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The Manager
Fibre in Greenfields
Networks Policy and Regulation Division
Department of Broadband,
Communications and the Digital Economy

By e-mail: greenfields@dbcde.gov.au

**RESPONSE – NATIONAL BROADBAND NETWORK:
FIBRE-TO-THE-PREMISES IN GREENFIELD ESTATES
CONSULTATION PAPER**

Dear Sir/Madam

Thank you for the opportunity to provide comment on the National Broadband Network (NBN) Fibre to the Premise (FTTP) in Greenfield Estates Consultation Paper. The Urban Development Institute of Australia (UDIA) is the peak body representing the urban development industry in Australia.

UDIA represents more than 4000 companies directly employing more than 400,000 Australians including developers and a range of professionals involved in the development industry including lawyers, engineers, town planners and contractors. UDIA has five state offices around Australia.

As you are aware, UDIA has assisted the Government in the development of this legislation by organising consultative forums with the key representatives of the development industry in the five mainland state capitals.

This paper adds to the interim paper provided to the Department on 15 June 2009 which outlined the key messages and issues for the industry in relation to the National Broadband Network and provision of Fibre to the Premise (FTTP) in Greenfield Estates.

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Yours sincerely



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Overview

In general the development industry is very supportive of improved telecommunications capabilities for new development areas and is keen for the improvements to be rolled out as soon as possible. In fact, a number of developers have already acted to put in place optical fibre or other enhanced communication arrangements in a number of their developments. There are however a number of issues which need to be addressed in relation to the implementation of the National Broadband Network (NBN) for provision of Fibre to the Premise (FTTP) in Greenfield Estates.

In simple terms, the UDIA suggests that the proposed FTTP be the modern replacement for copper and for all new developments, its installation should be exactly the same as what happens now when Telstra install copper cables into the development areas and then into the houses and commercial developments. The most important difference with the “fibre” system is that the whole of the network must have open access.

Issues

§ Equity

UDIA strongly believes that there should be no difference in relation to the treatment of new estates and retrofitting. It is simply inequitable for there to be an upfront capital charge for Greenfield estates but a cost recovery approach for elsewhere.

Therefore, UDIA strongly considers that developers should be responsible only for providing the trench for the pit and pipe, and the NBN Company (referred to below as NBN Pty Ltd) should be responsible for the installation of the pits and pipes, the backhaul, the head-end and all of the cabling into homes. UDIA considers that the way in which FTTP is delivered should not differ at all from the way in which telecommunications infrastructure is delivered into new estates (residential and commercial) and new apartments now.

FTTP

§ Network Planning

Installing systems on an estate-by-estate basis is likely to be very inefficient, with each estate having to have their own head-end (similar to a telephone exchange). UDIA considers that proper network planning is vital to ensure that duplication does not occur, that backhaul is available at strategic intervals, and that the network is not fragmented. This is not a task that developers can undertake by themselves, and needs to be done on a network-wide basis, with input from state government and developers as to where and in what sequence development is likely to occur over a 5-10 year time horizon.

§ Definition of Greenfield

UDIA believes that the definition of ‘what is Greenfield’ needs to be determined. This is a key issue and directly related to the issue of equity outlined above.

For example, what about land release in an infill context – does this constitute a new estate or retrofitting?

§ Open Access

It is unlikely that more than one fibre provider will enter Greenfield developments and therefore UDIA supports the development of an open access wholesale model at the 'bit stream' level.

NBN Pty Ltd should deliver and own the pit and pipe structure to ensure open access. Access may be easy in new Greenfields estates but not when they start moving into infill areas where a network provider already owns the pipes and may demand significant annuities for access by other providers.

§ Transitional Arrangements

Developments that have entered into contracts for provision of telecommunications and for which construction of the telecommunications infrastructure has commenced prior to the commencement date (including previous stages) should have the option of being exempted from the requirements for FTTP networks in Greenfields estates.

§ Regulation

Regulation for delivering FTTP technology needs to be created at Commonwealth level and supported by state governments.

