

Superfast Broadband Access Service

ACCC Declaration Inquiry

Discussion Paper

May 2015

Response by Vocus Communications Limited

Public Version

Please note this is a public version of Vocus's submission and commercially sensitive information has been redacted.

1. Introduction

If satisfied that it will promote the long-term interests of end-users (**LTIE**), the ACCC can declare a service under Part XIC of the Competition and Consumer Act 2010 (**CCA**). The public inquiry into the declaration of the Superfast Broadband Access Service (**SBAS**) follows a history of policy and regulatory actions with the object of promoting competition in telecommunications markets. In brief, Telstra's ability and incentive to use its market power in ways that hindered competition resulted in the need to declare and regulate a range of services on its network and was eventually a significant consideration in the government's decision to create a wholesale only NBN to provide high speed broadband services to residential and small business customers via retail service providers that compete for retail customers on standardised wholesale terms. Several pieces of legislation and other regulation was implemented to protect NBN's share of wholesale markets and to prevent other carriers from cherry picking NBN's most lucrative customers, most relevantly being the enactment of the 'level playing field' provisions in Parts 7 & 8 of the Telecommunications Act 1997 (**the Telco Act**) and the declaration of the local bitstream access service (**LBAS**).

The LBAS declaration imposes access obligations on carriers operating superfast networks that are captured by Parts 7 & 8 of the Telco Act, requiring them to wholesale a 25/5 Mbps layer 2 service at a price aligned with NBN's CVC rate of \$27/month.

In mid-2014, the ACCC considered whether TPG's fibre to the basement (**FTTB**) and vectored VDSL2 network build was prohibited by Parts 7 & 8 of the Telco Act. The ACCC concluded that TPG's FTTB/VDSL2 build was legal as TPG was able to rely on an exemption in Parts 7 & 8 that permitted existing superfast networks to be extended by up to 1 km and provide superfast carriage services to residential and small business customers (**the 1km exemption**). It was broadly recognised that TPG's FTTB/VDSL2 network and its stated intention of targeting high value residential customers in urban multi-dwelling units (**MDUs**) placed the viability of NBN at risk, particularly as NBN is tasked with providing services throughout Australia including many areas where it is uneconomic to provide a service and requiring cross-subsidisation from profitable urban areas. Though legal, many industry stakeholders and sections of government considered that TPG's plans were contrary to the purpose of Parts 7 & 8 and would result in a very large number of end-users being denied the benefits of open competition that NBN was designed to provide and promote. Concurrent with finalising its review of TPG's network, in September 2014 the ACCC announced its intention to commence a public inquiry into the declaration of SBAS. The ACCC stated the declaration inquiry was in response to specific competition concerns arising from technical limitations inherent in vectored VDSL2 technology,¹ i.e. the minimisation of cross talk interference and high speeds provided by vectoring cannot be achieved when more than one DSLAM is used or there are multiple access technologies present within a copper cable sheath, meaning that there can only be a single carrier operating vectored VDSL2 in an MDU. We understand that the ACCC's views about the technical limitations have close regard to information provided by the Communications Alliance working committee on VDSL2 and vectoring. Vocus agrees with the views expressed by the ACCC and Communications Alliance.

As a direct result of the ACCC's decision not to further investigate TPG's FTTB/VDSL2 network, the government quickly passed the *Carrier Licence Conditions (Networks*

¹ ACCC, SBAS Discussion Paper, p.1.
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supplying Superfast Carriage Services to Residential Customers) Declaration 2014 (**the Carrier Licence Conditions**), which was aimed at curtailing TPG's ability to rollout and operate a retail only FTTB/VDSL2 network. The Carrier Licence Conditions capture superfast broadband networks that are exempt from Parts 7 & 8 and providing retail services to residential customers, requiring the operating carrier to structurally separate into wholesale and retail divisions, and to provide a layer 2 wholesale service at \$27/month. The Carrier Licence Conditions were stated to be an interim measure until the ACCC declared SBAS and unless extended by the government, expire on 31 December 2016.

