Titanic Quarter Limited, Queen's Island, Belfast
Date 5th December 2007

1. Background to this Response

Titanic Quarter Limited is the property development company, owned by Dublin-based Harcourt plc., that is undertaking the redevelopment of the former Harland & Wolff shipyard at Queen's Island Belfast. Queen's Island was the original home of the Titanic, her sister ships Olympic and Britannic and many other major vessels.

In the spirit of that pioneering engineering age, representing a revolution in ship-building technology, the development of Titanic Quarter addresses the challenges of creating new working and living environments - a new 21st century city.

This massive regeneration project (larger, for example, than London's Canary Wharf) is located between Belfast City Centre and the City Airport. It offers a superb opportunity to design and deliver a waterside environment that will attract large-scale inward investment. It is designed to meet the needs of new global businesses, new industries, thousands of families and growing numbers of visitors to new and significant tourist destinations. The entire project is a key component of economic growth not just for Northern Ireland but across the entire island of Ireland.

In respect of our planning for the development's telecoms access infrastructure, Titanic Quarter is perhaps typical of many similar 'new build' opportunities across the UK. The quality of the local access infrastructure, its flexibility and competitiveness, its future growth potential, the sheer scale of the enterprise, and the economic risks, all indicate that its design, deployment and future governance is, from the developer's viewpoint far too important to be ceded to the whims, wishes and uncertain priorities of conventional telecoms companies who have frequently and publicly expressed uncertainty about the need for innovation.

It is clear that in considering the overall UK picture, 'new build' opportunities represent a small and more-easily addressed part of the investment challenge relative to the replacement of existing copper networks by new fibre access schemes. It is entirely reasonable for developers of sites such as Titanic Quarter to see the benefits of a modern infrastructure as a significant market differentiator that feeds through into faster occupancy and higher property values.

Titanic quarter is however competing for inward investment with other similar sized developments across Europe. Whilst we see the marketing advantages in our own local design approach, it is undeniable that all businesses and residents require interactivity and collaborative capabilities with those in other locations. Our 'island of fibre' would not make sense only as an isolated gem or an exemplar to encourage others. We find it difficult to contemplate a wider UK environment where the overall provision of next generation access networks in the medium term may be so patchy as to make the disparities in provision even greater than is already the case.

We have therefore not limited this response to those narrow areas that relate exclusively to 'new build' locations but have also commented on the wider implications for the UK's access infrastructure development. In our approach to this consultation document we have sought to identify where, in the proposed regulatory environment, there is evidence of Ofcom's intent to encourage new sources of investment and fresh approaches to market structures to ensure that the great benefits of localised fibre networks will provide new capabilities to both meet the current and future needs of businesses and citizens and deliver remedies for the inadequacies of last generation networks.

2. Detailed Observations and Responses to Ofcom's Questions.
References to paragraph numbers in this section refer to Ofcom's consultation document ('condoc')

Condoc Section 2 - Introduction

Throughout the condoc there is significant degree of caution about the need for next generation networks. Para 2.2 typifies this uncertain approach:

'*The continuing development of high speed services, for example broadband-delivered high definition video, may mean that current generation access networks will be unable to meet future demand.'*

The limiting factor of copper is not just the line length/capacity issue but, more significantly, its inability to provide concurrent access to any more than a single telephony service provider and a single broadband data service provider – both of which come with complex processes for switching to alternative suppliers.

There is no need to debate the maximum capacity requirements of future services when the deployment of fibre is most easily justified by the ability to provide *concurrent* service access to *multiple* providers. .

In this pro-consumer-choice context the use of the word *'may'* suggests a lack of conviction at Ofcom, not only of the technological viability of next generation networks but also of the statutory commitment to its basic citizen and consumer remit.

Whereas Para 2.1 and 2.2 assume the status quo of bundled service, there is in Para 2.3 some recognition of the independence of Access and Service.

