

# **The National Code of Practice for Utilities' Access to the Transport Corridors**

Code for early adoption and implementation until such time as ratified by legislation

December 2008

## Introduction

### **ADVANCE COPY OF NEW NATIONAL CODE FOR UTILITIES IN THE TRANSPORT CORRIDORS**

The release of this advance copy of the new National Code for Utilities in the Transport Corridors is the beginning of the final steps towards the full use of the Code, which is anticipated to become mandatory over the next 12 to 18 months.

The release of the advance copy is to provide Corridor Managers and Utility Operators opportunity to review their procedures for changes that may be required in order to implement the Code in 2009. It also signals an opportunity to identify any errors in, or aspects of the Code that will be difficult or impractical to implement, and feedback on these will be received up to **15 February 2009**. It is then intended to release the Code for implementation on or about the **1<sup>st</sup> of March 2009**. This final implementation copy will form part of the consultation process required before producing the final document which will be mandated by law.

The Code has been developed by the industry for the industry with the key objectives of developing a nationally consistent process, formalizing current industry best practice, and minimizing third party damage problems. It is developed in the context of the Utilities' rights of access to the corridor and the Corridor Managers' rights to set reasonable conditions. A draft was released at a series of workshops in February this year and the last nine months have involved addressing feedback relating to this and a legal review. The Code

- was developed on a consensus basis and is intended to be fair to all parties
- sets out the roles of the stakeholders
- promotes proactive cooperation between the parties
- outlines the planning process
- provides standard reasonable conditions
- provides standard forms and templates
- establishes a dispute resolution process
- identifies the ongoing monitoring and improvement processes for the code itself

While its introduction at this stage is still voluntary, many who participated in the development workshops earlier this year have been eagerly anticipating its release not only to enable them to get their systems in place before it becomes mandatory, but because it has been recognised as the most up-to-date and accurate documentation available to address the issues associated with road openings and utility damage. Probably the most important action you can take is to get together with your colleagues in your area across the sector to discuss how the Code will be implemented in your area. These processes are outlined in the code as liaison meetings. The second will be to attend our nationwide seminars in 2009.

We will be seeking further feedback following the implementation in 2009 before a final version of the Code is submitted for Ministerial approval as anticipated in the impending legislation. The NZUAG will also be running some training/implementation seminars in 2009.

## ACKNOWLEDGEMENTS

When the Government announced its proposed reforms relating to utilities' access to the transport corridors early in 2007, the sector's response was to take ownership of the issue. Representatives of all utilities, local authorities, Transit New Zealand and ONTRACK sat down to work out the industry's own solution, a national code to be developed by the parties for the parties, under the sponsorship of the NZ Utilities Advisory Group (NZUAG). A Statement of Intent to develop the Code was hammered out and a small team established to oversee the work.

Much of the work was done by a dedicated team of six Directors, comprising two representatives each for utilities and local authorities, and one each from Transit NZ and ONTRACK, and an independent chairman/project manager. Thanks go to Mark Larsen (Telecom Ltd), Ewan Gebbie (Vector NZ Ltd), Phil Consedine (North Shore City Council), Phillip Eyles (Local Government New Zealand), Ian Cox (then Transit NZ), and Mike Curran (then ONTRACK). Stephen Parker (Gas Association of NZ) was project sponsor for the NZUAG and Peter Winefield (then MWH NZ Ltd) was appointed Project Manager. Fiona Knight, Executive Officer for NZUAG, provided administrative services.

Many others throughout New Zealand also assisted, participating in working groups developing individual chapters of the Code, providing peer and sector reviews, and deputising for the Directors as required. Others provided editorial and/or technical assistance on the Code content. Over 450 people attended the seminars in February 2008 to launch the draft Code and 33 people/organisations made formal submissions. Since then, further peer and sector reviews have been concluded. The value of the time contributed by all these people to the development of the Code is immeasurable.

There were several different codes in existence developed by local authorities in addition to the *Standards NZ Handbook 2002:2003 'Working in the Road'*. Shared with the consent of all their owners, these codes provided the foundations for this new National Code, and their contents were updated in the process.

All sectors willingly provided the essential financial backing for the Code, through sector organisations, individual companies and councils, and central government agencies. Government support was also provided through officials of the Ministry of Economic Development to ensure that the developing Code was consistent with the impending legislation that mandates the Code.

With all this commitment and hard work from representatives of all sectors associated with utilities in the transport corridors, the 'National Code for Utilities' Access to the Transport Corridors' has been achieved. Congratulations and sincere thanks go to everyone who contributed.

David Fraser

Chairman, NZUAG

## **GUIDANCE FOR READING THE CODE**

For ease of reference this Code has been structured as follows:

Each chapter begins with a purpose clause, which is intended to indicate the general reason for the chapter, followed by the descriptive provisions.

The following construction applies to this Code:

- (a) Where the context requires, words importing the singular shall include the plural and vice-versa and words importing the masculine, feminine and neuter shall include all three;
- (b) The headings to clauses are both for convenience and for use in the interpretation of the relevant chapter, clause, subclause or paragraph;
- (c) A reference to any Act includes all subsequent Acts and includes relevant Regulations in amendment of, or substitution for, the same;
- (d) A reference to any Standard or other document includes any amendment of, or substitution for, the same; and
- (e) Where any period of time from a given time, act or event is prescribed or allowed for any purpose in this Code, the period will, unless a contrary intention appears, be determined as being exclusive of that day or the day of the act or event.