It is very clear from the legislative and policy background leading to this SBAS declaration inquiry that the purpose of the inquiry is to prevent TPG or other carriers with superfast networks that predate 2011 being able to rely on the 1km exemption in Parts 7 & 8 and provide superfast fixed line services to residential customers on networks that have natural monopoly characteristics without an obligation to provide regulated wholesale access. Such a situation is potentially detrimental to the LTIE in a broad sense by negatively impacting the viability of the NBN in that it places pressure on NBN's ability to fund networks in uneconomic regional areas. In a narrow sense, without regulated wholesale access the situation is potentially detrimental to the long term interests of the large number of directly affected end-users because they are unlikely to have access to competitive services provided by the range of service providers that would otherwise be competing to win them as a customer. Further, the incumbent and vertically integrated carrier has the opportunity and incentive to impose unreasonably high retail prices, i.e. monopoly rents.

With these points in mind, Vocus submits that it is important to focus the proposed SBAS regulation on the competitive impediment that it is supposed to address and to avoid the regulation capturing networks where competition is working. If SBAS regulation is broadly drafted and applied to networks that are operating in competitive environments it is very likely to discourage further investment and damage competition in those markets. A clear example of this is the market for high speed broadband services to business and wholesale customers that are provided on non-dominant fibre networks, such as the network owned and operated by Vocus. These networks, which do not operate in the same markets as NBN, do not have any technical impediments to competition like vectored VDSL2 and compete vigorously for market share, with considerable benefits flowing to business and wholesale customers who enjoy lower prices and can choose from a range of providers with diverse telecommunications products. It is important that SBAS declaration does not damage competition in this market by capturing these networks.

Given the existing LBAS declaration, SBAS regulation should be drafted to avoid the potential for a service to be captured by both declared service descriptions, as this could create uncertainty and conflict, for example if LBAS and SBAS final access determinations or binding rules of conduct contain different price or non-price terms there could be dispute about which declaration applies to a particular network.

2. **Executive summary of Vocus's submission**

Vocus supports SBAS declaration on the basis that it will:

- promote competition in telecommunications markets;
- promote the LTIE that are provisioned on networks that have natural monopoly characteristics and are otherwise unregulated as a result of the 1 km exemption in Parts 7 & 8 of the Telco Act; and

- promote the LTIE generally by creating a level playing field that encourages competition amongst retail service providers by reducing the ability and incentive of individual carriers to carve off lucrative segments of residential markets for their own use, which is likely to also promote the LTIE by assisting NBN funding in regional area.

Vocus submits that:

- networks that do not target residential customers and do not exhibit natural monopoly characteristics should not be subject to the SBAS declaration as it is likely to impede rather than promote competition; and
- the declaration should be carefully drafted to limit application to the type of network that prompted the regulatory need, i.e. vectored VDSL2 networks or other networks where the particular technology utilised impedes competition and which exploit the 1 km exemption.

The SBAS Discussion Paper contains eight specific questions from the ACCC. Vocus's response to these specific questions is set out below.

3. Answers to the ACCC's specific questions

1. ***What are the relevant markets for the purpose of this Discussion Paper and the application of the LTIE test?***

In Vocus's opinion the relevant markets for the SBAS declaration inquiry are the national markets for:

- retail and wholesale fixed voice services;
- retail and wholesale fixed broadband services, and
- retail and wholesale bundled fixed voice and fixed broadband services.

2. ***Would declaring a superfast broadband access service promote the long-term interests of end users? Please give reasons, referring to the implications for competition, any-to-any connectivity (where relevant) and the efficient use of and investment in infrastructure.***

Upon premises being provisioned via a FTTB/VDSL2 network, it is unlikely that alternative fixed line infrastructure will be installed to compete with the network. As the ACCC's discussion paper points out, technical limitations prevent other carriers from installing further VDSL2 equipment, which means that the available options are installing wireless infrastructure or a fibre network. Wireless infrastructure lacks the capacity of VDSL2 and is therefore unlikely to be robust competition. The installation of a fibre network is considerably more expensive than VDSL2, so even though technologically superior to VDSL2, in the particularly price sensitive markets for residential services fibre is unlikely to be a viable competitor to the cheaper pre-existing VDSL2 network that still provides high speed broadband and has the benefit of first mover advantage. It is currently unclear whether NBN will overbuild VDSL2 networks in MDUs by installing fibre. Though this would provide infrastructure based competition in the buildings, it would be a questionable practice from an economic viewpoint and we expect that any overbuild will

be limited in scale. Given these points, regulated wholesale access appears the most sensible and efficient means to provide for competition in what will clearly be an infrastructure bottleneck that affects end-users connected to VDSL2 networks.

