

Openreach response to Ofcom's consultation

"Wholesale Local Access Market Review:
Recovering the costs of investment in network expansion"

NON-CONFIDENTIAL VERSION

27 September 2017



Table of contents

1. Executive summary.....	4
2. Identifying qualifying premises.....	6
3. Assessing the technology mix.....	7
4. Approach to cost modelling.....	9
5. Approach to cost recovery.....	13

Foreword

On 9 August 2017, Ofcom published its consultation on recovering the costs of investment in network expansion as part of its Wholesale Local Access (WLA) Market Review.

This response is provided by Openreach, a functionally separate line of business within British Telecommunications plc (“BT”),¹ in response to proposals related to Openreach’s business. This document should be read in conjunction with Openreach’s other related responses to the WLA Market Review.

Any comments on this response should be sent to Alan Lazarus, Openreach Regulatory Affairs, at alan.lazarus@openreach.co.uk.

¹ As part of BT’s implementation of its formal notification dated 10 March 2017 under section 89C of the Communications Act 2003 (“the Act”), the Openreach business will be operated by Openreach Limited, which was incorporated as a separate legal entity on 24 March 2017, following the fulfilment of certain conditions set out in the notification.

1 Executive Summary

1. We welcome the opportunity to respond to this consultation which proposes a recovery mechanism for the costs that would be incurred by Openreach in delivering the fixed broadband element of BT's Universal Broadband Commitment (UBC) offer to Government.
2. Ofcom's consultation only addresses the cost recovery aspects of the UBC on the basis that BT reaches an agreement with Government and is thereby committed to delivering universal broadband under the terms of the agreement. This response addresses these cost recovery issues. Openreach, as well as BT Group, will also be responding to a separate DCMS consultation on a possible USO approach to increasing broadband availability.
3. Openreach believes that BT's UBC proposal represents the most efficient and cost effective means of delivering a 'backstop' 10Mb/s broadband service across the UK and is pleased to be part of this solution. Our investment is pro-competitive and will increase the reach of our open access wholesale network delivering benefits to telecom providers that use our network and their customers.
4. As Ofcom acknowledges, it is reasonable that Openreach be allowed to recover its efficiently incurred costs in taking broadband out to the most challenging areas of the country. In order to meet BT's commitment to Government, coverage of the fibre access network will be extended and the services provided over the enhanced network will fall within the wholesale local access market; the investment is also likely to occur within the forthcoming review period.
5. We are keen to commence deployment as soon as possible in order to deliver the benefits to customers and meet demanding Government targets. Therefore gaining early certainty on both the solution and cost recovery is important
6. We agree with Ofcom that the most appropriate means of recovering Openreach's costs is through an uplift on all broadband lines, both copper and fibre. This provides a broad base for cost recovery, ensuring that the pricing uplifts proposed for this charge control are small (under 20p per month per line). There are also arguments for spreading the costs beyond the direct beneficiaries due to the wider societal benefits from greater inclusion and access to learning that the network enhancement will provide. Using the WLA charge controls as the cost recovery mechanism is pragmatic and relatively straightforward, compared to the complexities of establishing and operating a USO fund.
7. Ofcom proposes cost uplifts only for the 3 years of the WLA Charge control currently under review. However, given Openreach's investment is mainly capitalised, we will also need to recover the bulk of our costs, primarily depreciation, through subsequent charge controls. In fact, only just over 10% of Openreach's incurred costs will actually be recovered during the forthcoming 3 year review period under Ofcom's proposals.
8. Ofcom agrees in principle that these remaining costs can be recovered through future charge controls (i.e. those set for the 3 year period commencing April 2021 and beyond)but is unable to give details of how this will work, raising an obvious risk for our UBC financial case. Whilst we recognise that it is not possible to be y prescriptive over the detail of future charge controls at this stage, we do need as much as certainty as possible that the entirety of Openreach's efficiently incurred UBC investment can be recovered through future charge controls. In this response we suggest how Ofcom could provide greater certainty such that Openreach can have the legitimate expectation of full recovery of the efficient long-run incremental costs of network expansion.
9. Ofcom has undertaken some complex modelling with support from Cartesian in order to estimate the likely number of eligible sub-10Mb/s premises, likely technology mix and hence the costs of addressing these. We have had some difficulties understanding all aspects of this modelling and do not agree with all the assumptions made but, broadly, we agree that the results are reasonable. We do, however, make some suggestions as to how the modelling could be improved in order to deliver more robust estimates.