### **Notes:**

1. This Code is for voluntary implementation until such time as it has been ratified by the (proposed) Utilities Amendment Act. This legislation is expected to be passed **in 2009** and at that time the Code will be reviewed for compliance with the new legislation and adapted as necessary. This review will also be an opportunity to consider any suggested changes to the Code that may have arisen from early implementation. On this basis, organisations who are involved in early implementation and who have any suggestions to make on the wording of the Code are encouraged to forward their comments to NZUAG.
2. That said, this Code has been written in a style that NZUAG hopes will mean that it can become the Code under the legislation without major structural change.
3. Based on 2008 Cabinet papers, it is anticipated that the Electricity Act and the Gas Act will be brought into line with the Telecommunications Act:
  - 3.1 so that cost allocation is the same in all three Acts, and the 50/50 cost share set out in the Government Roding Powers Act 1989 where NZTA requests relocation does not apply;
  - 3.2 so that the non-exclusive list of conditions in section 119 of the Telecommunications Act applies to all three Acts; and
  - 3.3 so that a new requirement is included such that any conditions imposed to give effect directly to creating additional amenity value (i.e. in addition to 'like-for-like') can only be considered reasonable if such outcomes are consistent with what is identified in the LTCCP.
4. The definition of "road" in the Telecommunications Act is expected to remain wider than in the Electricity and Gas Acts (i.e. it includes any public place).

## **INTERPRETATION**

Pages (i) to (v) are introductory material designed to assist users of the Code, but are not part of the Code itself.

Other material within the text that is marked as “Explanatory” is not part of the Code but is intended to assist with its interpretation and application.

## **GLOSSARY OF ABBREVIATIONS**

For an explanation of each term, refer to Schedule A: Interpretation and Construction.

|        |   |
|--------|---|
| CAR    | Corridor Access Request                           |
| CBD    | Central Business District                         |
| CIP    | Continuous Improvement Process                    |
| CMB    | Code Management Board                             |
| CoPTTM | Code of Practice for Temporary Traffic Management |
| kph    | kilometres per hour                               |
| LTCCP  | Long Term Council Community Plan                  |
| mm     | millimetres                                       |
| MOTSAM | Manual of Traffic Signs and Markings              |
| NZTA   | New Zealand Transport Agency                      |
| STMS   | Site Traffic Management Supervisor                |
| TA     | Territorial authority                             |
| TMC    | Traffic Management Coordinator                    |
| TMP    | Traffic Management Plan                           |
| TQS1   | NZTA/Transit Quality Standard 1                   |
| TQS2   | NZTA/Transit Quality Standard 2                   |
| WAN    | Works Approval Notice                             |

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## **CHAPTER 1 INTRODUCTION**

### **1.1 Reason for the Code**

This Code is an industry-led initiative to define the roles of various parties in a nationally consistent approach for the management of access to the transport corridors (road and rail) by Utility Operators.

The Code seeks to provide a consistent and cooperative framework for Corridor Managers and Utility Operators to manage the corridor while providing for the access rights of Utility Operators. The intention is to provide a set of principles for Corridor Managers and Utility Operators to use. Where 'must' is used this will be the minimum requirement for Corridor Managers and Utility Operators to apply. The remainder are guidelines, advice and best practice, for which Utility Operators and Corridor Managers must use good faith in endeavouring to ensure compliance.

The transport corridors are significant areas of public space that are used in a variety of ways by the community. It is important that this diversity of use is acknowledged and that all parties are responsible to preserve, promote and balance those diverse values.

### **1.2 Best Practice**

Accordingly, this Code provides parties with a framework of best practice, striking a reasonable balance between their competing interests and obligations (including statutory), built on the principles of:

- (a) Right of access by Utility Operators to the corridor for the placement, maintenance, improvement and removal of utilities;
- (b) Right of Corridor Managers to ensure safe and efficient operation of the corridor through the application of reasonable conditions;
- (c) Roles and responsibilities of the parties being defined;
- (d) Promotion of planning, liaison and coordination among parties to achieve greater efficiency and cost effectiveness;
- (e) The integrity of the corridor being maintained through compliance with transparent quality assurance procedures;
- (f) A safe work site and minimum inconvenience to the public during the work; and
- (g) Collaboration with each other in the spirit of good faith.

There are a number of differences between the nature and legislative context of the transport corridors. For this reason 'access to the rail corridor' is largely contained in a separate chapter (Chapter 8).

### **1.3 Background**

This Code is intended to be the Code contemplated by the Utilities Access Legislation (when enacted) and to meet the Statement of Government Objectives published in October 2006 to achieve the following purposes and principles:

- (a) To reduce the costs and inefficiencies arising from the current statutory framework, including avoidable damage to roads and utility networks, delays and disputes, inconsistencies between statutes, and poor coordination;
- (b) To provide for better management of the multi-use of road corridors in the public interest, including road safety, and balancing the provision of utility services with efficient transport and universal access to roads; and

- (c) To provide the potential for increased utility access to rail and motorway corridors while recognising the transport and safety responsibilities of Transit, and the transport, safety and business interests of ONTRACK.

#### **1.4 Parties**

The parties are Utility Operators, road controlling authorities, rail authorities, territorial authorities and NZTA. These parties have collaborated to develop this Code for working in the transport corridors, and the Code recognises the role and responsibilities that each of the parties must contribute to achieve the purpose.