Declaring SBAS on VDSL2 bottlenecks will promote the LTIE by:

- ensuring that a range of RSPs have the ability to compete for end-user customers;
- providing end-users with diverse products and services from RSPs that need to compete in order to win customers;
- allowing the ACCC to set access terms that are based upon the access provider's efficient costs of providing the service, which in turn will promote efficient use and investment in the infrastructure. For example, the cost of installing and operating a VDSL2 network that is limited to lucrative MDUs and business parks in major urban areas is unlikely to bear any correlation to the NBN CVC price on which the Carrier Licence Conditions' wholesale access price is based. Accordingly, the SBAS FAD could set a price that actually reflects the underlying efficient costs of operating a FTTB/VDSL2 network.

Not declaring SBAS on VDSL2 bottlenecks is likely to result in the situation where a large number of end-users are stranded from the benefits of competition that the wholesale only NBN is designed to provide.

Vocus agrees with the ACCC's view that:²

...declaration is likely to promote the LTIE where infrastructure facilities are enduring bottlenecks. Facilitating third party access to these infrastructure facilities will promote competition, any-to-any connectivity and efficiency in the use of and investment in telecommunications infrastructure. In the telecommunications industry, an enduring bottleneck is an element of the network that is essential to the supply of services to end-users in downstream (retail) markets, and exhibits natural monopoly characteristics.

Once it is rolled out, there will be a dominant NBN that is open access and wholesale only, and a declared LBAS applying to new networks that seek to compete with the NBN. This results in networks providing superfast broadband services that exist alongside the NBN being subject to competition from the NBN and LBAS regulation and as such their anticompetitive effect of being enduring bottleneck facilities is diminished. The regulatory gap where bottlenecks remain would be unregulated VDSL2 networks that rely on the 1 km exemption and are therefore outside the scope of LBAS regulation.

The ACCC explains why networks involving technology that constrains competition require regulation as follows:³

Natural monopoly characteristics may also be present where the features of a technology are such that the presence of multiple operators degrades the quality of the service. If a technology cannot support multiple operators using their own equipment to self-supply services of sufficient minimum quality, it may be more efficient for a single operator to supply wholesale services, rather than

² ACCC, SBAS Discussion Paper, p.6.

³ ACCC, SBAS Discussion Paper, p.6.

competitors duplicating the infrastructure to supply services that meet the quality of service standards.

The obvious technology where this applies is vectored VDSL2 technology. This issue was also recognised in the explanatory statement to the Carrier Licence Conditions as follows:⁴

While there is scope for multiple VDSL services to operate on a copper bundle without vectoring, technical and financial issues will mean that only one fixed-line vectored VDSL2 network is likely to be connected to multi-dwelling units and business centres.

[...]

A carrier that has connected a vectored VDSL2 network to premises does not have a statutory monopoly on access to those premises. However, the technical issues outlined above, and the resulting extra costs, mean that other service providers will be unlikely to duplicate the carrier's network.

The issues relating to vectored VDSL2 technology discussed above led the Vertigan Committee to recommend that the ACCC start a public inquiry with a view to declaring vectored VDSL2 services.⁵ The installation of unregulated vectored VDSL2 networks takes affected MDUs from a situation where competition exists to one where it doesn't. Despite the network providing higher speeds, the loss of competition is a retrograde step for affected end-users, as recognised in the explanatory statement to the Carrier Licence Conditions:⁶

The decision by the Minister to consult on a new licence condition declaration reflected concerns that carriers could use the exemptions under the Act to extend networks previously servicing business customers to service residential customers, contrary to the intention of the Act. This could allow them to operate FTTB networks on a vertically integrated basis, meaning they would have the ability and incentive to favour their own retail operations. This would re-introduce the competition issues that the rollout of the NBN and the structural separation of Telstra were meant to address.

It appears that the government's decision to enact the Carrier Licence Conditions was to address:

- the detrimental impact on competition that arises from the installation of vectored VDSL because it limits the ability of other carriers to install the same type of technology; and
- the problems that arise from the unanticipated exploitation of the 1km exemption in Parts 7 and 8 of the Telco Act.

⁴ Carrier Licence Conditions (Networks supplying Superfast Carriage Services to Residential Customers) Declaration 2014 – Explanatory Statement, at p.11 and p.12.