IN CONFIDENCE

10. The key uncertainty is the number of sub-10b/s premises that will need to be addressed via the UBC solution, given particularly the potential for other public funding schemes (BDUK and equivalent) to impact the number of these lines. Ofcom has modelled this using the latest available Connected Nations data and BT and Openreach have also produced a best estimate, based on our own planned deployments, both commercial and non-commercial, as well as public domain information on other companies' roll-out plans. We broadly agree with Ofcom's approach but Government needs to conduct an Open Market Review (OMR) exercise as soon as possible to provide a robust update.
11. Under Ofcom's base case scenario, Openreach would deliver the fixed broadband element of the UBC through a combination of FTTC and FTTP. This is a reasonable base case assumption but it should be noted that Openreach is evaluating whether Long Reach VDSL (LR-VDSL) technology could play a role in delivering the UBC commitment. We are grateful to communications providers for their responses to the recently closed industry consultation on LR-VDSL. These have raised a number of concerns and challenges which need to be considered carefully. Ofcom does model a scenario that includes LR-VDSL but the technical and cost recovery assumptions modelled for this option need to be refined, particularly to reflect CP requirements for compensation and other costs and foregone revenue associated with the migration of affected copper services. Were Openreach to use LR-VDSL to meet agreed UBC targets, Ofcom should update its modelling accordingly.
12. We generally support Ofcom's costing methodologies as being appropriate for the UBC. We do however have some concerns over Ofcom's use of the Weighted Average Cost of Capital (WACC) deemed appropriate for the copper access network. We accept the logic of Ofcom's arguments that investment risk is reduced given the cost recovery mechanism proposed, but it remains the case that there is no direct equivalence between the risks for this project and that of the copper access network. The expansion involves higher capital leverage and longer term pay-offs than in the copper access network; and there are specific additional factors such as the risk of cost overruns and uncertain take-up in these hard to reach areas, in addition to the uncertainty over cost recovery through future charge controls highlighted above. Taken together, these risks justify a higher WACC than for the copper access assets. Openreach accepts that the more certainty that Ofcom can provide, and the more risks it can mitigate, the more able we are to accept a lower WACC than would otherwise be appropriate.

2 Identifying qualifying premises

Question 3.1: Do you agree with our approach to assessing the number of qualifying premises to include in our analysis? Please provide reasons and evidence in support of your views.