§ Skills

A major issue for development will be delays in the provision of telecommunications due to capacity constraints caused by a lack of suitably qualified FTTP personnel which would be exacerbated by probable high demand at commencement date.

§ Commencement Date

Decisions in relation to the provision of FTTP are usually made a number of years in advance of subdivision work and are based upon cost calculations that are made as a part of a commercial assessment for the development. The current commencement date will not allow adequate time for the planning to be undertaken and may also result in an unfavorable commercial assessment with the addition of the FTTP costs.

The UDIA is keen to see the roll out of optical fibre in Greenfields at an early stage. However, in practice it perceives a number of issues in the number of skilled operators available to put in place the facilities, undertake the necessary planning, and put in place the appropriate governmental mechanisms at the various levels of government.

In addition, the planning that goes into making sure that the NBN proceeds in an orderly fashion will take some time.

Consequently, some delay beyond the proposed 1 July 2010 starting date is strongly recommended. UDIA believes that it is necessary for NBN Pty Ltd to address in more detail the roll out of the network and resources required for the development of the network over a given period and to prepare the elements of the network for competitive market operation.

§ Mechanisms for ensuring consistent delivery approach

There should be a minimum Australian Standard to ensure that the current framework is catered for but does not exclude innovation in the future.

§ Essential Service

FTTP needs to be classified as an essential service to ensure that it is delivered, and is carried on Development Approval (DA) consents. This is similar to what currently is the case with electricity.

§ Integrated Network/Headend and back-haul capacity.

The consultation paper assumes that every estate will provide backhaul, network, head end and lead in, with the home owner doing the house wiring. This will result in every estate having its own exchange (head end) and its own back haul (with multiple cables in individual trenches all going in the same direction). UDIA considers that all of this should at least be part of the general infrastructure and should be owned by NBN Pty Ltd like all the retrofit works it will do. We see little sense in these fragmented works being owned by different parties.

It is essential that the new NBN Pty Ltd takes a high level planning role in infrastructure delivery to ensure the most effective rollout. NBN Pty Ltd should also be responsible for providing the back-haul capacity and the head end. The upgrade of existing backhaul infrastructure needs to be properly planned so that it occurs at the time of the development of new land releases. The planning for the backhaul capacity and the head end locations must occur before the Commencement Date in order to limit wasteful duplication and provide certainty around planning for the developments.

New development will also often need access to trunk networks through other property or other developments. This distribution trunk network also needs to be facilitated by NBN Pty Ltd to ensure the trunk can be put in place across other property and undertaken in a timely way. Relevant powers of entry for requirement of other property need to be made available to the organisation putting in the fibre.

- **Maintenance**

Provision also needs to be made for certainty for ongoing maintenance of the reticulated fibre and broadband service even where carriers may no longer be viable. In effect a default or USO carrier if required which could be NBN Pty Ltd.

- **Regulation of Cost**

The cost of build should not need to be regulated, as developers should have access to multiple constructors to ensure competitive pressure on costs.

Answers to Questions

1. What are the relative merits of the models outlined? Which is the preferable approach? Why?

UDIA believes that option 2 is preferable, but with a clear Commonwealth controlled legislative framework incorporating a set of standards for construction details. State and Local governments would have to work within coordinated building code or similar standards. National guidelines and control would however need to allow for some flexibility/exemptions at the local level.

It should be noted that some developers have expressed concerns that both options are based on the premise that each new greenfield estate will provide its own dedicated FTTP network including its own back haul, head end, pit and pipe and internal network and then operate it as an open wholesale network. This would mean that, as development of an area proceeds the FTTP system will involve numerous individual back haul systems, individual head ends servicing estates and many small 'estate based' networks operating without the benefit of size based efficiency or common operational ownership.

This is clearly a recipe for operational disaster and gross inefficiency. It leaves the critical question of "how will the government ensure that each of these little networks will continue to operate efficiently and effectively as a true open wholesale network" given that the proposed approach will provide an operational monopoly to each little individual network created at each estate.

Therefore, the developer should be required to provide the trenches for the pit and pipe, and NBN Pty Ltd should be responsible for installation of the pits and pipes, the network, including the cables, lead in, head end and backhaul.

