allow for internal governance and adequate CP notification in February, encompassing the necessary 28 days' notice ahead of the start of the regulatory / financial year.

141. Moving forward, price rises are permissible under the proposed LLCC. In order to implement a price rise for the start of the regulatory / financial year in line with any reductions as described above, we will need to commence our analysis of any pricing decision in October or November rather than December. This is because price increases require 90 days' notice of implementation such that analysis and internal governance will need to be completed ahead of a notification date in December.

142. The November CPI isn't published or known until mid-December. If compliance is based on the November CPI then the assessment of our pricing options would have to wait until then. This would not leave enough time to draft and submit papers to the final pricing governance board of the calendar year (which takes place in mid-December). On this basis, there will not be enough time between the publication of the November CPI and the final pricing governance board of the year to notify price increases in time for the start of the compliance year (1 April). While price increases could take place late in the year, CPs expect price changes to take place at the start of the compliance year and value certainty on the timing of price changes.

143. Effectively, using the November CPI to set the controlling percentage for the following year unduly restricts our ability to use the flexibility afforded by the sub caps to raise some prices. Use of the October CPI would be in line with the WLA, which determines that the October CPI be used to set the controlling percentage for the following year to address the issues outlined above.

Time limited discounts

144. Ofcom propose to exclude time limited discounts counting towards compliance. We dislike this in principle and would prefer therefore that time limited discounts continued to count towards compliance. We think they provide flexibility otherwise not available to Openreach and, further, they have proven popular with customers in the past.

145. Ofcom's key reasons for excluding these discounts is to encourage price stability.[42] We think Ofcom's concerns in this respect are unfounded:

    a. Time limited discounts were used to a reasonably significant extent between 2016 and today, and we can appreciate Ofcom's comments on the discounts not providing the certainty and stability that a permanent price reduction allows. The level of special offers in this period was exceptional and would not necessarily be repeated during the control period to this extent.[43]

[42] BCMR 2019 Consultation, paragraph 5.18

[43] With the BCMR appeal and potential introduction of an "EAD 1G minus" dark fibre product there was significant regulatory uncertainty. We were clear with customers in forums like the EPCG that we were using offers to make the regulatory reductions as there was too much uncertainty to make permanent reductions.

b. Ofcom propose a CPI-CPI control for services and in this case we would not anticipate large price reductions will be needed up to 2021. It is therefore very unlikely there would be any offers being proposed to comply with the charge control.

146. We believe the flexibility that time limited discounts afford outweighs the risk that Ofcom reference. For this short duration control the exclusion of time limited discounts will have little impact, and so we believe they can continue to be allowed. If not, then moving forward from 2021, we would want Ofcom to allow discounts to count towards compliance again.

Exempt ancillary services

147. As discussed at para 108 to 110 above there is no mention in the Consultation of the concept of Exempt Ancillary services. In the current charge control these are excluded from the basket control and CPs are protected by a CPI-CPI sub cap. We believe this approach should continue.

148. The services are very low materiality (the current control excludes items were revenues are less than £1m, though in the terms of RFS reporting Ofcom have verbally agreed with the concept of £5m being an appropriate level of materiality).

149. On the grounds of proportionality Ofcom had previously proposed that these services did not need to be included in the charge control.[44] Ofcom has provide no evidence that circumstances have changed so as to undermine its previous assessment.

150. It appears disproportionate in the extreme and unreasonable to include hundreds of low value ancillary items in the basket control when:

a. The change from the current arrangements have not been justified by Ofcom; and

b. There are no price reductions required to comply with regulation.

151. A CPI-CPI sub cap provides sufficient protection to end customers and is not dissimilar to the overall basket control.

Clarifications on the legal instrument text

152. We have the following general comments on the legal instrument Annex 23 condition 10 which covers the charge controls.

153. We would interpret the basket control to consider all regulated volumes within a single basket. (For example, not to demonstrate compliance on separate Ethernet at 1G and below baskets for markets (b) to (j) and (l)). The alternative would be to have 10 baskets with different weightings that would lead to ten

[44] 2016 BCMR Statement, Volume 2

different prices for the same product nationally in order to achieve compliance. We would ask Ofcom to confirm this is a correct interpretation.

