Ofcom Wholesale Fixed Telecoms Market Review 2021-26

Response by Jurassic Fibre Limited

This response to Ofcom's consultation on its Wholesale Fixed Telecoms Market Review comes from Jurassic Fibre Limited ('Jurassic').

Jurassic is a full-fibre broadband provider focussed on bringing the best ultrafast connectivity in the UK to the underserved communities and businesses of the South West, and in particular Devon, Dorset, Somerset and Cornwall. This will secure the region's reputation as the best place to live, work and holiday in the world, and provide a platform to attract inward investment to seaside and rural communities that have traditionally have been allowed to fall behind the rest of the UK.

Jurassic's reference architecture is based on those of tier 1 telecoms operators: reliable and scalable, while supporting quad play and B2B services. This represents a sea change within the region more usually treated as an after-thought by the UK telecoms industry.

Jurassic is currently completing its Phase 1 build to the East of Exeter covering ✂ premises. Its Phase 2 plans are Board approved and underpinned by the securing of ✂ km of dark fibre to support the roll out of 22 points of presence, expanding the network footprint to ✂ premises across the region by 2026 Phase 3 of the project is under review. Further expansion is under discussion with a view to increasing coverage by an additional ✂ premises in areas contiguous to Phase 2, with similar economic characteristics with approval and construction expected to start in 2021

Jurassic is part of the Fern Trading group ("**Fern**") which is advised by Octopus Investments, an alternative investment group that has £8 billion under management. Fern has committed £500m to build two fibre networks, including Jurassic in the UK.

2. KEY POINTS

- **Ofcom has drawn Area 2 too narrowly**. It has relied on incomplete operator data. Jurassic has annexed details of our Board approved plans to build fibre to ✂ premises over the next four years (our "initial build plan"). Of these, ✂ premises currently lie in Area 3. These must instead be included in Area 2. In addition, Jurassic is reviewing a Phase 3 build of approximately ✂ premises to start in 2022 and complete by 2026, in areas contiguous to Phase 2, and of identical economic potential.

- **If Ofcom persists with its Area 2 definition, this should include _all_ premises which are economically viable** ("economically viable premises"). We are targeting all the economically viable premises in our target areas all of which are currently classified as Area 3.

- **Jurassic will not build to economically viable premises if they are not classified as Area 2.** Jurassic has identified ✂ economically viable premises in its target geography, all of which lie in Area 3. Ofcom's proposals risk Jurassic failing to pass any of these premises.

- **This highlights that Ofcom's methodology for defining geographic markets is flawed**. Markets should distinguish areas which are and aren't economically viable, and therefore have different competitive characteristics. This should be determined by modelling (or by dynamically reclassifying as economically viable, any location where an altnet builds).

- **If, however, Ofcom persists with its methodology for defining geographical markets**:

  - **A. Its Area 2 proposal to ban geographic price discounting should help support fibre build**, provided it redraws the Area 2 boundary to include committed and forecast credible build plans;

  - **B. Its Area 3 proposal to allow geographic price discounting will disincentivise altnet build** if it does not redraw Area 2/3 boundaries; and

  - **C. Its Area 3 wholesale fibre price uplift remedy proposal is unlikely to incentivise BT**. BT is more likely to continue to deploy mostly in Area 2.

- **If altnets withdraw from Area 3, BT is unlikely to build there instead**. BT's plans cover only a tiny proportion of Area 3. Its track record of rural build is poor compared to altnets; the vast majority of its deployment is in Virgin areas. This is where it makes the greatest returns.

- **Ofcom's concerns about altnet build in Area 3 are unfounded:**

  - A. Recent history shows that **altnets are much likely to go deep into the more rural parts of Area 3 than BT is**, given a fair playing field.

  - B. The current fibre investment goldrush demonstrates that **risks of insolvency are negligible**; cable industry history shows consumers did not experience service loss following insolvency. Ofcom could seek powers to appoint a provider of last resort if it is concerned on this point.

  - C. **Consumers already have a choice of ISP in almost all potential fibre areas** - this comes from the wholesale obligations on BT's copper/FTTC network in the same area. Exactly the same applies in current Virgin Media areas.

- **BT must be fully transparent about its fibre build programme. Without this, altnets will be cautious about where they deploy, in anticipation that BT can overbuild unannounced.**

Introduction

1. It is vital that the UK secures nationwide ultrafast broadband infrastructure to enhance the lives of its citizens and consumers, and to drive productivity and competitiveness. Both retail and business demand is booming, with new bandwidth-hungry applications driving willingness to pay for faster services.

