

23 July 2010

## **Submission to MED on “Proposal for Comment: Deployment Standards Initiatives” under the Ultra Fast Broadband Initiative (UFBI)**

### ***1. Introduction***

This submission is from the Wellington Regional Strategy Committee on behalf of the nine councils in our region: Carterton District Council, Greater Wellington Regional Council, Hutt City Council, Kapiti Coast District Council, Masterton District Council, Porirua City Council, South Wairarapa District Council, Upper Hutt City Council, and Wellington City Council.

The Wellington Regional Strategy (our sustainable economic growth strategy) singles out fast, affordable broadband as a key economic enabler because the region’s distance from the rest of the world, and focus on new, creative industries, make first-rate communications technology essential. We are very supportive of the government’s broadband programme for these reasons and want to ensure that the Wellington region is at the forefront of these developments and is "fibre friendly".

The key points of our submission are:

- We support the development of nationwide standards that prescribe how new fibre installation techniques should be deployed. However, we think it is important that any national standards reflect differences in geographical conditions (eg urban vs rural)
- The councils in the region have undertaken considerable work to coordinate policies relating to fibre deployment across the region, including assessment of trenching technologies, aerial deployment rules and coordination of road openings.
- The committee would also like to have Wellington region representation on the Standards Working Group and the Pilot Projects Investigation Working Group.

### ***2. National standards***

The Committee is supportive of nationwide standards of practice for the deployment of fibre infrastructure. We agree with MED’s view that local authorities need to have an open mind on non-traditional fibre deployment techniques (paragraph 26). In

order to ensure any future risks associated with these new technologies (i.e. risks to the integrity of the road, the fibre and the assets of other utilities in the road corridor) are adequately addressed it would be ideal if any national standards took into account the longer-term liability issues that may be associated with them.

## **2.1 Consent terms**

The discussion paper notes that infrastructure companies “have expressed a desire to have certainty regarding the regulations and consent terms that will be required for a wide scale deployment” (paragraph 24). It is not clear to us that the proposed national standards would have any impact on consenting. Clause 6 (2) of the Infrastructure Bill (as reported from the Transport and Industrial Relations Committee) states that “corridor managers must comply with the Code (but only to the extent that the Code is not inconsistent with any applicable criteria for reasonable conditions that are published under an enactment).” We are therefore unsure whether the National Code of Practice for Utilities Access to Transport Corridors will override District Plans completely within transport corridors and would like clarification on this. It would also be good to have clarification as to whether the Utilities Act 2010 and therefore the Code, will only apply to transport corridors.

If the intent of this work is to achieve consistency in consent terms, and this is not provided in the Utilities Code, we assume that this would have to be effected through the Phase II changes to the Resource Management Act (RMA) or a National Environmental Standard (NES).

Our earlier submission on the “Facilitating the Deployment of Broadband Infrastructure” discussion paper explained that we consider existing processes do allow for appropriate management of the competing issues that must be considered. We believe that changes made to the Utilities Code of Practice will enable consistently high quality and efficient deployment of robust fibre infrastructure.

Aerial deployment of fibre can provide cost advantages in both the long and short term, particularly in situations where overhead wires already exist or where due to ground conditions the cost of underground deployment is high. However, we don't believe that any further RMA changes or an NES is required, as such change would be inadequate to meet the differing needs of individual communities.

We firmly believe that nationwide standards need to reflect the variations in geography and geology so that the correct deployment technique is applied in the appropriate setting. This is especially so for aerial deployment and trenching technologies.

## **2.2 Code detail and reach**

The discussion paper states that nationwide standards would “Enable the efficient deployment of a range of non-traditional fibre installation techniques” (paragraph v

under Executive Summary). This might be seen to imply that those standards would give any local fibre company the right to use new deployment technologies by, for example, setting nationwide standards for the depth of underground utilities. The current National Code of Practice for Utilities Access to Transport Corridors, does not prescribe specific depths, but sets out a process for corridor managers and utilities operators to determine the depth of underground utilities. We believe this approach is appropriate given the range of deployment scenarios and conditions.

Considerable work has been undertaken by the councils in the region to coordinate policies relating to fibre deployment across the region. This work includes assessing trenching technologies, aerial deployment rules and opportunities for better coordination of road openings. We would be happy to share our knowledge and information with the working groups and other stakeholders involved in this process.

### **2.3 Aerial deployment**

Aerial deployment might accelerate deployment of broadband in some areas, particularly where overhead cabling or aerial infrastructure already exists. This will mean that the economic development and productivity benefits of fibre broadband could come into play faster than where slower or more expensive deployment techniques may be employed.

Overhead cabling has, in the past, generated strong community resistance due to its visual impacts. It is possible that community acceptance of aerial fibre may change when introduced to the modern fibre used which is lighter than cables used by companies such as Saturn. It is also possible that community acceptance of aerial may change when trade-offs are understood between the options to deploy aerially versus delays and increased costs of undergrounding fibre.