2. Is any action required by the Australian Government to facilitate local councils and planning authorities requiring the installation of FTTP facilities?

An overarching body is required to plan head end and back haul infrastructure to ensure that an efficient network is provided.

The Australian government would need to provide clear direction and guidelines to Councils as soon as possible in order for them to get their houses in order in one year's time.

UDIA discourages the use of local councils in general as a significant player in regulating, planning, provision and management of the system. Some industry experience with some local councils in regard to the facilitation of infrastructure has left a lot to be desired. Difficulties have been experienced with inefficiency, untimeliness, high and increasing costs, mixed objectives, officiousness and self serving behaviour.

3. Would the preparation of model laws, templates and/or national specifications or guidelines assist local councils and planning authorities with implementation?

Yes, this is absolutely necessary (see comments in 2 above).

The spectre of many differing standards for different but similar areas is frighteningly inefficient and concerning. This however is the past practice in the main of local and state governments.

For example, some councils require dual pits to be dug, even in estates where no copper is being installed. Therefore, it would be useful to have some specifications, law or guidelines to ensure that implementation does not occur differently from development to development.

4. Would the development of educational tools for industry assist? If so, what?

Yes. This may particularly apply to builders and household/business cable installers. There are examples in the industry of poor wiring and price gouging which can lower a customer's experience of both the broadband network and the development itself.

5. Would the introduction of a certification system for the installation and performance of FTTP networks be beneficial?

Yes. The introduction of a certification system for both design, and construction is extremely important. This would assist in the clearance process as it would be anticipated that preapproved suppliers would receive automatic clearance from local authorities.

Home cabling should also be included, but not to be included in the conditions for subdivision approval.

6. To what extent is a nationally co-ordinated approach preferable to one where state and territory or local governments take the lead?

A Nationally coordinated approach is essential.

A national initiative requires that there be a nationally co-ordinated approach. A clear delineation of responsibility between the retailer, NBN Pty Ltd, the competing wholesaler (should the presence of one not reduce efficiency by limiting economies of scale), and the householder would also be of use to avoid confusion

State and local government, and developer input into planning the network is necessary to ensure that the backhaul and head end required for new land releases is available.

7. If the Australian Government were to place obligations on developers and builders, at what stage of development should obligations be placed and on whom?

Obligations should be placed at the structure plan approval stage as opposed to the subdivision approval stage. This will allow planning of the system across the development or developments as opposed to installation of major infrastructure to service a small catchment which would be the result of placing a condition on each subdivision application.

Any obligation on developers for a start date must be in tune with demonstrated ability on the part of the government initiative to fulfill the requirement. Serious deficiencies in industry resourcing, legislative arrangements, trunk or backhaul planning and delivery are currently and likely to be present next year.

A requirement to put in place FTTP that is practically unachievable and derails or delays the provision of development will seriously impact on project viability, affordability, employment and economic activity.

Ideally, NBN Pty Ltd should be the monopoly provider(s) of the open-access wholesale network up to the premises. A patchwork of competing infrastructure would not only result in unnecessary duplication (which would be better used rolling out to other areas) and inefficient operation and ineffective long term upgrading, but the development industry does not consider it to be its role nor its area of competence to own or run a wholesale telecommunications network.

8. Is there scope for the provision of lead-ins in greenfields to be made contestable?

We define lead ins to be the pipe and cable from the pit located on the footpath to the premises. It would seem logical for this to be done in the same way as a lead in for current telecoms (copper) or power, and not be contestable. The monopoly wholesale provider (i.e. NBN Pty Ltd) would connect houses as they are built, while the internal wiring within a home would be the home owner's/builders responsibility.

9. What is the appropriate number of lots or premises required for a development to qualify as a greenfield development requiring FTTP? What other issues or factors should inform the definition?

If the developer is required to install pit and pipe, and nothing more, then the definition of a greenfield site becomes moot.

That said, if a definition is required, it should be as broad as possible, requiring pit and pipe to be built by NBN Pty Ltd as part of a development.