' *However, they are independent of each other; a given provider can decide to invest in either one without having any interest in the other.'*

It would have been very helpful, at this introductory stage in the condoc, to point out quite clearly that investment in (and operation of) local fibre networks need not be undertaken by any service provider but can, as evidenced in other countries, be seen as an independent Access utility connecting the community on a [regulated wholesale] commercial basis and providing the opportunity for maximisation of competitive services provision and easier/affordable market entry for locally-relevant service innovators.

Property developers have no difficulty in identifying next generation access networks as a major contributory component for building new and attractive communities in new places.

In Para 2.6 the issue of investment timeliness and effectiveness is raised.

'These networks will comprise the fixed access infrastructure….for years to come – it is therefore important that, when it is time for these investments to be made, they are made correctly.'

Both timing and effectiveness is best judged at a local market level. The use of the word 'correctly' could be interpreted here as related to making sound technology choices but it seems more likely that Ofcom is here signalling a determination to *inhibit* investment by new players who could place values on benefits that mainstream market economists or incumbent operators might regard as 'irrational'.

In Para 2.7 we note Ofcom's recognition of the wider '*social and economic welfare'* benefits but this is tagged onto one of the condoc's repeated claims for high achievement in the first phase of the UK's broadband deployment.

We would question the motive for repeated claims of great success. A BT representative has already stated that delivery of ADSL2+ headline download speed of 24Mb/s would in practice be only possible if the customer was living in or immediately adjacent to the telephone exchange. According to BT ADSL2+ will, in any event, only be available to around 50% of the UK population. In dealing with prospective inward investment from global companies we have found the need to counter widespread views that the UK is very poorly served – and indeed this is one of the reasons why we are determined to guarantee an enhanced infrastructure in those locations under our direct control.

Para 2.8 again uses the uncertain 'may' and 'could' – as if the benefits of fibre were not already self-evident from many of our competitor nations. We would not be debating this if there was any doubt about 'these prospects'. A significant part of the telecoms industry and our direct competitors in property development markets (and many municipal communities) have already seen the light at the other end of the fibre!

Para 2.9 introduces the concern about costs in the context of fundamental changes to the structure of the communications sector.. The estimates given elsewhere for a national fibre programme tend to be framed in what appears to be an out-moded context of a single dominant (and therefore nationally regulated) Access supplier. In a fundamentally different provision era it is likely that investment decisions will be far less centralised and subject to increasingly localised perceptions of need.

We welcome the recognition in Para 2.21 of the need to ensure:
'a competitive environment for the delivery of next generation access that facilitates service and business model innovation and experimentation, and that allows service differentiation based on wholesale inputs.'

The wording of this high level objective is helpful because;

(a) it recognises the distinction between Access and Service

and

(b) taken together with the two subsequent paragraphs, would support the concept of Open (i.e. carrier neutral) Networks that have been shown elsewhere to facilitate a high level of flexibility, service choice and easier market entry for innovators with locally-relevant designs. In this context the notion of 'wholesale' applies well to easy multiple service provider interconnections to local networks.

Para 2.31 would appear to underplay the position of larger businesses. Whilst it is true that office sites can and are served by high speed fibre on a case by case basis (nationally around 150,000 sites according to BT) these facilities are not practically applicable to their 'business continuity' , 'disaster recovery' and 'conformance' processes where a high standard of connectivity is already required at many employee home locations. This is precisely the point we made earlier in our 'Background to this response'.

3.2 Condoc Section 3 - Next Generation Access: the broader context

The use in Fig 2 of *incumbent* operator deployment plans does not fully expose the considerable progress made by other operators ('alternative carriers'), and although some acknowledgement is given the 3rd and 6th bullet points of Para 3.1 the Condoc maintains a view that it is not yet clear that there is a compelling case for UK deployment and that investment here may be 'naturally later'.

Ofcom could have used this opportunity to report in greater depth on the impacts of municipal and developer-led networks (e.g. in Sweden, Norway and The Netherlands and elsewhere) with relevant supporting evidence of the benefits of facilitating great consumer choice and service innovation.