13. Ofcom has undertaken some complex modelling with support from its consultants, Cartesian, in order to estimate the likely number of eligible sub-10Mb/s premises. We have had some difficulties understanding all aspects of this modelling and do not agree all the assumptions made. However, we believe broadly agree with Ofcom's approach to estimating the number of premises that are likely to receive less than 10Mb/s service.
14. Ofcom and Cartesian have modelled this using the latest available Connected Nations data and BT and Openreach have also produced a best estimate this based on our own planned deployments, both commercial and non-commercial, as well as public domain information on other companies' roll-out plans..
15. However, we would stress the considerable difficulty in accurately estimating that amount of future build, which could therefore cause the volume estimate to vary. For example, future BDUK and other public funding options are largely un-scoped at present, implementation approaches are unknown (for example whether they will target more expensive or less expensive premises), and delivery timescales are highly uncertain. We note that public funding schemes in Scotland, Northern Ireland and Wales have been considered in Ofcom's assessment, but we are unclear as to the extent of that consideration and the potential amount of funding available that has been considered. We broadly agree with Ofcom's approach but Government needs to conduct an Open Market Review (OMR) exercise as soon as possible to provide a robust update
16. Publicly funded and commercial plans by all operators, including BT, are also subject to a high degree of risk. Rather than considering that all future plans are certain and will deliver over the timescale, we suggest that Ofcom should consider applying a risk factor associated with these future unknown plans which would guard against these being overly optimistic, or risk, by default, excluding these customers from benefitting.
17. We also have some particular concerns regarding the use of the Cartesian geo-spatial analysis for identifying the qualifying premises and how those results flow through the subsequent stages of Ofcom's modelling. We expect Ofcom to use this geo-spatial analysis to determine not only the approximate level of build required but also which premises may be covered in the future. Due to the nature of this analysis there is likely to be a high degree of variability that will either under or overestimate the number of premises. Determining which premises are likely to be covered via the geo-spatial analysis may result in assuming certain geographies or clusters of premises as being previously addressed or not. This could then have implications for the technology mix, and consequent costing, that is assumed in the next stage of Ofcom's analysis. We believe the individual stages of Ofcom's modelling can be improved and we would be happy to set out possible refinements in subsequent engagement.

3 Assessing the technology mix

Question 4.1: Do you agree with our approach to assessing the technologies and technology mix that should be used as the basis for calculating the costs of BT's proposed rollout? Please provide reasons and evidence in support of your views?

19. We recognise that Ofcom and Cartesian have undertaken some complex modelling in a short period of time, and this is in an early stage of refinement. We have experienced some difficulty understanding the detail of this modelling and have identified the following areas where this modelling could be improved:
20. **Calculation of the eligible sub-10Mb/s premises** Cartesian start with a figure of 2.4m premises from the 2016 Connected Nations data, which is then 'extrapolated down' to 785k with a technology mix that is then subject to a top-level adjustment to correct an erroneously high weighting of fixed wireless access (FWA). This approach could be simplified and improved by taking a more appropriate starting point and applying a different approach to technology selection. (see below)
21. **Network routing** The Cartesian model is purely based on radial analysis, and does not use routing techniques such 'snap to road' (follow roads and paths) as used within Cartesian's own WLA bottom-up fibre model, which we believe is a better approach
22. **Performance characteristics of the network** Our understanding is that Ofcom has used a previous Analysis Mason report and has not taken into account any particular cable fill, or gauge of cables in order to model the solution. These parameters can have an impact on the outcome, and potential solutions available.
23. **Selection of appropriate technologies by cost**
 - Copper re-arrangement (CuRe) to new, or existing cabinets has also not been taken into account. Within Openreach's modelling, some rearrangement to existing cabinets has been taken into account, as well as providing new cabinets, in order to provide a cost effective way of providing 10Mb/ps.
 - There are also no specific cost thresholds on an individual technology, with no limit placed on the costs of network 'fixes' to enable the use of particular technologies; however solutions such as VDSL2 and LR-VDSL are compared for cost, and the cheaper option chosen.
24. In general, we conclude that Ofcom has conducted a reasonable, yet incomplete analysis, given the uncertainties that still exist. We consider that some refinement is required to the Ofcom/Cartesian model and we set out below a brief comparison to the approach adopted by Openreach:
25. We set out, in Figure 1 below, Ofcom's modelling approach², showing the stages of modelling and analysis undertaken. An important difference is in the way the selection of technologies are made, with the (pre-adjusted) Cartesian modelling producing an incorrect technology mix with a higher proportion of FWA coverage.

² From Appendix 10, page 26, section 4.8 of Ofcom's consultation.