10. What mechanisms could be used to achieve a consistent approach across large developments involving multiple developers and/or over an extended period of time? For example, what provision should be made in relation to estates in which lots are released over a number of years?

If pit and pipe is the only requirement put in place for a developer to deliver as part of their own development, the consistency of approach comes from NBN Pty Ltd or wholesale provider installing and running the network from the home to the backhaul. For Developments where there are multiple stages with planning approval already in place there should be some compensation to the developer to install the infrastructure. The purchasers of these blocks should not have to pay for the NBN twice.

This question as with the previous assumes an intention to require developers to pay and resolve all the issues. This in the main is completely inappropriate. The government needs to put in place either through NBN Pty Ltd or other focused agency responsibility to ensure growth area planning, backhaul/trunk planning and connection for development and back up/default/USO responsibility. The responsibility may then be outsourced/ tendered or similar if desired.

As has been suggested earlier, there needs to be a central authority or central owner to ensure that no one development is favoured over another. Multi-stage development should be treated no differently to occasions where a greenfield development occurs adjacent to an already existing development.

11. Are there any special requirements for multi-dwelling units or office blocks?

Standard building code or similar requirements should apply. Standards should also apply to community title estates.

12. Should the threshold for the connection of FTTP for new multi-dwelling units be lower than other estates or should all new multi-dwelling units be connected with FTTP? What threshold, if any, should apply?

UDIA does not consider that there are any special requirements for multi-dwelling units or office blocks. We consider that the same thresholds should apply to sites regardless of whether they are multi-dwelling units or detached houses (and most developments have a mix of multi-unit and detached housing).

13. What specified characteristics should be considered for the purposes of defining FTTP for greenfields?

Some developers have indicated to UDIA that they have concerns about a whole lot of different technologies, being thrown together and called a network, and that simply defining the network as being future proof and able to carry 100 mb per second is too open. Characteristics including splicing, cable, pipe and pit specifications, as well as performance minimums should be put in place at a federal level.

14. Are there particular issues in relation to backhaul between the greenfield estate and point of interconnection to a national network that need to be considered?

There are many issues in relation to back haul. See the response to 9&10 above, however most of these issues disappear if the developer is responsible to provide the trench and NBN Pty Ltd is responsible to install the pits and pipes.

As has been stated above, backhaul should be provided by the network provider (NBN Pty Ltd)

Backhaul requirements should be planned for, with input from state and local government and developers, to ensure that there is a 5-10 year pipeline of backhaul associated with land releases

There is currently a major issue in relation to backhaul for some estates (e.g. in Melbourne). Some estates that have installed FTTP to date have not had backhaul capacity within 5km of the estate. This makes FTTP particularly expensive, considering that it is an upfront cost that basically adds to the holding costs for the developer, and needs to be installed before the first house can be built.

UDIA believes that an overarching body needs to be set up to deal with these issues.

15. What exemption arrangements, if any, would be appropriate and how should they be administered?

See above. The UDIA requires the early release and consultation on the proposed fibre foot print map.

16. Are there any particular circumstances under which developments should be exempt from the Australian Government's requirements for FTTP in greenfields (for example, for large area subdivisions in rural and remote Australia)?

There will be circumstances where there will be practical or economical limitations to the installation of a FTTP network and the obligation to install relaxed in these cases. Nevertheless it may be practical for FTTP to be installed at some later stage and pit and pipe infrastructure should be installed as a matter of course to allow for a future installation.

17. Are there any factors that the Australian Government should be aware of in relation to the commencement of FTTP requirements?

The July 1 2010 deadline seems far too short for the development industry, given telecommunications design and construct, and the need for Councils to skill up to handle the workload on top of the NBN rollout and other workloads.

As the federal government has yet to finalise what the model is, how is industry to make positive moves to service these changes with such uncertainty. We propose adding 1 year extra to the timeframe to July 1 2011.

18. Under what circumstances, if any, should transitional arrangements allow for the installation of copper-based infrastructure?