Para 3.7 correctly identifies the scope for prioritising 'areas with lower current generation access broadband speeds'. Why the example given should refer to 'some urban areas' and not openly address the even greater shortfalls in rural areas is perhaps another example of an endemic/default regulatory focus on incumbent/dominant-player strategies and high-value markets that is not fully attuned to a citizen and consumer remit.

Under a heading commentating on the lack of wide-spread announcements, (Para 3.10) there is no observation that, in nearly all those countries that are making more rapid progress, the early initiatives are mainly taken by non-incumbents – and they have been pro-actively encouraged by policy makers and regulators.

The emphasis in 3.13 is again on 'widespread' announcements. It would, however, be interesting to discuss why there have been no *localised* initiatives in the UK with perhaps the exception of the South Yorkshire 'Digital region' scheme which appears to have won the battle for EU clearance in spite of UK policy discouragement. The prevailing culture of finding reasons for not taking local initiatives (such as presuming failure under 'state aid' rules) serves only to preserve the market-led status quo but also suggests either a general lack of regulatory imagination or a lack of clear policy direction from central government..

The Condoc does however acknowledge (Para 3.8) that in some countries the incumbent operator has been spurred into action by competition. Whilst Ofcom is concerned to ensure that new investment will be encouraged it seems unwilling to signal clearly any encouragement for alternative operators or public/private partnerships to trigger wider experimentation.

The bulleted reasons given in Para 3.13 for UK delay read like a counsel of despair and suggest a failure to support UK innovation and enterprise.

- NGA-delivered IPTV services offer scope for a better competitive market – and cries out for innovative differentiated services.

- The relatively low reach of cable networks is a good reason for enhancement.

- The presumed higher UK costs do not now appear to stack up in the light of falling technology prices and evidence from overseas deployments.

- The capabilities of existing copper are invoked here as reason for not doing anything just yet, whereas many commentators would come to the opposite conclusion.

Para's 3.14 to 3.19 serve not to inform respondents of possibilities but to justify preservation of the need for delay and maintenance of blockages on innovation.

Similarly the comments on uncertain demand (Para's 3.20 to 3.31) are based on notions of requirements for headline speed but seem not to consider the scope for concurrent multiple applications within each home or business and the scope for these being provided by multiple providers over the same access utility fibre.

QUESTION 1: When do you consider it timely and efficient for next generation access investment to take place in the UK?

Titanic Quarter Response:

Timeliness should be considered in the context of local economic and community needs. Each area has different priorities. For Titanic Quarter it is unthinkable that our development would be built using last generation access networks. This has been patently obvious for several years and we do not see our position as very radical or innovative in our global market.

Efficiency can only be assessed against the objectives and the value of their prompt realisation. We would suggest that the UK is already suffering because of a lack of

experimentation and experience in developing new/alternative business models and new forms of regulatory governance for local open access (carrier neutral) networks

The question, as posed, appears to presume a national, collective and (by default) incumbent-led decision that seems hypothetical – very unlikely to occur and probably undesirable in terms of the richness of the development experience. From the perspective of a major property developer, we suggest that the notion of centrally-planned access infrastructure dominated by the incumbent operator and not influenced by local stakeholders is fast fading into irrelevance.

Condoc Section 4 – Regulatory Concerns

In Section 4 of the Condoc the primary regulatory challenge is seen as (Para 4.2) *'setting the right conditions for timely and efficient investment to be undertaken'.* Para 4.3 then usefully highlights the long-term nature of infrastructure investment, how the onset of this era represents 'a potential cross-road for competition', and how a wide range of stakeholders have an opportunity to *'influence the competitive structure for …… decades to come'*.

We welcome the fleeting recognition in Para 4.5 that the infrastructure investment could be *'undertaken by a range of different organisations, including communications providers; utilities, building developers, community broadband projects, other new entrants and the public sector.*'

We also welcome (in Para 4.7) principles v-vii. Our studies show that that for next generation network access *'the deepest levels of infrastructure where [competition] will be effective and sustainable*' (4.7- i) is actually higher than in legacy networks. Competition and choice can be maximised by teasing apart Access and Service and operating the local Access network as an independently managed utility for use by all services providers.