#### **1.5 Conflicts with the Code**

If this Code conflicts with any legislative provision or New Zealand Standard specified in this Code, the legislative provision or Standard will prevail. This Code does not indemnify any party from any liability that they may incur when carrying out works in accordance with this Code.

#### **1.6 Intention for Code to Replace Earlier Codes**

The intention is that over time, this Code will be recognised as the approved National Code under [the Utilities Access Act 2009] governing utilities' access to the transport corridors and be enforceable under that Act. Utility Operators and Corridor Managers must use this Code to access the transport corridors to carry out work.

To avoid doubt, this Code:

- (a) Replaces and supersedes any voluntary industry code covering utilities' access to and working in the corridor;
- (b) Must be read together with any approved variation of this Code; and
- (c) Enables the parties to agree terms and conditions between themselves as specified in this Code.

#### **1.7 Review and Amendment**

Regular reviews of the Code are planned to ensure the Code continues to reflect best practice throughout the industry.

Amendments to the Code, if necessary, will be made in accordance with the Utilities Access Act 2009 and processes prescribed in or under that Act.

#### **1.8 Forms and Templates**

Forms and templates for procedural matters under this Code are specified in Schedules B and C. Utility Operators and Corridor Managers must use these forms. Variations may be used by parties where they are substantively similar, but not for the template for reasonable conditions.

#### **1.9 Format of Code**

The first two chapters, Introduction and Principles Supporting the Code, deal with the reasons for the Code, the background, its status, how it operates and guiding principles that support the operation of the Code such as collaboration among parties and consistency of practice.

Chapters 3 to 5 deal with planning and processes to ensure the efficient and effective identification of roles and responsibilities of the parties, and the management of relevant information leading to better planning for access.

Chapters 6 to 10 focus on the construction and operational standards to maintain safety of users and structural integrity of the corridors, and guidelines for the setting of reasonable conditions, including specific provisions for access to motorway and rail corridors.

Chapters 11 to 13 cover compliance issues, cost sharing and a mechanism for last resort dispute resolution.

Chapter 14 looks to the future, dealing with variations to the Code and the requirement for continuous improvements to its content and application.

The Schedules prescribe details of interpretation and construction of the Code and include forms, templates and procedures supplementing the main text of the Code, and supporting the principle of consistency of practice. Schedule E expands on the procedures for risk management specifically for above-ground structures.

#### **1.10 This Code is Not Retrospective**

This Code is voluntary, but is expected to have legal force on the date stipulated in or under the proposed Utilities Access Act 2009 when enacted.

This Code does not apply to any application lodged or work commenced by the Utility Operator before the commencement date. This Code does not require the relocation of corridor assets that exist at the commencement of this Code.

#### **1.11 Legislative Framework**

Parties must operate within a legislative framework and a regulatory environment when planning for or carrying out work in the transport corridor under this Code. The legislative framework includes the following Acts and any amendment to these Acts and any applicable regulations, rules or bylaws under these Acts:

Auckland Metropolitan Drainage Amendment Act 1963;

Building Act 2004;

Commerce Act 1986;

Electricity Act 1992;

Gas Act 1992;

Government Rounding Powers Act 1989 (formerly the Transit New Zealand Act 1989)

Health and Safety in Employment Act 1992;

Land Transport Act 1998;

Land Transport Management Act 2003;

Local Government Acts 1974 and 2002;

New Zealand Railways Corporation Act 1981;

Postal Services Act 1998;

Railways Act 2005;

Resource Management Act 1991; and

Telecommunications Act 2001

## **1.12 Other compliance documents**

Parties also acknowledge that, in addition to the legislative framework, when carrying out work they should be aware of applicable Codes of Practice, Rules, bylaws, and Standards such as those issued by the Department of Labour, Ministry of Economic Development, NZTA, local authorities, and Standards New Zealand and known international standards that are accepted best practice within the New Zealand industry.

These documents are identified in Schedule F. References to those documents include any amendments to them that are in force, and any document issued in substitution for any of those documents.

The obligation in this clause 1.12 does not apply so as to override any specific obligation in this Code.

## CHAPTER 2 PRINCIPLES SUPPORTING THE CODE

### 2.1 Purpose

The purpose of this chapter is to specify principles that support the Code to meet the Statement of Government Objectives published in October 2006/purpose of the Utilities Access Act 2009.

### 2.2 Working Together

Utility Operators and Corridor Managers must coordinate working in the transport corridors (the corridor) according to their respective roles and responsibilities.

They must cooperate and collaborate with each other so far as is reasonably practicable in individual circumstances. The parties must engage constructively and promptly through open dialogue and regular meetings, provide each other with relevant and accurate information, maintain the confidentiality of information, and supply technical assistance where appropriate.

### 2.3 Consistency

*[Explanatory: A consistent approach to the application process and imposition of reasonable conditions will enable Utility Operators to plan for and deliver utility services in a cost efficient manner. For Corridor Managers, while there may be diversity in terms of the appropriate approach, a consistent process and good record keeping will ensure accountability and the development of transparent rights and responsibilities.]*

The parties must adopt consistent approaches and procedures relating to undertake:

- (a) Notification;
- (b) Information quality;
- (c) The location of services;
- (d) The application of reasonable conditions; and
- (e) Local and special conditions

### 2.4 Technical Excellence

Parties must adopt best practice standards in all aspects of road corridor management by fostering:

- (a) Technical excellence;
- (b) Timely identification of technical redundancy to enable new technologies to be adopted as appropriate; and
- (c) Adoption of bundling and/or co-occupation of utility structures where appropriate —

having regard to the rapidity of technological change and the practicalities of keeping up with changing standards of best practice.