⁵ Independent cost-benefit analysis of broadband and review of regulation - Statutory review under section 152EOA of the Competition and Consumer Act 2010 – recommendation 6.

⁶ Carrier Licence Conditions (Networks supplying Superfast Carriage Services to Residential Customers) Declaration 2014 – Explanatory Statement, at p.2.

The explanatory statement to the Carrier Licence Conditions confirms that the government considers TPG's FTTB/VDSL2 network crystallises both of these issues:⁷

On 17 September 2013 TPG Telecom announced plans to deploy a fibre-to-the-basement (FTTB) broadband network to an initial tranche of 500,000 residential and small business premises in five mainland capital cities (Brisbane, Sydney, Melbourne, Adelaide and Perth). It plans to do so by using a fixed-line fibre network which it acquired in November 2009. The network will offer very high-speed digital subscriber line (VDSL) services that can support download transmission speeds of more than 25 mbps. In this case the network will offer a newer version of VDSL, known as vectored VDSL2.

[...]

In this case, TPG is rolling out a network through a loophole that the Government did not anticipate in 2011. TPG's network prior to 2011 did not target residential customers. It is now extending a business network to target such customers. This is a regulatory failure as the legislation has not ensured that a superfast local access network targeting residential customers will operate on a wholesale-only and non-discriminatory basis.

In considering the scope of SBAS declaration it is relevant that the Vertigan Committee and the government have recently considered the issues relating to the provision of superfast broadband services in Australia, and neither considered it necessary to implement regulation directed at any non-dominant networks other than those that are vectored VDSL2 networks and/or networks that are seeking to exploit the 1km exemption in Parts 7 and 8 of the Telco Act. Recent government policy announcements state that the focus of future regulation directly relevant to these issues will be on new networks servicing residential customers rather than the broader markets of residential *and small business* customers that are regulated by Parts 7 & 8 of the Telco Act.⁸ This suggests that there is currently no justification for applying the SBAS declaration to any non-dominant networks that are not vectored VDSL2 networks and/or networks that are seeking to exploit the 1km exemption and serve residential customers. Non-dominant networks that should not be captured by the SBAS declaration include:

- non-VDSL2 or similar technology networks that only service business customers;
- networks that pre-date 1 January 2011 and were used to provide superfast broadband services to residential and small business customers before that date; and
- networks that are subject to a Ministerial exemption from Parts 7 and 8 of the Telco Act.

These types of non-dominant networks are also not captured by the Carrier Licence Conditions. Vocus submits that the SBAS declaration will most effectively promote the LTIE without any adverse anticompetitive repercussions in markets served by other networks if the scope of the declaration reflects the scope of the Carrier Licence Conditions, and in effect ensures that the purpose of the Carrier Licence Conditions continues after its expiry on 31 December 2016 but with the additional benefit of providing a means for the ACCC to make targeted access terms.

⁷ *ibid* at, p.6 and p.7

⁸ Australian Government, Telecommunications Regulatory and Structural Reform, December 2014, p.10
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- 3. Do any superfast broadband networks represent, or are they likely to represent in the future, a bottleneck for providing broadband services to end-users? Please give reasons referring to the state of competition in broadband (and other relevant) markets, any-to-any connectivity and the efficient use and investment in infrastructure.**

As discussed above, there is a specific competitive problem with regard to vectored VDSL2 networks that are not operated by NBN or another wholesale only open access provider.

- 4. Do you consider that any existing wholesale commercial terms and conditions of access to superfast broadband networks inhibit competition? If so, what have been the effects on the ability of access seekers to compete? In the future, what are the likely effects on the ability of access seekers to compete?**

Vocus does not have any specific information to provide in response to this question.

- 5. If the ACCC were to declare a superfast broadband access service:**
- (a) What would be an appropriate service description?**
 - (b) Should the service description be technology neutral?**
 - (c) What specifications, if any, should the service description include? For example, should the service description include specifications as to quality of service (such as speed)?**
 - (d) Which types of services should be captured and/or excluded by the service description? Please give reasons, referring to the implications for competition, any-to-any connectivity (where relevant) and the efficient use of and investment in infrastructure.**
 - (e) Do you consider that the LBAS service description is an appropriate starting point for a SBAS service description which may apply to a broader range of services or network providers?**

Please see a proposed SBAS service description at **Annexure A** to this submission.