Para 4.8 reminds us of the regulatory effort that has been needed to overcome the *'enduring economic bottleneck'* of existing copper networks. We therefore question why there is any need to create new forms of bundled bottlenecks when fibre technologies provide an excellent opportunity to break free from these legacy constraints. Even more worrying, is Ofcom's suggestion (Para's 4.9 and 4.10) that the new investments themselves may engender further '*enduring economic bottlenecks'*. This section of the condoc highlights the dangers of extreme (possibly perverse) technological neutrality if regulatory levers or influence cannot be deployed or clearly signalled until well after the difficulties have been created and the consumer, wider society and local and national economies have been shown to suffer.

Furthermore this section of the condoc does not review (as was exemplified in the BSG 'Pipe Dreams?' report) the current inhibitions to *'timely and efficient investment'* or consider what immediate regulatory or policy actions might be appropriate to unblock investment – but prefers instead to ponder the regulatory ramifications of things going badly wrong in the future.

Para 4.13 helpfully identifies the power of competition to drive incumbents to innovate at an earlier stage than might otherwise have occurred. This effect was marginally observed in the UK in the previous broadband era. The reference here to cable operators, however, somewhat diverts attention from the potential impact of entirely new market entrants that had previously been acknowledged back in Para 4.5. The overall effect is to reinforce a view that the regulator is focused on the industry structure as defined under legacy technologies and is less than acutely aware of the great opportunities afforded by fibre to transform the competitive landscape and encourage new investment in the UK from a variety of national and global sources.

In considering Para 4.14, we are not convinced that '*next generation network investments are inherently risky'*. This gives the impression that the regulator is preparing to accommodate or protect potential players who prefer to wait until risk is reduced (as was the case in the previous broadband era) by public subsidy or by virtue of some regulatory leniency (such as a regulatory holiday) rather than be spurred into action by new innovative forms of competition.

It is surely not beyond the realms of possibility that traditional players, given competing priorities for their investment capacity (and an alleged risk averse attitude to local network investment), may prefer next generation infrastructure investment to be made rather more efficiently by new 'open access' players. Such an environment might be encouraged if it was clear that the regulator addressed separately the issues of Access (i.e. connectivity) and Services (i.e. competitive applications such as telephony, IPTV, Internet, security etc).

There is little validity in the argument (at Para 4.18) that unnecessary disruption and economic inefficiency would be caused by multiple operators making separate investments in a range of distribution technologies – particularly as noted earlier, one of the leading and most powerful benefits for consumers of the new technology is to enable multiple operators to concurrently use the same (common) fibre for delivery of their services. Surely Ofcom cannot seriously consider that investors would be encouraged by the prospect of competing teams of road-diggers?

This does not contradict the alternative use of satellite and wireless broadband as some sort of substitute for fixed location fibre services but the (frankly disappointing) notion of fibre being bundled in direct replication of legacy copper networks suggests an extremely limited view of developments in other countries that are already much further ahead in the exploitation of next generation networks.

In Para 4.19 this notion of competing (duplicate and probably less sustainable) local networks as leading to a potential diminution of regulatory needs seems to be both dangerous in practice and supported by little more than an historical commitment to a regulatory concept that now appears outmoded and is distorting the central remit of delivering the best possible business and consumer benefits.

The maintenance, in Para 4.20, of a technology neutral position seems to deny growing evidence of the rapid convergence in all services toward IP and Ethernet standards. The last sentence of Para 4.20 suggests that Ofcom is not sufficiently aware of the technological remedies (to their concerns) already evident in mature (open access) next generation deployments.

Against Para 4.21 we would suggest that it seems regulatory unwise to encourage/allow next generation deployments by 'bottle neck asset owners'. Here again the concept of carrier neutral access networks (with interoperable gateways designed to be the opposite of bottlenecks) seems not to have disturbed the established regulatory mind-set.