### 2.5 Equity and Fairness

*[Explanatory: Management of access to the corridor is necessary to ensure that regulation to protect the interests and values in the road corridor is fair and does not favour or prejudice one Utility Operator over another. In this regard, all the parties must recognise that one party's work has possible impacts on another and that there is an expectation that any party working in the corridor must take responsibility for its actions and have due regard for the existing assets and intentions (where known) of all other Parties.]*

Each Party must:

- (a) Treat each other Party fairly;
- (b) Respect the assets of other Parties;
- (c) Communicate openly with other Parties; and
- (d) Treat other parties working in the transport corridor in a consistent manner where practicable.

## **2.6 Quality**

This Code is intended to reduce costs and inefficiencies including avoidable traffic disruption and damage to corridor and utility networks. **To achieve these goals, all parties must commit to continuous improvement through quality assurance processes.** Each Party must ensure that its work is carried out in a competent and professional manner and that quality outcomes are delivered. Each Party must act, to the extent practicable, so as to ensure:

- (e) Protection of the long term integrity of the road asset;
- (f) Protection of existing utility assets;
- (g) Compliance with the processes and standards set down in this Code;
- (h) That contractors adopt responsible work practices; and
- (i) That works are completed to the expected standard.

## **2.7 Health and Safety**

Each Party acknowledges that the corridor is a dangerous working environment and that it must co-operate with other Parties to enhance corridor safety.

Each Party must observe its:

- (j) statutory duty to protect employees working in the corridor; and
- (k) statutory duty to protect the public from hazards while work is being done.

## **2.8 Resolution of Differences**

Where a dispute arises and the Parties cannot resolve it informally each Party involved must participate in the process specified in this Code (Chapter 13) in good faith and as quickly as possible.

## CHAPTER 3 ROLES AND RESPONSIBILITIES

### 3.1 Purpose

The purpose of this chapter is to set out the roles of each of the parties and the matters for which they are respectively responsible under this Code. In addition, parties are responsible for achieving the objectives in Section 1.3 of the Code.

The areas of responsibility for each respective party are indicated so that each can understand clearly the extent of their roles and responsibilities and the role and responsibilities of other parties with whom they must interact. The parties acknowledge that there is an overriding obligation to work together cooperatively to achieve the outcomes stated in Section 1.3.

### 3.2 Corridor Manager for Roads

Each Road Corridor Manager must, in respect of its Corridor,

- (a) Coordinate, where practicable, works in the corridor including advice of forward works programmes;
- (b) Receive and process notifications of work in the corridor (the CAR, as outlined in Chapter 9);
- (c) Set reasonable conditions for any work in the corridor (based upon the relevant conditions set out in this Code);
- (d) Ensure and enforce compliance with the Code and conditions;
- (e) Establish and maintain formal and informal communications with all other parties, and participate actively in liaison meetings; and
- (f) Take reasonable care not to damage other parties' infrastructure or cause unnecessary disruption to the public in undertaking their works.

*[Explanatory: It is noted that whilst road controlling authorities are not covered by the definition of 'utility' in this Code, the principles of the Code are equally relevant to road controlling authorities when they undertake work in the corridor, in particular the obligations and responsibilities they have to others who own assets or have rights in the corridor.]*

### 3.3 Corridor Manager for Rail

Each Rail Corridor Manager must in respect of its Rail Corridor:

- (a) Receive and process requests for access across or along the rail corridor, in accordance with Chapters 9 and 10 and Schedule B;
- (b) Set Reasonable Conditions for any work in the rail corridor, based on the relevant conditions set out in this Code;
- (c) Advise the location of its assets in the corridor;
- (d) Ensure and enforce compliance with the Code and conditions;
- (e) Participate as appropriate in regional coordination meetings;
- (f) Establish and maintain formal and informal communications with all other parties and participate actively in liaison meetings; and
- (g) Take reasonable care not to damage other parties' infrastructure or cause unnecessary disruption to the public in undertaking their works.

### **3.4 Utility Operator**

Each Utility Operator must:

- (a) Notify the Corridor Manager of any impending works in the corridor in accordance with this Code (in both a wider planning sense and in relation to specific works);
- (b) Comply with any reasonable conditions set by the Corridor Manager in relation to those works;
- (c) Take reasonable care not to damage other parties' infrastructure or cause unnecessary disruption to the public in undertaking those works;
- (d) Advise the location of its assets in the corridor; and
- (e) Establish and maintain formal and informal communications with all other parties and participate actively in liaison meetings.

### **3.5 Responsibility for Suppliers and Agents**

Each Party is responsible, in respect of this Code, for the actions and omissions of its delegates, agents, consultants, contractors and employees; except to the extent that any Act provides otherwise.

### **3.6 Corridor Managers as Utility Operators**

Where a Corridor Manager is also a Utility Operator, such as for the infrastructure for the reticulation of water and/or stormwater, the Corridor Manager must, while performing the functions of corridor management, comply with the roles and responsibilities of a Utility Operator.