2. We are at an inflexion point in national capacity to meet this demand. In the past year major investment has poured into the altnet sector. The engineering workforces of both BT and its commercial rivals have expanded and upskilled. The Government has committed £5bn to fund gigabit-capable[1] deployment in the hardest to reach areas.

3. If Ofcom gets the policy framework for this market review right, it can create conditions which incentivise telcos to connect a majority of the country's businesses and households with ultra-fast networks within the next five years. Decisions taken now will also determine what happens when BT's copper network is switched off, due in the next review period.

Ofcom's approach to encouraging investment in fibre

4. Ofcom's approach to securing this investment is to split the country into three geographic areas where it considers that conditions for competition differ: those where there is already significant fibre competition (Area 1); those where commercial deployment by non-BT networks is or could be economic (Area 2); and those where commercial deployment is unlikely without public intervention (Area 3).

5. Ofcom's aim is to find the best way to encourage investment in Areas 2 and 3 within the review period, through competition where viable. Its tools for achieving this are largely limited to the creation of obligations on BT, under the Significant Market Power framework, to provide access to its upstream and downstream network infrastructure through regulated wholesale prices.

6. Ofcom appears to believe that the most efficient way to secure UK-wide fibre coverage using these tools is to incentivise BT to invest in Area 3, and alternative network ('altnet') providers to invest in Area 2. Before considering whether these incentives are likely to work, we now comment on Ofcom's overall approach to defining geographic markets.

The problem with relying on operator forecasts to define geographic markets

7. BT and the altnet sector follow similar approaches when planning fibre deployment. For each location, they model revenue and costs by examining factors such as socio-demography, population density, and the quality of existing upstream infrastructure. Using this methodology, altnets typically see commercial potential in more locations than BT does, because they are more nimble and can sometimes deploy more cheaply.

8. Both BT and altnets then create rough forward deployment plans, based broadly on where they think they can generate the greatest returns from their limited build capacity. The further

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[1] Ofcom notes that fibre networks will support the delivery of other ultra-fast broadband technologies, such as 5G and fixed wireless. It includes these networks within the term 'fibre'. We think Ofcom's thinking could be clearer if it focused on promoting positive consumer outcomes rather than the enabling technology. This could lead it to use either the generic term 'gigabit-capable' networks, which the UK government seeks to promote, or 'Very High Capacity Networks' ('VHCNs'), which Ofcom has a duty to promote under the forthcoming European Electronic Communications Code Directive.

forward they look, the less certain their plans. The deeper they go into the commercially viable areas, the lower the likely returns, and so the later they tend to build.

9. For this review, Ofcom has relied on operator forecasts created in this way to determine where build is likely between now and 2026. For reasons set out below, we believe this underestimates the *scale* of likely build, and gives a false view of *where* fibre will be laid.

10. Deployment plans are highly dynamic. Targets change as new site survey information is received, and negotiations with planning departments stall. Operators do not plan in a vacuum. They respond to the market and to regulatory interventions. Other things equal, they are less likely to build in places where they see a competitor building, or where BT could come in at any point and undercut them. At the very least, these locations will move further down their list of targets, potentially beyond the period under review by Ofcom.

The need for regulatory modelling of the economic viability of deploying fibre

11. A more accurate way to encapsulate and respond to this dynamism would be for Ofcom to conduct its own analysis of areas suitable for commercial build. This would allow it to remove the assumptions about regulatory and competitor behaviour which are built in to the plans which operators have provided to Ofcom, and which underpin its calculations.

12. It appears that Ofcom considered but rejected this approach. It proposed cluster analysis to identify geographic areas of sufficient size and density to make them attractive for fibre deployment, but then discarded this on the grounds that it risked being overly speculative[2]. Ofcom said it would reconsider if it found that Virgin and City Fibre's actual build plans prior to its WFTMR statement differed from those they had shared with Ofcom.

13. We urge Ofcom to look again at this.

- Economic modelling is the only way to determine commercial viability. It identifies where build is possible, not where operators say they think they might build based on the highly limited information they have about what the market will look like in five years' time. It is less "speculative" than most operator plans, particularly after the first couple of years.