Para 4.26 raises issues of regulatory transition and the issues of significant market power. The existing Universal Service Obligation is not explicitly mentioned but may perhaps be embraced in the comment *'some existing regulatory remedies may no longer be appropriate following deployment of next generation access'.*

It does seem very likely that successful encouragement of new local infrastructure investors on sufficient scale may indeed over time lessen the need for regulatory remedies that are at present uniquely targeted at BT. The issues of market definition may, however, also need to be reviewed. Whilst it is clear that, as a result of the LLU remedy, large numbers of consumers have some degree of choice of broadband provider (albeit often merely a re-branded BT wholesale product) there remain many geographic areas where the competitive writ does not run – or does not run far enough to deliver adequate service levels at the far end of a long or poor quality line. As a developer of a new estate Titanic Quarter is committed to provision of an expansion of consumer choice in services and far easier switching between suppliers. We certainly do not see that it is necessary to have multiple road diggers laying different varieties of networks to achieve this.

Nor do we see the invocation of access obligations as a potential barrier to new investors in local access networks. We suggest that the basis of the obligations be reviewed and made more widely applicable to next generation infrastructure investors. Where network coverage areas might be seen as creating a local next generation access monopoly, and where *local*

significant market power is likely to occur then mandatory obligations on open access (carrier neutral interoperability) and minimum standards might be invoked and clearly signalled prior to investment.

In the context of (a) the currently unfulfilled consumer appetitive for both higher quality services and easier service supplier choice/switching mechanisms, and (b) the massive scope for operating cost reductions by the incumbent (together with resale of surplus copper and sale of duct assets) it is not difficult to envisage that localised but service-independent operations (possibly, as has occurred in other European countries in conjunction with local authorities) could provide sustainable, efficient and locally attuned next generation access networks that would see local service obligations as a benefit (increased utility value) and not at all as a burden.

QUESTION 2: Do you agree with the principles outlined for regulating next generation access?

Titanic Quarter Response:

No. Some of the principles may be little different to existing practice but we do not believe that there has been sufficient, imaginative and informed consideration of the scope for regulation to encourage new investment and the development of new market structures incorporating open-access utilities.

Condoc Section 5: Securing Investment in next generation access

Para 5.1: See previous comments (against Para 2.7) on current broadband achievement.

Para 5.3. See previous comment (against Condoc Para 4.14) regarding potential overstatement of 'inherently risky'.

We acknowledge that the recognition (Para 5.9) that the investment conditions are very different for overlay or replacement networks as opposed to new build sites.

We understand that Ofcom is (Para 5.9 1st bullet) *'uncomfortable'* with direct intervention in design and prefers a position of absolute technology neutrality. These issues cannot, however, be treated with the same detachment by those whose investment outcomes are highly sensitive to these choices. It is not understood why the options given here do not more clearly articulate (though perhaps bullet 3 comes close) the scope for independent carrier neutral operations with full interoperability to accommodate the widest possible range of competitive service providers.

It is with some relief that we note Ofcom's awareness (Para 5.10) of the danger that some fibre network technology choices and topologies could be difficult/impossible to unbundle. We do not, however, understand why any informed regulator would not signal in advance that investors intent on creating bottlenecks (for short-medium term economic disadvantage of competitors, consumers and communities) through the deployment of inappropriate technologies should expect imposition of a severe (and costly) obligation for effective unbundling regardless of the technological difficulties.

But more than this, a debate, founded on Ofcom's determination to remain technology neutral is rapidly becoming irrelevant. It is increasingly clear that the notion of local access infrastructure competition has also been rendered obsolescent by technological progress. Since we are considering investments that must be sustainable for many decades there is already a consensus that point-to-point FTTH (and using Ethernet) will be (a) entirely fit-for-purpose and (b) the lowest long-term cost option when set against future capacity levels already being deployed (and used) in many other countries.

We are pleased to note that (Para 5.19 bullet 5) the '*co-operative deployment'* approach has been (albeit fleetingly) recognised as a useful approach to risk reduction but we are far from convinced (at Para 5.20) that investors will need the support of mandated access terms to gain a sufficient return.