### **3.7 Conflicts of Interest**

The Parties must observe the following best practice principles for dealing with conflicts of interest between parties:

- (a) Establish rules for the most important and obvious actions that people must or must not take;
- (b) Establish a mechanism (such as an interests register) for recording those types of ongoing interests that can commonly give rise to a conflict of interest, and a procedure for putting this into effect and updating it on a regular basis;
- (c) Set out a process for identifying and disclosing instances of conflicts of interest as and when they arise (including a clear explanation of how a party should disclose a conflict of interest, and to whom);
- (d) Set out a process for managing conflicts of interest that arise (including who makes decisions, and perhaps detailing the principles, criteria, or options that will be considered);
- (e) Provide avenues for training and advice;
- (f) Provide a mechanism for handling complaints or breaches of the Code; and
- (g) Specify the potential consequences of non-compliance.

## CHAPTER 4 SHARING KEY INFORMATION

### 4.1 Purpose

The purpose of this chapter is to promote methodologies and practices that, where practicable, improve the level of information sharing between Utility Operators and Corridor Managers (and within each group). Information relating to the nature and location of utility assets in the transport corridor is of primary concern, including the promotion of efficient and effective ways of ensuring related information is appropriately available, maintained and accurate.

Poor location data of utility services in transport corridors is contributing to an unwarranted level of third party damage and this has implications for costs, warranties and liabilities, stalled road works and reduced performance of all utility services.

Better information sharing will improve the performance of those working in transport corridors, and will assist in reducing costs including third party damage claims. However, any increased sharing of commercial information requires a rigorous process to protect the confidentiality of that shared information to ensure that it is used only for the purpose of improved coordination of works in the transport corridor.

Placing responsibility for ensuring provision of accurate location information with the Utility Operator is the most effective means of ensuring the information is accurate on an ongoing basis. Having Utility Operators hold that information within their own organisations allows them to maintain direct links with internal systems such as asset registers and geographical information systems (GIS).

The transport corridor is a dynamic environment, and the nature and extent of information requirements differ for different activities, although it is impractical to try to define this too specifically.

### 4.2 What Information is Needed to Achieve the Desired Outcome

Any party considering carrying out work in the road corridor will need to know the following:

- (a) The utilities that are present in that location;
- (b) The nature of the utility;
- (c) The location of the utility assets; and
- (d) Usage patterns in the transport corridor and in nearby roads.

There may also be other important information exchanges, such as standards relating to any working practices in the vicinity of assets or urgent contact information should assets be damaged. It should be emphasised that the Utility Operator approved by the Corridor Manager to undertake the work is accountable for the competency and actions of contractors undertaking that work. Utility Operators undertaking the work must ensure any contractors working on their behalf work safely and preserve and protect assets of all kinds.

#### 4.2.1 Responsibility for Keeping Information Up to Date

Each Utility Operator must hold accurate records of the nature and specific location of their assets in each corridor and provide this information as required by Corridor Managers or other Utility Operators. This includes advising Corridor Managers of their presence within each designated corridor in the Corridor Manager's territory as soon as practicable where they are in a corridor as at the commencement of this Code and thereafter as soon as practicable after they enter any corridor.

Corridor Manager's must provide an appropriate process for capturing this information, and Utility Operators must ensure the information supplied by them is as accurate as reasonably possible.

### 4.3 Confidentiality and Information Sharing

Utility Operators and Corridor Managers accept that commercially sensitive information may need to be shared with other parties to complete work. While openness and sharing of information is to be encouraged, the recipient must, subject to its legal obligations, respect the confidentiality of information received according to the classification given by the provider. For all information provided to Corridor Managers by Utility Operators claiming confidentiality (for commercial reasons or other reasons), it is considered good practice always to check with the Utility Operator who provided the information before disclosing the information to other parties.

Given the commercial sensitivity of some utility information provided under this Code, care should be taken to ensure that release of the information is considered in the light of Section 9(2) of the *Official Information Act 1982* and Section 7(2) of the *Local Government Official Information and Meetings Act 1987*.

This Code does not limit the rights or obligations of any Party under either of those Acts.

### 4.4 Forward Work Planning

Utility Operators must provide information on their forward schedules of upcoming works to Corridor Managers to facilitate coordinated and efficient outcomes. Corridor Managers must provide information on forward schedules of upcoming roadworks to Utility Operators to facilitate coordinated and efficient outcomes.

Corridor Managers must co-ordinate regular liaison meetings with all Utility Operators, on the nature and timing of such future works, so that these can be accommodated with any other proposed or planned works in that section of the corridor.

Corridor Managers must provide on request by any Utility Operator advice as to what utility structures and/or notified works are likely to be in the area of, and affected by, proposed works.

### 4.5 Plans

All parties must keep accurate records of their work and works in transport corridors and make them available on request to Corridor Managers and Utility Operators planning works in those corridors.

*[Explanatory: It is recognised that in some cases some historical information held by Utility Operators regarding the location of assets has been based on other asset locations that have since relocated, e.g. kerb sides, and may no longer be accurate.]*

Each Party must endeavour to manage its records in an electronic format capable of being exchanged with other Utility Operators and Corridor Managers.

Where the existing utility services have been located and/or exposed, their location must be confirmed or amended on the plans, and any previously unknown services must be added. The accuracy of new location data should be targeted to be  $\pm 0.3$  metres in the horizontal direction and  $\pm 0.1$  metres in the vertical direction where practicable. Information on location of utility assets should be sufficiently accurate for future location and identification of the asset as appropriate to the location. The Party that locates or exposes services not shown (or shown inaccurately) on any plan must notify the Utility Operator responsible for the service of the true location and that Utility Operator must amend its records and notify the Corridor Manager accordingly. If an unidentified utility is located during works, the Corridor Manager should be notified and that utility's existence notified to the owner to record on their plans.