- It removes reliance on Ofcom having a complete operator dataset. In this response, we attach data showing our fully funded plans to build past ✂premises that lie within Ofcom's Area 3, ✂of which in the BDUK intervention areas.

- It allows for the possibility that new players with new business models may enter the market during the review period, and cover areas which Ofcom previously thought uneconomic.

- By considering the commercially viable market as a whole, it removes the weight that Ofcom places on rollout data provided by BT, City Fibre and Virgin. (We do not accept that there should be any difference in the "materiality" of proposals made by these multi-service geographically-dispersed networks when compared to single-service broadband networks).

- It eliminates the effects of regulatory gaming in provision of data by operators.

- It allows Ofcom to take a long-term view of build potential which includes the *next* market review period, and use this to design interventions which encourage bringing forward

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[2] WFTRM Vol 2, 7.34.

deployment of commercially viable but less attractive areas within *this* market review period. This aligns with the Government's 'outside-in' strategy.

- It avoids the false delineation created by taking a five-year view, as opposed to, say, a seven- or a ten-year view.

- It allows Ofcom to rank locations according to their commercial viability.

A better approach to defining geographic markets

14. In our view, Ofcom could encourage a more efficient and targeted deployment of the nation's resource-constrained fibre build by defining just two markets:

   A. Areas where commercial gigabit-capable deployment is viable according to Ofcom modelling; and

   B. Areas where modelling shows subsidy is required.

   Ofcom should assume that *everywhere* is in Area A unless it has evidence to the contrary. Ofcom should not be concerned whether it is BT or altnets which build in either Area.

15. We believe Ofcom modelling would show that the vast majority of the UK - certainly well over 95% of postcodes - could support at least one giga-bit capable network on a commercial basis, i.e. would lie within our proposed Area A. We think most could support two or more.

16. The *maximum* size of Area B should be the BDUK intervention area. However, we believe that the commercially viable fibre footprint extends far into this area[3]. In many locations, BDUK funding doesn't *create* the fibre business case. Instead, it incentivises providers to *bring forward* deployment in areas which, while commercially viable, generate lower commercial returns than other viable areas. Without such an incentive, operators would leave these areas till last, because there is an opportunity cost to deploying their limited resources, such as labourers, network designers, and engineers.

17. This is well demonstrated by the 'CDS' programme. This offers public funding for fibre deployment to ✄ premises in Somerset and Devon. JFL plans to build in ✄ of these premises on a purely commercial basis, with no recourse to CDS funding. However, public funding will bring forward JFL build to areas which it might otherwise have left till last.

18. We believe that the existing BDUK funding programme already provides sufficient incentives for operators to build in the non-viable (Area B) and least viable areas (within Area A). However, to the extent that Ofcom sees a need for additional *regulatory* incentives in these locations, these should target altnets and BT equally. They would compete openly outside of these intervention areas, subject to Ofcom checking BT's dominance by preventing it from stifling competition through offering geographic price discounts or undercutting competitor wholesale prices.

19. This would align Ofcom's strategy much more closely with that of BDUK. It would allow regulatory incentives to work in tandem with Government financial incentives to deploy in both uneconomic, and economic but unattractive areas.

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[3] For example, our current trials connecting 5G signals to a local fibre ring, suggest we could bring ultra-fast capability to *every single house and business* in the counties of Devon and Somerset on a commercial basis. This does not yet appear in our five-year build plans or in Ofcom's analysis. But if Ofcom conducted a modelling exercise, it could take the commercial potential of areas such as this into account.

20. Ofcom should not seek to second-guess whether BT or altnets are more likely to build in these locations. Both are commercial providers with the same commercial incentives. Yet by defining Area 3 locations as those where material commercial deployment is unlikely "by rival networks to Openreach", Ofcom appears to believe there are swathes of the country where Openreach is the more likely to deploy. This is untrue. It is altnets, not BT, which have the track record of going further into some parts of the least commercially attractive areas, and who can sometimes do so more cheaply than BT. Both have an equal incentive to bid for Government funding to cover the uneconomic areas.

Contrast with Ofcom's approach

21. Let's contrast this approach with Ofcom's proposed approach to defining geographic markets. Ofcom draws a huge intervention area of 9.2m premises where it believes "material" non-BT commercial network deployment is "unlikely", based on operator forecasts, rather than modelling. It seeks to incentivise BT, rather than the equally capable altnet sector, to build in this area, by allowing it to offer geographic price discounts which could undercut rivals, and to charge higher wholesale prices for fibre than copper access.