	1 Data preparation	2 Cabinet Technologies	3 Dense Clusters	4 Disperse Premises	5 Satellite Substitution
Technologies	<ul style="list-style-type: none"> All 	<ul style="list-style-type: none"> VDSL LR-VDSL (Optional) 	<ul style="list-style-type: none"> FTTP G.Fast (Optional) 	<ul style="list-style-type: none"> FWA (Optional) FTTP 	<ul style="list-style-type: none"> Satellite (Optional)
Illustrative Diagram					
High-Level Approach	<ul style="list-style-type: none"> Receive external files Consolidate information following Ofcom's guidelines Ingest consolidated data into the geospatial model 	<ul style="list-style-type: none"> Identify premises within reach of each cabinet technology Calculate cost of each cabinet technology Select the technology with the lowest cost per premise passed 	<ul style="list-style-type: none"> Identify clusters of premises with high density Calculate the cost of FTTP and G.Fast deployment for each cluster Select the technology with the lowest cost per premise passed 	<ul style="list-style-type: none"> Distribute FWA base stations to serve the remaining premises Incorporate premises from overlapping clusters if the base station has capacity Select FWA to serve these premises if it more cost effective 	<ul style="list-style-type: none"> For each premises, compare the cost of the chosen terrestrial technology with satellite Substitute with satellite if a satellite subscription is lower cost

Figure 1: Ofcom's modelling approach

26. This can be contrasted with BT's modelling approach set out schematically in Figure 2 below:

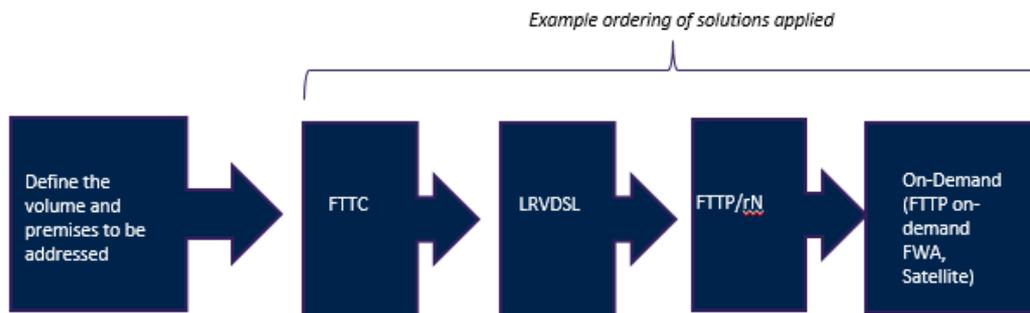


Figure 2: BT's modelling approach

27. The BT modelling approach can be summarised as follows:

- Openreach's approach is to provide as much coverage via fixed network solutions as possible (to 99% coverage) using FTTC, LR-VDSL, FTTP and CuRe.
- The aim is to maximise the solutions available to *specific* premises, rather than to serve geographic areas.
- *Specific* design and cost criteria is applied for each element of the technology solution
- We use our inventory network data to calculate the number of premises addressed within the cost threshold for the first technology. We then move onto the next technology that we specify. Any remaining premises would be addressed by on-demand solutions (e.g. FTTP on demand, FWA and Satellite) but these are not modelled for the purpose of deriving fixed network costs.
- We recognise that there is uncertainty around the costs, commercial viability and technical performance of LR-VDSL. As a result we have analysed scenarios with varying amounts of LR-VDSL to identify the most cost effective mix of technologies.

28. As indicated above, we believe that Ofcom has ensured that the overall outcomes of its multi-stage modelling are reasonable and these broadly align with our own results, but going forward, we believe the individual stages of Ofcom's modelling can be improved. Openreach would welcome any opportunity to engage with Ofcom and Cartesian to assist with the refinement of the modelling of technologies as part of this consultation process.

4 Approach to cost modelling

Question 5.1: Do you agree with our proposed approach to modelling the costs of BT's proposed network expansion? Please provide reasoning for your answer

29. In this section, we comment on Ofcom's approach to cost modelling. We generally support Ofcom's costing methodologies as being appropriate for the UBC. We do however have some concerns over Ofcom's proposed use of the Weighted Average Cost of Capital (WACC) deemed appropriate for the copper access network, and more generally the extent to which Ofcom's approach reflects the risks and uncertainty relating to the network expansion investment: we cover this below. We agree with Ofcom's general approach to modelling the costs for network expansion but have concerns over some of the details, which we cover later in this section.