Final "as built" plans must be prepared by the party carrying out works as soon as practicable and made available no later than three months after the completion of any works affecting any utility structures.

## CHAPTER 5 PLANNING FOR ACCESS TO ROAD CORRIDORS (POSITIONING GUIDELINES)

### 5.1 Purpose

The purpose of this chapter is to support improved planning processes for works in transport corridors to ensure that utilities will be installed, maintained or removed in a timely and cost effective manner, with minimal impact on the corridor environment, community, corridor users and the assets of other Utility Operators. This will be achieved in part through better cooperation and communication amongst Utility Operators and Corridor Managers and in part by a consistent approach to project and risk planning.

### 5.2 General (Explanatory)

*The intention is to:*

- (a) Share forward plans with other parties as identified in Section 1.3;*
- (b) Ensure that, in all respects, Corridor Managers and Utility Operators work towards an outcome that balances the respective interests of the parties, and causes minimal impact on the environment and for corridor users following completion of the works;*
- (c) Maintain the integrity of the road corridor, including road and utility assets;*
- (d) Optimise the safety and efficiency of the road corridor;*
- (e) Minimise road safety hazards created by equipment or plant within the corridor;*
- (f) Encourage the sharing of trenches and poles to maximise the efficient use of limited corridor space, reduce clutter and prevent reduction in road safety;*
- (g) Encourage use of trenchless construction of underground works as the preferred choice of Corridor Managers, while ensuring existing underground utilities are not damaged;*
- (h) Ensure that utility equipment and plant installed in the road corridor does not affect private property access and common law frontage rights; and*
- (i) Minimise interference with access to adjacent property.*

*All Parties acknowledge that better planning (including long term strategic planning), liaison and notification will also produce mutual benefits for minimising compliance assessment and auditing for Corridor Managers and Utility Operators, as well as minimising the risk of dispute.*

*Utility Operators should undertake strategic and operational planning for works.*

*For State Highways there is a specific statutory duty to have a written approval from NZTA for all works, to avoid committing an offence. Maintenance activities by utility operators will be treated as a separate application.*

*The liaison meetings are an opportunity to provide for that engagement and help to coordinate utility work, road work and other planned activities to minimise any nuisance and costs caused to each other and the public, and to consider the need for further simplification of processes, particularly for urgent or minor works. It should be noted that where State Highways pass through urban areas, the Corridor Manager role may be split between the NZTA and the territorial authority.*

### 5.3 Liaison Meetings

The Corridor Manager must facilitate liaison meetings to improve coordination and planning of roading activities between all parties. This must include separate strategic high level planning meetings with Utility Operators to discuss their annual plans and longer term planning and coordination. The Corridor Manager must also facilitate operational coordination meetings on a more regular basis to ensure coordination objectives are met.

Utility Operators must each have a representative of appropriate seniority attend the regular coordination meeting hosted by the Corridor Manager. Corridor Managers and Utility Operators must engage with each other during the development of corridor management frameworks to ensure coordinated outcomes are achieved that will address the needs of all parties.

The corridor is not static and changes to national policy, environmental, safety and community objectives can all require further developments within the corridor. This development may impact directly on existing corridor and utility infrastructure and an optimal outcome might be relocation. Utility Operators and the Corridor Managers are expected to work together to resolve these issues and enable development within the corridor.

The coordination of works between Utility Operators and the Corridor Manager requires the cooperation and sharing of information between the respective parties. This is the primary objective of the liaison meetings and all parties are obliged to disclose information in a timely manner in order to assist with the coordination of works. A lack of coordination and forward planning may create unnecessary disruption to road users and damage to the road asset or utility infrastructure.

The nature of providing utility services means that work cannot always be anticipated. New installations and upgrades of network infrastructure and roadworks, however, can often be anticipated and conditions may be set to provide for coordination with the installation of other networks and/or road work by the Corridor Manager.

### 5.4 Future Proofing

The Corridor Manager may also request a Utility Operator in conjunction with trenching work done by that Utility Operator to install additional ducts where practicable for the future use by that Utility Operator, other Utility Operators or the Corridor Manager. Any net additional cost must be at the Corridor Manager's expense unless otherwise agreed.

### 5.5 Redundant Abandoned and Disused Utilities

#### 5.5.1 Redundant or abandoned utilities

Utility Operators **must** provide available information on redundant utility structures or assets such as unused ducts **on request by Corridor Managers or other Utility Operators** in order to ensure the corridor is being utilised most efficiently and effectively.

*[Explanatory: A road corridor may become heavily congested with utilities and space will be at a premium. It is in the interests of communities to maximise the use of this space and in these circumstances redundant, abandoned or dormant assets may become an impediment to new utility work. In uncongested corridors, redundant or abandoned infrastructure may not affect the installation of new infrastructure. Removal of redundant or abandoned assets could cause unnecessary disruption to others and could have a more negative effect on the community than leaving it in place. ]*

**In a congested corridor:**

- (a) Where a Utility Operator determines that its infrastructure is redundant or abandoned at the location and any other party is carrying out works in the corridor in the vicinity of that redundant or abandoned infrastructure; then

- (b) The owner of the redundant or abandoned infrastructure must consider, in good faith, the removal of its infrastructure, at its own cost, or allowing other parties to share, remove or recycle that infrastructure.