The concept of anchor product regulation (Para 5.29) appears to address an issue that simply would not exist in the context of open access networks. Furthermore the 3rd bullet point seems to suggest licenced scope for price increases rather than reductions to reflect the benefits of new technologies. Recent OECD and ITIF reports suggest that UK consumers have yet to experience globally competitive cost/Mb rates.

As noted earlier, a considerable part of this regulatory debate is rooted in an effort to visualise next generation networks in the context of last generation structures – whereas the new technology provides a much greater opportunity for a complete transformation of provision that is not constrained by historic and outmoded commercial models.

QUESTION 3: How should Ofcom reflect risk in regulated access terms?

Titanic Quarter Response:

> We suggest that Ofcom should take a different/fresh stance on technology neutrality and rise above long-standing and technologically out-moded notions of low-level infrastructure competition. The remedies of LLU and functional separation (BT) may have helped to relieve some of the inherent difficulties of last generation networks but should be now regarded as an historical irrelevance in an era where investors are pro-actively encouraged to deploy point-to-point FTTH networks.
>
> Furthermore there is a patent need elsewhere to further explore, '*co-operative deployment'* – used perhaps in conjunction with enterprise vehicles such as Community Interest Companies – as an imaginative and sustainable way of addressing local investment priorities wherever conventional Telco market forces appear to be unwilling to recognise the opportunities to better serve the needs of businesses and citizens.

3.5 Condoc Section 6: Promoting competition in next generation access

The observation in Para 6.56 that most incumbent operators in Europe (BT included) are keen to base FTTH deployments on a technology (GPON) for which there is no clear option for unbundling, does not come as surprise.

In contrast we observe a growing number of suppliers based in Scandinavia (e.g. Packetfront and Netmedia) and in France (e.g. Thomson-Cirpack) and elsewhere who are experiencing rapid growth and success in delivering point-to-point technology platforms to non-incumbent local operators.

A recent independent study commissioned for the French government reported that the assumed higher cost of point-to-point FTTH (relative to GPON) had been severely overstated and was at worst only 8% - a differential when set again future long flexibility and capacity pales into insignificance even in the hypothetical context of a full UK fibre deployment programme.

It is difficult to understand why Ofcom's stance is to consider how GPON can be encouraged and how complex regulatory remedies might perhaps be devised to deal with the (apparently technological insurmountable) difficulties with unbundling.

Question 4: Do you agree with the need for both passive and active access remedies to promote competition?

Titanic Quarter Response:

No. Ofcom should, in the interests of simpler regulation, rapid deployment and long-term sustainability, step back from a position of absolute technology neutrality and promote competition through encouragement of investment in point-to-point next generation access infrastructures with active line access and full interoperability with the widest possible range of local, national and global service competitors.

3.6 Condoc Section 7: The case for direct intervention in next generation access investment.

Para 7.3 considers whether later deployment in the UK (presumably later than countries that are already deploying next generation networks) is a matter for concern. The 3rd bullet point of Para 7.3 then suggests that we should consider '*the costs and benefits of being the first nation to deploy a new technology.'* **!** The contradiction seems to have arisen from confusion between incumbent operator strategies and national policies. Incumbents in many countries are usually slow to innovate and prefer to follow market trends demonstrated by new entrants who bear the cost of raising consumer awareness through market education.

The comment in Para 7.9 that evidence is lacking is disappointing. This position suggest that greater rigour and effort is needed in studying the impacts of next generation networks. As noted earlier in our response the focus on finding single applications such as IPTV to justify higher capacities somewhat misses the point about enabling multiple concurrent services. Looked at independently many of the services may each have relatively low or moderate capacity demands and may individually be of marginal or low value but when valued in aggregate they can deliver very powerful benefits.

The value of services enabled by next generation networks seems only to have been viewed through the prism of today's limited and inflexible services. That many of these applications simply cannot emerge until such network capabilities are available (as recognised in Para 7.47) is a further factor that demands a rather more imaginative and positive approach to determining wider societal values and community benefits. On the evidence of local initiatives in Sweden, Norway, The Netherlands and other countries there is great economic value (and employment) generated directly and indirectly by the creation of new software industries built on the experience of next generation network operation.