Ofcom's cost modelling methodology

30. Ofcom sets out its approach to calculating the per line uplift for the year until 2020/21 in paragraph 5.2 of the Consultation. In summary, the approach is:
- To estimate the long-run incremental costs of deploying and operating the proposed network expansion using a bottom-up approach;
 - To deduct any incremental revenues that Openreach may derive from the expanded network, over and above those already projected in the WLA charge control, from the modelled network costs;
 - Thus to derive the net costs of the copper and fibre network enhancements necessary to deliver the proposed network expansion;
 - Then to use CCA depreciation as the method for determining how the costs will be recovered over time; and
 - To allow a return on capital employed on the network.

WACC

31. We do not agree that systematic risk for the network enhancement in question would be "*more akin to that in the provision of access lines in general*"³ (for which Ofcom has estimated a forward looking WACC at 8.0% pre-tax nominal in the March 2017 WLA Consultation).
32. In its discussion of risk, Ofcom recognises that capital leverage might be relatively high initially, but states that capex is low "*compared to the overall opex and capex associated with the base of lines from which it is proposed to be recovered.*"⁴ This comparison obscures the fact that Openreach would be embarking on an incremental project which has a higher capex / revenue ratio compared to that for the existing legacy network on which Ofcom proposes to set the WACC. As Ofcom accepts, "*investment in the proposed network rollout will mostly occur before 2021, implying that the project could have relatively high capital leverage initially.*"⁵ The risk associated with this capital leverage will not be captured in the WACC set for the legacy access network where 'business as usual' costs (largely maintenance) do not have this 'lumpy' structure. The relative size of the UBC and ongoing maintenance costs associated with the base of lines is not relevant in this regard.
33. The 'pay-offs' associated with this investment are of a longer term nature than the legacy network average. This is because most of the existing network is already partly-depreciated and thus the unrecovered capital will be recovered in the near term. For the network expansion, however, cost recovery occurs over a longer timescale (reflecting the economic life of the underlying assets which

³ Para 5.37

⁴ Para 5.41

⁵ Para 5.41.

IN CONFIDENCE

includes new duct)⁶ and will depend, therefore, on demand much further into the future. Although Ofcom is right that the recovery mechanism allows some cost recovery from the first year of the new controls (rather than waiting for demand to build) there is still a difference between legacy and new assets in their relative dependence on demand in the near and more distant future. The latter is inherently more risky given the possibility of more significant switching in the future to mobile broadband solutions. Put simply, it is not known how networks may develop (fixed and mobile) and to what extent it will remain possible to raise an uplift on regulated prices.

34. Both capital leverage and long term pay-offs are therefore distinguishing features of this proposed investment, and thus for its level of systematic risk when compared to that which applies to the legacy copper access network. A higher WACC than that for the legacy copper network should therefore apply.
35. More generally, Ofcom should ensure that its modelling captures (as appropriate) uncertainties relating to costs which cannot be known with accuracy as some of the locations to be served may be exceptional in ways not yet fully understood, and therefore could be more costly to serve than anticipated.