While the decision on whether infrastructure is unused or abandoned ultimately rests with the respective asset owner, the owner must act reasonably in making that decision and must consider the wider interest of the community to maximise the use of the corridor.

In an uncongested corridor, there is no expectation in this Code of any requirement to remove infrastructure or consider removing infrastructure. Where a Utility Operator does have redundant or abandoned infrastructure in the corridor and is itself working around that infrastructure, the Utility Operator is encouraged to consider whether the infrastructure should be removed.

This provision does not prevent any party exercising any right to have infrastructure moved or removed.

#### 5.5.2 Unused ducts

Ducts may only be installed with a stated specific purpose. If they are not reasonably used for that purpose within a reasonable timeframe, then the above provisions may be applied. Other parties could make better utilisation of these assets and this may yield alternative lay positions for new utilities. If spare and unused ducts and their alignment are not required, these should be made available where reasonably practicable to another Utility Operator or the Corridor Manager for their use. Whether or not they are reasonably used for the purpose for which they were installed, the ownership of the ducts is not altered by any lack of good faith and the ducts remain as assets of the Utility Operator who installed them. Where agreement cannot be reached between the parties then the disputes resolution section of this Code will apply (see Chapter 13).

#### 5.5.3 Congested corridors

In congested corridors, there should be no expectation that road space can continue to be available for redundant and abandoned utilities or unused ducts for which no stated purpose has been declared.

### 5.6 **General Principles for the Placement of Utilities (Explanatory)**

*The following principles support best practice for preferred placement:*

- (a) *The corridor is a valued and finite resource that has many functions and is shared by parties with different needs. Space for utilities in corridors may be restricted and should be allocated by agreement between parties in a fair and consistent manner taking into account long term needs;*
- (b) *Utility assets should be spaced in accordance with the statutory and declared reasonable operational requirements of Utility Operators and Corridor Managers;*
- (c) *Best use of available underground space is required. This would include installing multiple ducts in a vertical configuration where it is reasonably practicable and there is no interference or safety issue with other utilities and, for example, is not likely to cause conflict between longitudinal and lateral lines. Some services may need to be placed at greater depth to allow for this;*
- (d) *Agreements between Utility Operators on trench sharing and use of spare standby capacity assets should be encouraged;*
- (e) *The effects of utilities on*
  - i) *Above-ground structures, trees and street furniture should be minimised; and*
  - ii) *Road safety should be assessed and hazards minimised – further details are given in Schedule E;*

- (f) *Works should not unreasonably inhibit the free flow of traffic, including pedestrians, especially on busy roads. Consideration should be given to using less busy roads wherever practicable;*
- (g) *Innovative approaches should be encouraged;*
- (h) *Utilities should be placed in a consistent alignment parallel to or perpendicular to the road centreline. This is to ensure that new work does not intrude into space that could be allocated for, or could inhibit, future use by others;*
- (i) *In urban areas, bulk mains infrastructure (e.g. water, wastewater, high voltage power) may be placed beneath the carriageway outside of wheel track alignments to free berm space for other utility network services;*
- (j) *The structural integrity of the road assets is not compromised;*
- (k) *The alignment of new utility works shall, where possible, position the utility chambers, pedestals, poles, structures, lids and covers so that access to maintain and develop the network can be undertaken while minimising the effect on traffic;*
- (l) *The number of transverse carriageway crossings in the design of the network should be minimised;*
- (m) *Parties should work together to make allowance for all programmed corridor works in an identified programme, and*
- (n) *The size of underground chambers should be kept to a minimum to reduce interference or conflicts with other utilities.*

#### 5.6.1 Lay positions in eight key situations

Eight key situations have been identified in respect of the particular requirements for positioning new utilities. Specific conditions may apply in these areas, and the Corridor Manager must where practicable be consulted early in the process when a Utility Operator is developing proposals that will require placement of utility structures in these areas:

- (a) Greenfield areas, which generally applies to new subdivisions or new roads;
- (b) Developed urban areas, which are areas of steady growth where space is still available;
- (c) Congested urban areas, which are areas where little or no space is available to lay new utility infrastructure;
- (d) Rural lifestyle areas, which are areas that provide for a mix of rural residential lifestyle and intensive farming and horticultural uses, where the owners expect a full range of utilities.
- (e) Other special rural areas, for example, access ways to large farms or rural business areas, where some utilities pass along or across the access way;
- (f) State Highways, which comprise the principal roading system linking communities to each other and to New Zealand's major ports, international airports and business, industrial and tourist centres;
- (g) Motorways, which are the major roading system links dedicated to high volume, efficient traffic movement and where access to the corridor is tightly controlled (refer to special requirements for motorways in Chapter 7); and

(h) Railways (refer to special requirements for rail corridors in Chapter 8).

#### 5.6.2 Preferred lay positions

While it would be beneficial to all parties to have a standard lay position, preferred lay positions may vary and will be determined, to a large extent in existing roads, by the current number, position and type of utilities present. Where Corridor Managers have already adopted documented standards for the placement of utilities in new roads (e.g. subdivision standards, *NZS 4044: Land Development and Subdivisions*, or District Plan requirements), these standards must be followed by the Utility Operator in design and may be stated in the reasonable conditions being specified by the Corridor Manager.