Copper should be allowed where no other option is practical. It should be the backup when all else fails. It would be necessary to ensure that the pit and pipe were fibre compliant and could be overhauled at a later date.

It should also be allowed where retrofitting infrastructure is cost prohibitive. This is especially true in our current market where finance is difficult to obtain.

19. Should the FTTP requirement apply to developments approved before 1 July 2010 but for which telecommunications infrastructure has not yet been contracted or provided? What transitional arrangements may be appropriate in these circumstances?

Yes, so long as it is the developers choice. In any case the transitional arrangements should be following release of relevant standards that fibre compliant pit and pipe infrastructure should be installed.

In the transition period, the interaction of the Universal Service Obligation with the NBN policy needs to be considered. We understand that it is Telstra's preference that when estates are currently having fibre installed, Telstra copper is not being installed as well. The government should consider re-working the USO – one option would be to rebate developers for installing mandated FTTP networks in their developments in lieu of Telstra installing copper under the USO. This would nullify the cost differential for developers. The USO could be used to provide backhaul and multi-estate/suburb-wide lead-ins as well.

Transitional arrangements will be a short-term problem. Ideally FTTP networks would be built from now, but the cost makes it prohibitive in greenfield estates that are being marketed to first home buyers. Approval date should be the cut-off date; however, the government needs to consider how it will go about retrofitting areas that have copper only installed. We suggest that capacity for future FTTP network installation be included from now and that pit and pipe that is installed from now on is FTTP compliant.

One concern is for the government to ensure that development does not just stop on the basis that the government may or may not retrofit or reimburse a developer for installing fibre rather than relying on Telstra using the USO to install copper for free.

20. Is the Australian Government's intention that the NBN Co not overbuild existing FTTP developments in greenfield estates appropriate?

Yes. So long as there is appropriate open access and segregation of wholesale and retail. It should be noted that many developers have signed long term Telstra Velocity (or smart

community) contracts applying to stages still in the planning process or not to be constructed for several years. Existing early adopters of FTTP should be protected and benefitted. While competition is desirable existing suppliers should be compensated in any change.

However it should be noted that some developers have a strong preference that NBN Pty Ltd takeover all the old fibre areas when the contracts expire so that we can achieve a truly open access and universal service with choice for all parties.

21. Are there any specific issues that should be considered in relation to the role of the NBN Co in greenfield estates?

Yes, but the government should consider if competition in infrastructure provision is appropriate, given that NBN Pty Ltd will presumably own the retrofitted parts of the network.

Regardless, the network in its entirety should be open to retail competition. It needs to be considered how the application for competition and choice can be delivered to all customers across the board, regardless of any existing agreements - legislation might need to be such that it outlaws any private agreements, otherwise those lead developments will end up second class developments, locked to one supplier. Suppliers will have issues too – but may force them to be more competitive.

NBN Pty Ltd, or regional provider, should acquire the head end and back haul infrastructure currently in the possession of private carriers.

22. What measures could the Australian Government introduce to facilitate competition for the provision of FTTP infrastructure in greenfield developments?

As has been stated above, UDIA is concerned that competition for the provision of FTTP infrastructure in greenfield developments will not be appropriate and is likely to result in diseconomies of scale and inefficiencies.

Regardless of the wholesale environment, however, there should be regulation of open access arrangements.

The Government will need to provide the Standards, Panel of providers, Equipment specifications, Minimum performance measures, planning guidelines for Councils, a national infrastructure database, a development hotline, Web site with all information and login access to interested stakeholders.

23. Could the competitive provision of FTTP in greenfields be facilitated by a national online database of proposed developments accessible either publicly or to licensed carriers? Could this also assist with the planning of telecommunications infrastructure in such estates?

The system should be mandated as open access. As has been said earlier, however, the government should consider if the natural monopoly elements of the broadband network preclude effective infrastructure competition, and whether it is better to have NBN Pty Ltd own the whole network and use contractors to construct it.

In any case, the market will seek out commercial opportunities.

24. Is it sufficient for access to wholesale FTTP services in greenfield estates to be delivered through the telecommunications-specific access regime in Part XIC of the Trade Practices Act?