The SBAS service description should capture:

- Superfast networks that involve technology that by its nature creates a competitive bottleneck. This obviously includes VDSL2 networks and clearly does not include fibre networks. We consider that the service description should be as technologically neutral as possible so that it can include any advances in technology that also create a similar competitive bottleneck, but that care needs to be taken to ensure that fibre networks providing services to business customers are not captured.
- Superfast networks that target residential customers and rely on the 1km exemption in Parts 7 & 8, making them distinct from networks subject to the LBAS declaration.

We consider that the LBAS service description is an appropriate starting point for the SBAS service description, however, it is important that the LBAS and SBAS service descriptions do not overlap in order to avoid dispute over which declaration applies to a particular network.

To promote competition, the service description should ensure that access seekers are able to utilise the captured network to its full potential. This includes being able to

offer end-users as high a speed as the access provider is able to. The access seeker's acquisition of the regulated service should not be limited to a particular speed at a particular price as this does not appear to promote the LTIE.

We consider that the SBAS service description should reflect the ambit of the Carrier Licence Conditions. Definitions used in the Carrier Licence Conditions, such as 'designated telecommunications network' (and other definitions that flow from the use of that term) would assist in drafting a service description for the SBAS. The definition of 'designated telecommunications network' could be used to ensure that the SBAS service description is not drafted too broadly and does not capture networks that are outside the scope of the Carrier Licence Conditions. The definitions used in the carrier licence conditions are technologically neutral definitions.

Vocus's proposed SBAS service description includes drafting from both the LBAS service description and the Carrier Licence Conditions.

6. *If the ACCC were to declare a superfast broadband access service:*

- (a) Should the service description cover the SBAS nationally, or be limited in geographic scope? Please give reasons why/why not.***
- (b) Will carrier-specific exemptions promote the LTIE? Please give reasons why/why not.***

Vocus considers that the SBAS service description should apply nationally, even though it may eventuate to only be relevant to major urban areas where captured networks are most likely to be built. We consider that it is reasonable for carriers to apply for geographic or carrier specific exemptions where the exemption would not be contrary to the LTIE.

7. *What is an appropriate duration for the declaration? Please give reasons.*

We consider that following the common five year declaration duration is appropriate and provides sufficient certainty during the rollout of the NBN.

8. *Having regard to the potential sources of regulatory burden listed above, would declaration of an SBAS lead to a substantial increase in regulatory burden on your business? If so, please provide details and where possible evidence of the likely increase in regulatory burden.*

This depends entirely on the scope of the SBAS declaration and its service description. Vocus will not be subject to significant regulatory burden if the declaration targets vectored VDSL2 (or similar) networks and/or networks that are seeking to exploit the 1 km exemption in Parts 7 and 8 of the Telco Act. If SBAS is applied more broadly and captures networks, such as the Vocus network, that provide high speed services to business customers outside the ambit of Parts 7 & 8, then we would suffer considerable regulatory burden. This is probably best demonstrated by explaining the underlying cost basis that Vocus incurs to provide fibre services to our business customers, which is markedly different from FTTB/VDSL2 networks.

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Accordingly, if Vocus's network was captured by SBAS declaration and subject to regulated access terms and prices that were not specifically based upon the design and costs of our network, it would likely be entirely uneconomic to continue operating a significant part of our network.

If SBAS declaration applies solely to the types of networks that we believe it is supposed to capture, i.e. vectored VDSL2 networks and/or networks that are seeking to exploit the 1km exemption in Parts 7 and 8, then the cost of the additional regulation is likely to be fairly low because the Carrier Licence Conditions already require carriers operating these networks to provide an open access layer 2 wholesale service. We consider that these additional costs of regulation are likely to be outweighed by the benefits to competition and the LTIE as a result of:

- regulatory certainty through continuing regulated access following the expiry of the Carrier Licence Conditions in late 2016; and
- more defined terms of wholesale access set via an ACCC FAD.

Yours sincerely



Mark Simpson
General Counsel & Company Secretary
Vocus Communications Limited

12 June 2015

Appendix A: Proposed SBAS service description

The superfast broadband access service is a point to point service for the carriage of communications in digital form between a **network-network interface** and a **user-network interface** supplied using a **designated superfast telecommunications network** that is:

- (a) a **Layer 2 bitstream service**; and
- (b) a **superfast carriage service**.