Cost recovery profile

36. A further issue with Ofcom's proposed approach is that only around 10% of the costs of the network expansion will be recovered by 2020/21 (i.e. at the end of the three year review period), meaning that most of the cost recovery (around 90%) will have to occur in periods beyond that currently being considered by Ofcom.
37. There is clearly a need then for Ofcom to provide as much clarity as possible that, in the years beyond 2020/21, Ofcom will continue to follow a consistent approach to that adopted for the first three years. Openreach does not consider that this is provided by Ofcom in the consultation as this is restricted to a single comment in paragraph 5.4 that:
38. *"...we anticipate that we would treat the costs incurred in this particular network expansion consistently with the approach we use in the next charge control relating to BT's costs in general, and consistent with our principle of allowing the expectation of the recovery of efficiently incurred costs."*
39. This creates a **regulatory risk** because Openreach does not know how Ofcom might perceive the efficient level of costs in future periods
40. Ofcom should therefore provide as much certainty as possible so that the risk for Openreach is minimised. One way Ofcom could do this is to expand on its comments in paragraph 5.4 in such a way that they provide an unambiguous guide for use in future periods. Openreach therefore invites Ofcom to confirm that:
 - Openreach can have the legitimate expectation that Ofcom will continue to apply the approach summarised in paragraph 5.2 of the Consultation above in future periods (unless Openreach and Ofcom agree to amendments, following consultation as may be appropriate);
 - Openreach can have the legitimate expectation of full recovery of the efficient long run incremental costs of network expansion over the lifetime of the recovery programme; and
 - recovery will continue to be calculated as an uplift on all broadband enabled lines.
41. Openreach suggests that, in future reviews, Ofcom considers a standard 'RAB (Regulatory Asset Base) approach' as a tool to ensure the recovery of the invested capital, including an appropriate rate of return, to investors over the life of the assets. This would evolve over time by adding to the RAB any new investment undertaken in any given year and by deducting depreciation recovered through charges.

⁶ New duct has an economic life of 40 years but it will not be until these ducts have been fully depreciated that the cost recovery will be complete i.e. somewhere in the 2050s.

IN CONFIDENCE

42. The more certainty that Ofcom can provide, and the more risks it can mitigate, the more able will Openreach be to accept a lower WACC than would otherwise be appropriate

Cost standard

43. We agree with Ofcom that for the purposes of modelling the costs of network expansion, it is appropriate to use a LRIC standard with no mark up for common costs. However, it is important that common costs are then correctly modelled and assigned within the WLA charge control models; we have separately highlighted some issues with Ofcom's proposed approach in our response to Ofcom's WLA charge control proposals.

LR-VDSL migration costs

44. Under Ofcom's base case scenario, Openreach would deliver the fixed broadband element of the UBC through a combination of FTTC and FTTP. This is a reasonable base case assumption but it should be noted that Openreach is evaluating whether Long Reach VDSL (LR-VDSL) technology could play a role in delivering the UBC commitment. We are grateful to communications providers for their responses to the recently closed industry consultation on LR-VDSL. These have raised a number of concerns and challenges which need to be considered carefully. Ofcom does model a scenario that includes LR-VDSL but the technical and cost recovery assumptions modelled for this option need to be refined, particularly to reflect CP requirements for compensation and other costs and foregone revenue associated with the migration of affected copper services. Were Openreach to use LR-VDSL to meet agreed UBC targets, Ofcom should update its modelling accordingly.
45. We note and support the fact that Ofcom intends to include migration costs resulting from LR-VDSL as part of the cost recovery mechanism, but are concerned that, in paragraph 5.19, Ofcom specifically excludes modem costs. We agree with Ofcom that telecom providers may choose to use their own modems (as opposed to Openreach's) as they currently do when delivering SFBB services: in fact we expect the majority of our CP customers to opt for this option. However, we still expect CPs to seek recovery from Openreach for all incurred costs, including modems, to support transition to LR-VDSL.
46. A large proportion of current ADSL customers do not have VDSL-compatible modems and a replacement will be required in advance of migrations. CPs typically recover the modem replacement costs with one-off activation fees and/or ongoing rental. However with LR-VDSL, CPs will not be able to recover costs directly from end customers as replacement services will be provided at no extra charge. CPs will also incur development and testing costs to enable modems to support LR-VDSL and this is necessary to realise the LR-VDSL speed uplift benefits compared to standard VDSL.
47. For these reasons, we believe that should LR-VDSL be deployed, Ofcom should allow modem costs to be recovered in the WLA via the proposed UBC cost uplift. We do not agree with Ofcom on the viability of separate commercial arrangements with telecoms providers without provision for the resulting costs in the WLA charge control.