154. In addition we have also raised the following issues of clarification with Ofcom during the consultation period:

Reference in Document	**Clarification Required**
Annex 23, Condition 10D Section 1 and Section 2	Overblow is a single item on the ECC price list, and yet is included in the definitions in both Section 1 and Section 2. This means a single charge on the price list would be subject to two forms of regulation. Please can Ofcom clarify this is their intent as there is no discussion of this in Volume 2 3.70 – 3.85 The same issue applies to Fibre Cable. We believe they should be charge controlled only once. Fibre Cable should be included in Section 1 based on Direct Labour being the predominant delivery method and Overblow in Section 2 with Indirect labour being the predominant delivery method, as set out in our response to question 3.3.
Annex 23 Condition 10, multiple references to Openreach price lists.	Where Ofcom have referenced Openreach pricing pages to define services in scope of a control, specific dates have been referred to. For example 15 November 2017 for ECCs and Access Locate, 12 February 2018 for BES and 28 September 2018 for Cablelink. Please can Ofcom clarify that this refers only to the date Ofcom accessed the price list and it has no further significance.
Annex 23 Condition 10, Conditions 10D.11 vs 10D.12	ECC Balancing Charge Condition 10D.11 refers to "the provision of a service ("Connected Service") reasonably necessary for the use of the services falling within the Ethernet 1Gbit/s Services Basket and the Ethernet and WDM (over 1Gbit/s) Services Basket", and Condition 10D.12 provides the formula for the ECC Balancing charge referring only to "EAD and EAD LA connections". Could Ofcom clarify whether the ECC Balancing charge is intended to apply to "EAD and EAD LA connections" or all services within "the Ethernet 1Gbit/s Services Basket and the Ethernet and WDM (over 1Gbit/s) Services Basket".

	We believe that condition 10D.11 is written inappropriately to suggest the ECC Fixed Fee and Exemption is applied more broadly to services, including VHB services, rather than just EAD. We believe the drafting of 10D.12, which only covers EAD, reflects the correct position. We would expect to see consistency between these two points so that they both refer only to EAD.
Annex 23	Throughout the legal instrument, there are references to "Dark Fibre Access". Given Dark Fibre is now an inter-exchange product not available in the access market, this terminology is confusing, and we would suggest a different term is adopted in the legal instrument for clarity.
Annex 23 Condition 10 10A.3 (c) (i) and (ii)	There are two definitions of $\bar{p},-1$: one for the Ethernet and WDM (over 1Gbit/s) and one for the Ethernet (1 Gbit/s and below) Services Basket and Cablelink Sub-Basket. However Condition 10D.2 refers to 10A.3 as well, and it is not clear what to use as $\bar{p},-1$ for Direct ECC Services. Please could Ofcom define the $\bar{p},-1$ for Direct ECC Services.
Annex 23 Condition 10; 10A.9	$\bar{p},-1$ in the First Relevant Period is the weighted average price in the prior period for all products for the sub cap test. But in 10A.3 (c) (i) for Ethernet and WDM above 1gb $\bar{p},-1$ is the price at 1 October, 2018. This means the prior year price is different in the percentage change test and the sub cap test. We believe that for consistency the same prior year weighted average price should be used across both tests for Ethernet and WDM.
Annex 23 Condition 10B.1	Whereas connection service is clearly identified as for one fibre and two fibre service, no other charge description makes a distinction between one fibre or two fibres. In Volume 2 4.14 it makes it clear that the cease charge should be the same whether ceasing one or two fibres, but we think the legal instrument does not reflect this, and so can be read as inconsistent with the main document. We believe Ofcom should clarify the legal instrument drafting.

Annex 23 Condition 10. Section 3	Refers to Condition 10D.13, but we believe the intention to refer to Condition 10D.12. Ofcom have already corrected for this in the clarification of 21 December 2018 which we consider should be kept in final the statement.

Prior year price for services above 1G

155. Ofcom state that the prior year price for services over 1G will be the prices at 1 October 2018[45] for the controlled percentage, but should be the prior year weighted average price for the sub cap test. We do not see the benefit of this, and believe for consistency both tests should use the same definition of prior year price.

Openreach to repay providers if revenues are in excess of those allowed by the control

156. Ofcom set out that they would expect Openreach to repay providers if revenues are in excess of those allowed by the control.[46] We appreciate this corresponds to text used on other controls e.g. WLA.

157. In the WLA, where the most material items are under a single item control, it is simple to understand how this would operate. In the LLCC, where you have baskets with many hundreds of items, it is less straightforward to see how compliance might have instead be achieved and how revenues could need to be repaid.

158. We therefore disagree with this text in the LLCC legal instrument and as any chosen way of complying appears subjective we would request that Ofcom either:

    a. Specify how Openreach is expected to comply with this rule; or failing that

    b. Remove the requirement.

END

[45] BCMR 2019 Consultation, paragraph 5.9
[46] BCMR 2019 Consultation, paragraph 5.15