However, councils throughout the region have been working to underground facilities to reduce their impact on the quality of our urban environments. We believe that policy measures to facilitate greater broadband deployment throughout the country need to be sympathetic to this intent.

Our work on assessing the region's council rules around aerial deployment has led us to understand the following:

- Aerial deployment is considered to have half the life of underground fibre
- There are some challenges using power poles as companies generally require a metre separation between the power and fibre services on the pole. This can mean that fibre could hang too low over roadways and driveways
- Fibre casings need to be of a heavier grade than when put underground as they need to withstand the elements

- The backbone for an urban deployment needs multiple fibres in separate casings that can be easily split off from the main line. These can cause additional visual impacts, an increase in maintenance costs and operational complexities.

There will be situations where overhead cabling is not appropriate. These may include:

- new subdivisions, particularly greenfield subdivisions where all other services are located underground.
- areas where services have already been undergrounded and areas where aerial services do not already exist, eg Porirua City and Kapiti District
- in open space areas, important landscape areas and over buildings or areas of high heritage or cultural values.

We would anticipate these situations being reflected in the development of any National Standards.

## **2.4 Trenching**

We recognise that shallow trenching and other new trenching technologies will be effective in enabling cheaper and potentially faster deployment of fibre throughout the country. Any national standard needs to recognise and provide for any risks associated with shallow trenching technologies and recognise where these technologies are most suitable. We believe this is necessary to manage impacts on maintenance costs of roading assets and other infrastructure in the road corridor. It would also enable councils to take full account of variations in local conditions.

The impact of trenching techniques on roads varies according to a range of factors, such as road composition, traffic volume and type, as well as the type of materials used in trench reinstatement. Furthermore, the Wellington region is characterised by significant variations in geology and underground water conditions. Any standards should be flexible enough to allow councils to determine permissible trenching techniques according to these conditions.

Our own investigation of trenching techniques suggests that the potential for shallow trenching to lower the deployment costs is limited because, at shallow trenching depths, the road could prematurely fail. During restoration of the failed road, the fibre cable will have to be relocated at a greater depth. This cost would fall on both fibre companies and councils.

Our initial work on trenching depths suggests that the shallowest depth where it can be safely guaranteed to minimise any risks of road failure, is around the 600mm level. However, we are continuing our work in this area and are more than happy to see or be a participant in, any pilot investigations that might explore this further.

Shallow and micro trenching techniques were primarily developed for North American roads with a concrete base layer, which are less prone to degradation as a result of these issues. However we will support trials if they provide opportunities to explore these issues further.

We believe two related key concerns are understated, namely security of broadband service and liability for damage or relocation costs. Clarification of these issues needs to be given in any development of standards.

Further views on legislative or regulatory measures to facilitate fibre deployment are explained in our submission on the “Facilitating the Deployment of Broadband Infrastructure” discussion paper from November 2009. That submission can be found here: <http://www.med.govt.nz/upload/70936/FDBI-Submissions-022-Wellington-Region.PDF>

### **3. Standards development process**

The committee is comfortable with the governance structure outlined in the paper, with separate working groups to manage the pilot initiatives and the development of standards. This is appropriate as the selection and commissioning of pilot initiatives, and the development of standards will involve quite different tasks. We also note that the Standards Working Group, or a successor body derived from it, might have an enduring role in contributing to future amendments to the Utilities Code.

We would like to have Wellington region representation on the Standards Working Group and on the Pilot Projects Investigation Working Group. We can provide names of subject matter experts that have considerable experience both nationally and internationally. Our councils have staff with experience in a variety of local government and engineering fora, such as Ingenium and Local Government New Zealand, and that have contributed to the development of standards for Standards New Zealand.

We welcome the decision to review legal issues as part of the project (paragraph 39). Much of councils’ work in this area is driven by the need to comply with the multiple laws, regulations and other codes relating to utilities, works in the road and maintaining the urban environment. A central approach will allow councils to develop a shared legal view, and will be more efficient than councils seeking legal advice independently.

### **4. Pilot initiatives**

The committee believes pilot initiatives are a good approach for assessing new deployment techniques and standards. We would welcome initiatives in the region to ascertain how Wellington’s unique geological conditions would impact on the feasibility of different techniques. We would be particularly interested in pilot initiatives for directional drilling and new insertion technologies in the region.

If one or more of the pilot initiatives are undertaken in Wellington region, the committee would be keen to see a member from the region on the Pilot Projects Investigation Working Group, to ensure smooth coordination and knowledge-sharing between the pilot initiative and regional broadband facilitation activities.

### ***5. Economic analysis of deployment technologies***

As part of our work to coordinate policies affecting fibre deployment in the region, councils have assessed new trenching technologies with a view to developing region-wide trenching conditions. This work could inform the proposed economic analysis, especially in respect of the implications for road maintenance costs. We would be happy to share our data and findings with the Standards Working Party.

Any economic analysis needs to state what period would be considered in the analysis.