The analysis of benefits in the Condoc seems to overlook business, consumer and citizen interests and has strayed into the trap of preserving outmoded market models and not to grasp the radical opportunities for change afforded by new technologies.

In Para 7.25 the Condoc again reiterates the unimaginative view that viable investment models are totally dependent on mass market residential consumer services (noted in 7.16 as mere 'entertainment'). Para 7.25 does however go on to suggest that the needs of business might also justify investment – but then (Para 7.30) positions business benefits as distinct from social value as if employment and productivity are not inextricably intertwined with community development. It should not come as a surprise that many applications for next generation networks will evolve from familiar applications. The opportunity for delivering these applications better, faster, cheaper and in novel combinations should not be overlooked or undervalued.

QUESTION 5: Do you consider there to be a role of [for?] direct regulatory or public policy intervention to create artificial incentives for earlier investment in next generation access?

Titanic Quarter Response:

Does the use of the qualifier 'artificial' imply that some incentives may not be real? Ofcom as a regulator is always intervening; that is its role on behalf of citizens and consumers. There is a long established history of interventions (albeit of variable justification) and the question would be more helpfully phrased without the presumptive qualification.

The short answer to the (amended) question is YES. Despite our determination to gain local market differentiation we would suggest that there is an immediate need to encourage a wider range of trial deployments and if some of these included an element of public sector engagement in order to achieve clear and justifiable objectives then we would not see that as unwarranted market distortion.

Condoc Section 8 – Implications for existing regulation.

This section of the Condoc does not pose a specific question. We would, however, reiterate that, in considering market definitions and significant market power, it would be helpful to build policy for next generation access networks on a complete, robust and current understanding of the local status of availability, performance and competitiveness of existing networks rather than treat the issues entirely on a national basis with presumption of the continuing dominance of one supplier.

Condoc Section 9 – Next generation access and new build premises.

We welcome the recognition (Para 9.1) that smaller scale deployments will occur – especially in conjunction with new housing developments and we are pleased that this is to be encouraged by Ofcom.

We do not however endorse the design approach adopted by BT Openreach for their high-profile Ebbsfleet 'pilot project'. The shortcomings of this G-PON design seem already evident not just in terms of unbundling but also in the use of an additional separate fibre to each household to deliver point-to-multipoint multicast content for a *single* exclusive supplier.

We agree with the view (Para 9.6) that the investment model for new-build sites may be more attractive. We would, however, add that the requirement for the network infrastructure to help create new cohesive communities (with a strong sense of local identify and public safety) in these places will also provide a significant motivation for a wide range of local stakeholders to take a keen interest in, and oversight of, network planning, deployment and operation.

We agree with Ofcom's growing recognition (at Para 9.17 2nd bullet) of the technological consensus favouring Ethernet. We do not identify any great need for further debate on this issue.

We do not endorse the view (Para 9.17 3rd bullet) that passive access networks may be more *'practical or effective'* in new build developments. It is precisely in these locations that the opportunity exists to deliver vastly better managed active access with carrier neutral portals to allow consumers and businesses easier choice of multiple service suppliers.

The Universal Service Obligation (Para 9.17 4th bullet) is ripe for reconsideration. We would urge Ofcom to consider adopting an appropriate obligation on Broadband Access that is quite distinct from Services and to consider how this could be applied more equitably to the network coverage of any investors (such as Titanic Quarter) who are able to deploy across a

neighbourhood (particularly in new build environments) and might therefore be seen to have acquired SMP if, for example, insufficient carrier interconnections are not available.

We also acknowledge that there is concern that residents moving into new build environments will typically arrive already owning (and familiar with operation of) a wide variety of network-connected devices. Local network designers and access utility operators should be encouraged to provide the best possible level of upward compatibility in order to avoid unnecessary consumer equipment redundancy.