This declaration does not apply to services supplied, or capable of being supplied:

- (a) using a specified network; or
- (b) using a specified local access line; or
- (c) by a specified owner of a local access line;
 - (i) where that network, local access line or owner is the subject of a Ministerial exemption under section 141A or statutory exemption under subsection 141B(3) of the *Telecommunications Act* and any conditions that apply to the exemption are satisfied; or
 - (ii) where that network or local access line serves wholly or predominantly business customers and does not include technology that limits competitive infrastructure in a multi-dwelling unit; or
 - (iii) where that network or local access line is subject to regulation under the Local Bitstream Access Service final access determination.

Definitions

Where words or phrases used in this declaration are defined in the *Competition and Consumer Act 2010* or the *Telecommunications Act 1997*, they have the meaning given in the relevant Act.

ABN has the meaning given in section 41 of the *A New Tax System (Australian Business Number) Act 1999*.

business customer means a customer that:

- (a) carries on a business or enterprise from a premises, regardless of whether there is any incidental use of the premises for occupation (from time to time) as a place of residence; and
- (b) has an ABN for the business or enterprise.

charity customer means a customer that is an incorporated charitable organisation

Layer 2 bitstream service has the meaning given in section 152AC of the *Competition and Consumer Act 2010*.

designated telecommunications network means that part of a fixed-line telecommunications network made up of local access lines or parts of local access lines which:

- (a) is used, or is technically capable of being used, to supply superfast carriage services; and
- (b) is not:
 - (i) subject to either sections 141 or 143 of the *Telecommunications Act*; or

(ii) the subject of a ministerial exemption in force under section 141A or section 144 of the *Telecommunications Act*; or

(iii) any of the following:

(A) the national broadband network; or

(B) a specified HFC network; or

(C) any local access lines that are used to supply carriage services to business customers, public bodies or charity customers unless the local access lines include technology that limits competitive infrastructure; or

(D) a fixed-line network (or any part of such a network) in existence immediately before 1 January 2011 which is situated in a real estate development project that is extended on or after 1 January 2011 to an area that was developed as another stage of the project;

(E) a fixed-line network (or any part of a such a network) in existence immediately before 1 January 2011 which prior to that date was used to supply carriage services to residential customers and which has not been extended on or after 1 January 2011; and

(G) a fixed-line network (or any part of such a network) which is:

(i) owned by a carrier that is also the primary universal service provider; and

(ii) built (including any extensions made to such a network of less than 1 kilometre from any point on the infrastructure of the network) between 1 January 2011 and 31 December 2014 to enable the primary universal service provider to fulfil the universal service obligation; and

(c) is situated anywhere in Australia.

multi-dwelling unit means a building or buildings where multiple separate units for occupation (from time to time) as a place of residence or business are contained within one complex.

national broadband network has the same meaning as in section 5 of the *National Broadband Network Companies Act 2011*.

a **network-network interface** means an interface provided by an access provider at a **point of interconnection** where the access seeker's telecommunications network can interface to the access provider's **designated superfast telecommunications network**.

a **point of interconnection** is a physical point of interconnection which allows the interconnection of facilities in accordance with subsection 152AR(5) of the *Competition and Consumer Act 2010*.

public body means:

(a) the Commonwealth, a State or a Territory; or

(b) a municipal authority or other local governing body; or

(c) a public authority that is constituted by or under a law of the Commonwealth, a State or a Territory.

specified HFC network means:

(a) a telecommunications network that is used to supply carriage services and the line component of which consists of optical fibre to connecting nodes, supplemented by coaxial cable connections from the nodes to the premises of end-users; and

(b) which was in existence prior to 1 January 2011.

superfast carriage service has the meaning given in section 152AC of the *Competition and Consumer Act 2010*.

technology that limits competitive infrastructure means equipment or facilities that limit or restrict the ability of other service providers to operate equipment or facilities because doing so would result in a degradation of service provided over either party's infrastructure. This includes but is not limited to vectored VDSL technology and for the avoidance of doubt does not include optical fibre technology.

universal service obligation has the meaning given in section 9 of the *Telecommunications (Consumer Protection and Service Standards) Act 1999*.

a **user-network interface** means an interface located at a physically defined end-user's premises where the access provider's **designated superfast telecommunications network** is present to an end-user.