22. The problem with this approach is the risk of regulatory failure. If Ofcom's interventions turn out *not* to incentivise BT sufficiently to invest in upgrading Area 3 from FTTC to FTTP (because it believes it can make greater returns doing this in Area 2), then millions of households could find themselves without fibre. In other words, unless Ofcom is *absolutely certain* that its proposals incentivise BT to prioritise Area 3 build, it risks leaving vast holes in the UK's fibre footprint.

23. BT's current behaviour must cast doubt on the extent to which any incentives in Area 3, financial or regulatory, will work in practice. Analysis of the Fibre First Programme shows that 90-95% of BT premises won't lie in Area 3. Instead, they will lie in Areas 1 and 2, and, more specifically, in Virgin Media areas. This is logical, as Virgin Media is the dominant ultrafast network in the UK. In addition, BT has frequently chosen not to bid for BDUK funds in rural areas - certainly in the case of the CDS programme. There is no reason to believe that Ofcom's regulatory incentives in Area 3 will be more effective than BDUK's economic incentives.

24. Moreover, Ofcom's proposed remedy *disincentivises* altnets from building in Area 3 *even if* Ofcom's view that commercial build is unlikely turns out to be wrong. We know from experience that wherever we announce an intention to build, Openreach often immediately builds in the same location even though it had not previously planned this. If it was given regulatory approval to apply geographic discounts, we would expect more of this. The mere threat of BT overbuild and undercutting could deter us from deploying[4].

25. As a case in point, we can look at Budleigh Salterton, which was included in the BT 227 Rural Build Programme. JFL had planned to build Budleigh Salterton commercially starting later this year, as well as the surrounding villages of Otterton and East Budleigh. BT has no such plans to build the surrounding villages. Even though it is unclear when (or if) BT will finally start to build in Budleigh Salterton, the fact that it has announced its intention means we will no longer build there. But it also means that the surrounding villages are likely to be stranded for many years to come.

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[4] In theory BT's forward-looking build transparency policy might provide some insurance against this, but in practice it has exempted up to 4m households from this policy, through its 'Newsites Retrofit' programme, for houses built in the past 30 years.

26. To be explicit on this point, if Ofcom pursues this approach to regulation, whether through the Regulated Asset Base approach or the Forecast approach (whereby BT would commit to a minimum number of premises), we will have to scale back our total investment in UK fibre from ✄m to ✄m, and reduce the number of houses we pass from ✄ to ✄. as the villages surrounding the core towns would no longer be economically viable

27. By drawing the Area 3 boundary so wide, Ofcom has created a single intervention approach for a heterogenous market, which ranges from the most dispersed of rural locations (with either no fibre or fibre to a sub-cabinet), to small towns (with their own fibre-connected exchanges). To the extent that Ofcom's incentives work, BT will use them to cherry-pick the most commercially attractive Area 3 locations - the very places that altnets might otherwise have built.

28. Ofcom's distinction between areas where only BT is likely to deploy and other areas is a false one. BT is a commercial player, just like most altnets. It is as likely to build in any commercially viable location as any other provider, although altnets have a stronger record of building in more rural and difficult-to-reach areas. BT behaves rationally, by building in the most affluent and densely populated areas, in order to maximise returns on its investments. The 2.575m homes it has passed with fibre so far are almost entirely in Ofcom's Areas 1 or 2. Beyond this, it chooses to invest its money on sports rights, not in charitably passing millions of uneconomic homes.

29. Its reward for this approach should not be the gift of a regulatory competitive advantage which might or might not incentivise it to pass the most commercially viable of the 9.2m Area 3 households, but which will certainly disincentive altnets from passing any of them.

Why does Ofcom favour Openreach over altnets in its Area 3?

30. If the objective of the WFTMR is to incentivise investment in full-fibre networks, it should make no difference to Ofcom whether it is BT or altnets which deploy. Yet, when it comes to Area 3, Ofcom openly favours Openreach investment over altnets and is distorting the market to encourage this. We understand from INCA that Ofcom has given three concerns over Area 3 altnet investment which underpin this approach.

- **Lack of ubiquity in altnet deployments.** Ofcom is concerned that altnets would cherry-pick the most commercially attractive Area 3 locations, leaving other parts unserved. However, as described above, BT has the same financial incentives to do this as altnets. In fact, as altnets are leaner and more nimble, they are more likely to build deeper into Area 3 than BT.