25. Should the ACCC conduct a Part XIC inquiry into the specification/definition of the access service to be supplied over FTTP networks, with particular reference to greenfield estates?

Yes

26. Should an alternative approach to providing access such as mandatory access to FTTP networks in greenfield estates be adopted? If so, what? Why?

The alternative approach could be for NBN Pty Ltd to control all installations in Greenfields. At least then you will have clarity.

27. Should it be mandatory that new FTTP networks in greenfield estates after 1 July 2010 be wholesale-only networks? If introduced, should there be exceptions to this type of rule and if so how should they be administered?

Yes

28. What are the minimum equivalence arrangements that should be put in place to ensure wholesale services are provided on equivalent price and non-price terms and conditions in greenfields?

Nationally controlled wholesale agreement similar to the power companies.

29. Would it be appropriate and workable to have different access and equivalence arrangements for greenfield FTTP networks depending on whether or not they were operating before 1 July 2010?

No, Existing early adopters should not be disadvantaged.

All broadband networks should be an open-access network open to retailers with the wholesale operation controlled to ensure no price gouging, fair operation and appropriate maintenance and upgrades.

30. Should Telstra continue to be the universal service provider in greenfield estates where FTTP is deployed by an alternative provider and retail providers are able to use these networks to supply voice services?

Ideally, FTTP would be mandated as part of the USO and NBN Pty Ltd would take over as the USP, with developers only be required to install the pit and pipe to facilitate the distribution of the network.

31. If Telstra should continue as the universal service provider in greenfield estates, would it continue to be appropriate for Telstra to determine the technology it uses to fulfil its USO in those areas?

Ideally, the Universal Service Provider (i.e. NBN Pty Ltd) should install infrastructure equivalent to the rest of the network.

32. If Telstra were not to continue as the universal service provider, what, if any, obligations should be imposed on whom to ensure that consumers continue to have access to basic telephony services in greenfield estates?

This question assumes that NBN Pty Ltd will fail. UDIA believes that on the basis that the NBN Pty Ltd sets up the network and provides open access, there shouldn't be risk of failure. However if this is not the case, a clear delineated boundary should be agreed upon as to the area the private carrier is responsible for the USO. Back up measures would also need to be agreed on should the private carrier collapse.

33. Will the proposed greenfields model deliver satisfactory retail pricing outcomes? If not, would new mechanisms to regulate prices in greenfields be necessary and workable? What form might such mechanisms take? What would be the implications for such mechanisms on the broader market?

Not sure if it will unless the wholesale model is adopted effectively. While UDIA is not an expert in this area we would prefer that a wholesaler should not be a retailer as well.

If NBN Pty Ltd will eventually take over from Telstra's local loop provision of telephony services to all homes, Telstra role as the universal service provider should transfer to NBN Pty Ltd.

A central authority should be established (or a new division of an existing one be created) to establish that the FTTP network built in an area is compliant and be the consent authority for the FTTP.

With an open arrangement and due to the level of competition within the retail market we are finding that prices are regulated through this competition.

34. How would progress in delivering FTTP in greenfield estates be best monitored and reported?

Monitoring needs to be at a National level through a database and open access to councils and developers.

35. What further steps should be undertaken to support this initiative?

A strategic planning body such as the Water Corporation is required to provide strategic planning of infrastructure and drive efficiencies in implementation of the network.

36. Would the establishment of a stakeholder group assist with the implementation? If so, how many members would be appropriate, and who should be represented? What should be its terms of reference?

A stakeholder group should be established, consisting of the major players (developers, telecommunications companies, etc). The terms of reference would be shaped by further developments in the government's NBN policy.

Further questions relating to the ownership and maintenance of the networks and revenue streams need to be discussed. In practice for example the developer may "gift" the network to a third party wholesale company in order to move on, the company wins out. If however competition is high to be the wholesale provider of telecommunications in estates discounting may occur in the knowledge that they will regain their upfront costs through wholesaling. It is not sufficient clear how this model can work and UDIA suggests some clarification from the DBCDE.