Cost modelling approach

48. We agree with Ofcom's general approach to modelling the costs for network expansion but have concerns over some of the details. As indicated above, we recognise that Ofcom and Cartesian have undertaken some complex modelling in a short period of time and that Ofcom has ensured that the overall outcomes of its multi-stage modelling are reasonable but going forward, we believe the individual stages of Ofcom's modelling can be improved.
49. As covered above, the volume of premises calculated by Cartesian form the basis of Ofcom's modelling, to which Ofcom then makes adjustments, which bringing the premises volume more in line with those that BT has identified as requiring network expansion, albeit there are still some variances. The method used to adjust for premises also results in a technology profile which differs from the BT/Openreach modelling.

IN CONFIDENCE

50. The mix of technologies forecast to deploy the network expansion necessary to deliver 10mb/s to the premises is therefore very different to that which BT has profiled and subsequently the unit economics are also very different. This is important because, as covered above, there is no certainty over the mechanism for cost recovery beyond the current proposed charge control and there is a risk that any shortcomings of this modelling approach will have implications for cost recovery beyond this charge control.
51. While the exact requirements for the regulatory financial reporting for network expansion are still to be determined, it is nevertheless a concern that with a derived capital spend and a mix of technologies that are not reflective of volume driven numbers, the integrity of the reporting may be compromised. Further, progress against the UBC objectives may be extremely difficult to track for stakeholders and this in turn could lead to inappropriate corrections to cost recovery beyond 2020/21.
52. We do however believe it is relatively straightforward to modify the Ofcom models to address the points made above, and we would be happy to work with Ofcom on this as part of this consultation.

5 Approach to cost recovery

Question 6.1: Do you agree with our proposal to recover the costs over all broadband lines?

Question 6.2: Do you agree with our proposed approach to implementing recovery from all broadband lines?

53. We agree with Ofcom that the most appropriate means of recovering Openreach's costs is through an uplift on all broadband lines, both copper and fibre. This provides a broad base for cost recovery, ensuring that the proposed pricing uplifts are small (under 20p per month per line). There are also arguments for spreading the costs beyond the direct beneficiaries due to the wider societal benefits from greater inclusion and access to learning that the network enhancement will provide. Using the WLA Charge Control as the cost recovery mechanism is pragmatic and relatively straightforward, compared to the complexities of establishing and operating a USO fund.
54. We also agree with Ofcom's proposed approach of having two FTTC prices; one when FTTC 40/10 is taken with WLR or on its own, and another when FTTP 40/10 is purchased with MPF. However, we do not believe that Ofcom's approach to implementation within the legal instrument Condition 7B is the best way to achieve their proposal. We believe there are two ways that Ofcom could charge control the two prices of FTTC 40/10:
- a) Set a charge control for FTTC 40/10 sold with MPF, with a charge ceiling in year one of the control and a CPI-X control thereafter (as per the original WLA Charge Control legal instrument). Set a price for FTTC 40/10 sold on its own or with WLR to be a fixed amount above the other FTTC charge, with the fixed amount being different in each year (namely, £0.39, £1.19 and £1.93).
 - b) Set a charge control for FTTC 40/10 sold with MPF, with a charge ceiling in year one of the control and a CPI-X control thereafter (as per the original WLA Charge Control legal instrument). Set a price for FTTC 40/10 sold on its own or with WLR with a charge ceiling in year one of the control and a CPI-X control thereafter. The level of X is calculated so that the difference between the two FTTC prices will be the modelled amount of cost recovery.
55. By proposing the second approach, Ofcom has chosen the option that will lead to the cost being over or under recovered depending on the rate of inflation. We believe it would be better to adopt the first option, which will always lead to the modelled costs being exactly recovered on each line.