  Furthermore, the investment to date and future build capacity of the altnet sector is as large as BT's, and they have greater experience of building in rural and semi-rural locations. In the case of JFL at least, there is a track record of systematically using the most attractive areas to subsidise the build of less attractive surrounding areas. This is not the case in BT's rural build programmes, where it focuses almost exclusively on the locations offering the highest returns.

- **Service continuity risks (provider of last resort).** We believe this risk is negligible. Many altnets - even smaller players - are now backed by substantial investors. This lessens the risk of insolvencies. Even where insolvency occurs, we believe a buyer is likely to be found. When smaller players in the highly fragmented cable industry of the 1990s entered financial difficulties, they were simply snapped up larger players, almost always without insolvency or loss of service to consumers. The large premiums paid in recent transactions demonstrate

that the market for full fibre providers now is as vibrant as it was previously for cable providers. Few predict this will change over the coming years, as the industry consolidates. JFL has been designed with a reference architecture that is typically used by tier 1 operators: reliable, scalable and supporting quad play and B2B services. In extremis, it would be relatively easy to integrate into the network of an established operator such as BT, Virgin Media or CityFibre.

Nevertheless, to the extent that any problem does exist, Ofcom could seek powers - similar to those of Ofgem in the energy industry - to intervene to appoint a provider of last resort in the event of an insolvency. We are also happy to explore the development of common standards and interfaces with other fibre providers, with the aim of facilitating takeovers if the need arises.

- **Lack of retail choice**. It is important that consumers have a choice of ISP. However, wherever altnets deploy, choice is *always* guaranteed through the regulated wholesale obligations on BT's copper/FTTC network in the same area. In exactly the same way, Virgin Media does not currently offer wholesale access to its network, but customers within its footprint always have a choice of ISP from the BT network in the same area.

We have a natural incentive to ensure that, in any area where we deploy the only fibre network (alongside BT's copper network), we explore all options for commercially viable wholesale access. Without this, there will always be sections of our addressable customer base - those who want audio-visual services provided by Sky, Virgin or BT for example - that we cannot attract. This incentive is implicitly acknowledged by Ofcom when it discusses the scale of potential altnet deployments, and says that "these rely to differing extents on ... ability to wholesale access to retailers"[5].

- Although many small providers exist across single-network areas, it is possible that an aggregation platform could consolidate these networks into a single large network for wholesale access purposes. We are confident that, with the support of Ofcom and retail ISPs, a solution can be developed that will address any concerns Ofcom may have in relation to wholesale access in locations where only altnet full-fibre networks are deployed.

Treatment of MSNs

31. As set out above, we disagree that Ofcom should treat the rollout plans of single service broadband providers and "Multi-Service Networks" any differently. However, if it insists on doing this, then Ofcom should treat Jurassic as an MSN and not as a single-service network. This is on the basis that we comply with Ofcom's MSN criteria:

- our networks cover both business and residential customers;
- our combined planned footprint during the review period will cover over ✂ premises across much of the South West of England; and
- we offer a wide range of services including both leased lines and broadband.

32. Our network is arguably the most advanced currently being deployed in the UK , enjoying a network architecture usually associated with tier 1 operators, and capable of supporting residential, 5G and B2B services across any part of the access network estate, while

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[5] WFTMR Vol 2, 1.28

underpinned by a series of core fibre rings anchored by redundant links to the telehouses in London.

33. Furthermore, we do *not* fulfil Ofcom's criteria for non-MSN single service WLA providers. "*These tend to be networks with a targeted business case, for example to serve MDUs or to target rural areas, perhaps using public funding or support from the local community*"[6.] We target both urban and rural areas, provide leased lines and WLA, and, while we will bid for public funding where appropriate, our current plans are solely funded by commercial investment.

Dynamic reclassification between Area 2 and Area 3

34. We have set out above our view that Ofcom should not distinguish between areas where fibre deployment by providers other than BT is and isn't likely, and should not use operator data to determine this. Instead, it should distinguish between areas where fibre deployment is and isn't *commercially viable*, whether by BT or altnets, and should use its own modelling to determine this, including an assessment of the relative attractiveness of those areas which are viable.

35. Notwithstanding this, if Ofcom persists with its proposed approach to geographic market definition, it has rightly recognised the limitations of using operator forecasts to determine the boundary between Area 2 and Area 3. It has said it would need to consider updating its analysis if, before it publishes its statement, new altnets come to market, or networks which currently only provide broadband services start to provide leased lines, or if actual build by larger players differs significantly from forecasts provided to Ofcom[7]. We strongly believe that this analysis should be updated to take account of Jurassic's build programme in the South West, and that this should be placed in Area 2.

36. However, drawing a line in the sand at the date of statement publication in this way lacks flexibility. Consider a new player offering to pass, say, 3 million Area 3 homes immediately *after* Ofcom's statement, but only if Ofcom removed BT's ability to apply a geographic price discount in these areas. Under Ofcom's static approach to market definition, it could not consider and respond. The UK would potentially find itself with 3 million fewer fibre homes in rural areas during the review period. At the very least Area 3 coverage would slow down.

37. We understand that Ofcom works to a 5-year market review cycle, and needs to provide regulatory certainty where possible. But it cannot deliver on its objective to maximise fibre coverage if it is unable not respond to market changes of this nature. This is easily fixable by two means:

   A. Ofcom could automatically reclassify any Area 3 location as Area 2 as soon as any altnet completes build in it without state support. It is nonsensical to describe an area as one where "there is unlikely to be material commercial deployment other than by BT", when an altnet has, in fact, deployed there on a commercial basis. This dynamic approach to classification would incentivise altnets to build in locations which Ofcom has included within Area 3. They would do so without fearing immediate reactive overbuild and application of geographic price discounting by BT.

   B. Ofcom could automatically reclassify any Area 3 location as Area 2 as soon as it becomes entitled to BDUK financed build rollout. It would be nonsensical for Ofcom to duplicate BDUK's fiscal incentives, even in a different for, especially where Ofcom's incentives to BT

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[6] WFTMR Vol 2, 7.14

[7] WFTMR Vol 2, 7.21

to overbuild BDUK intervention areas actual increase the costs of that intervention to the UK Exchequer.

C. Ofcom should update its geographic market definition annually with a review of actual deployments and updated proposals.

BT fibre build transparency

38. Altnets will invest more in fibre if they know where Openreach is going to build. Openreach is generally transparent about its proposals, publishing build plans up to 18 months in advance, for its Fibre First and 227 villages programmes.

39. However, it does not publish equivalent plans to deploy under its "*Newsites Retrofit Programme"*, nor has it published the details of this programme beyond a recent statement of its existence. Openreach has told us that this accounts for around 10% of its current FTTP build, usually in small areas with newer housing stock, although this has since been defined in writing as including "the 1980s", which appears inconsistent with the recent statement that homes in the programme are "predominantly" up to ten years old. It means that altnets can start building in the belief that Openreach will not build within the next 18 months, only to find it arriving unannounced under the Newsites Programme.

40. Ofcom can encourage altnet investment by requiring Openreach to be transparent about its *entire* build programme. There is no logistical barrier to this; its 227 programme already includes build plans for tiny hamlets. There will always be operational reasons why Openreach, like altnets, makes late changes to its proposals. But Ofcom should require it to set out clearly when and why this is permissible, and should rigorously enforce adherence to these principles, requiring it to publish explanations whenever it deviates, so altnets can scrutinise them.

41. Under its Commitments Code of Practice, Openreach promises to disclose CP confidential information with BT only where legally required and properly disclosed and checked. However, in practice, BT sees all information which altnets disclose to OR. This is because BT has access to the PIA ordering portal, which shows a marker every time an altnet gives a Notice Of Intent to build. BT can use this information to inform its build decisions. In addition, altnets are required to provide information of where their staff are working on the OR estate. At a local level this ensures that in practice OR has full transparency regarding altnet plans.

42. Ofcom can only enforce against any mis-use of confidential data by BT if it can see an audit trail showing who accessed it. (Note: this problem goes away if Openreach is transparent about *all* of its build plans (or at least justifies its non-planned build after the event).

Appendix 1
Jurassic Fibre Holdings Limited board resolutions of 14 April 2020

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Appendix 2
Funded build plans (2020-2026)

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Appendix
Note from Analysys Mason

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Appendix 4
Network Schematic

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Appendix 5

Current Product Line Up

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Product road map

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Appendix 6

Phase 3 Build plan 2022-2026 (under shareholder review)

Areas are contiguous to Phase 2 build, and are all in Area 3.

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