#### 5.6.3 Berm

A number of Corridor Managers identify the berm area for kerbed urban roads as 'front berm' and 'back berm'. The front berm is that zone between the kerb and the footpath, with the balance being the back berm.

The preferred lay position is in the back berm.

The Utility Operator must take note of all existing above-ground utility assets including power lines, poles, telephone lines, trees, ancillary structures such as cabinets, kiosks, phone boxes, gas structures, street furniture, overhead pipelines and transformers that may be affected by site construction, and take measures to ensure that they are not damaged during the course of the work.

Where possible, all new utility structures, poles, cabinets, transformers, phone boxes, etc, shall be located as close as practicable to the property boundary. Any decision on the location needs to consider access for installation and ongoing maintenance. Impacts on other utilities and property owners also need to be considered. Care is required when working in the vicinity of trees – refer to Schedule D for details.

#### 5.6.4 Drainage

Utility Operators must be aware of risks associated with rainfall and subsoil drainage when working in the road, especially during trenching operations, and take appropriate steps to keep excavations free of water.

An increasing number of roadside stormwater treatment and disposal systems are being located in roads in greenfield and other residential and commercial developments. These systems must be installed as part of consented stormwater systems to cater for treatment and disposal of road runoff. These systems are consented under the *Resource Management Act 1991* and must be protected. Parties must consider whether additional consent or conditions are required when working in the vicinity of these systems.

Existing formed and natural drainage paths must be retained during, and reinstated after, any works in the road. Roadside drains are generally the drainage channels for adjoining land and carry significant flows. Roads may also operate as the secondary flow path for stormwater runoff in times of flooding or heavy rainfall events.

Where a utility cuts across a slope or intersects a subterranean groundwater flow path, the Utility Operator must install appropriate drainage or flow control devices, as agreed with the drainage authority or Corridor Manager.

Care must be taken in low lying areas where the natural groundwater level may be close to the ground surface. Dewatering may not be practical in these circumstances.

#### 5.6.5 Construction noise/vibration

The Utility Operator is responsible for resolving unreasonable noise and vibration conditions where they occur as a direct result of the works and must acknowledge this in its work planning.

#### 5.6.6 Code limitations for power voltage and gas pressure

Installation of electricity lines carrying voltages greater than 110 kV and 100 MVA capacity, or gas lines with pressures greater than 2000 kPa, are special projects requiring particular approval processes not covered by this Code.

### 5.7 Depth of Underground Utilities

The depths of existing utilities can vary within and between regions, and within and between road controlling authorities and utilities. The purpose of this section is to set out the factors that require consideration, and a process that Corridor Managers and Utility Operators can engage in to determine optimal depths rather than to specify a national standard depth for utilities.

There are a variety of factors that will influence the optimal location and depth of a utility. For example, roads vary in terms of the volume and loadings of traffic they carry, and the underground environment varies considerably in terms of ground conditions. There is also a range of engineering responses that can influence the depth a utility service needs to be, and it is important that these are not precluded by setting standard depths.

Utilities' Legislation, Standards and Codes of Practice generally provide the minimum depths at which utilities shall be laid. These depths usually reflect public safety issues for the various utilities.

In road and rail corridors there are outcomes that the Corridor Managers wish to achieve (for example in terms of future upgrading or road widening) and these factors need to be considered as they could influence the design of the corridor and the location and depth of the utility.

Before selecting the depth and location of services the Utility Operator and Corridor Manager must understand the various risks, not only to their own assets and services, but also to those of others to ensure that the most appropriate depths or positioning occurs.

Poor location, inadequate cover or unreasonable depths may result in the shortening of the life of a road/utility asset, reduced performance of the asset, interruption to traffic, problems with subsequent road/utility construction or maintenance activities. Sub-optimal choices can have significant cost implications for all affected parties, and ultimately their customers.

Utility Operators and Corridor Managers must agree a suitable process for optimal depth determination, which reflects the various factors, risks and outcomes sought by the Corridor Managers, the Utility Operators, road users and the public. There could be, for example, an agreement to continue to use those depths applied historically in that locality, with an agreement to use a risk assessment model for exceptions.

A process for assessment (including the risk management process) of the factors that must be considered to determine the optimum depths is described in Schedule D and the parties must (unless specified or agreed otherwise) use this for agreement on depth of underground services.. This allows an agreement to enable the Utility Operator to defer the true full costs for a complying project to a later date should full compliance ever be required.

## 5.8 Safety Issues for Above-ground Utility Structures

### 5.8.1 Risk assessment

Where relevant an assessment of potential safety hazards must be undertaken by the Utility Operator and Corridor Manager collaboratively for new works, and a decision taken as to whether a formal risk management process needs to be instigated. Full details of the risk management assessment process are contained in Schedule E.

In the case of new installations, the intent is to provide the maximum practicable separation from the road carriageway. In some circumstances a combination of solutions may need to be agreed and employed if, after a risk assessment of the particular site, this distance is not considered to be wide enough.

In addition to considering safety from the perspective of road users including pedestrians and cyclists, the safety and practicalities for those working in the road (for example utility workers accessing, maintaining or operating above-ground structures and those maintaining the road) must be taken into account. Consideration must also be given to the impact of the location on other utilities and other property owners (for example does the utility work create an aerial trespass?).

### 5.8.2 Assessing above-ground structure hazards when doing routine and planned works and upgrades

When significant asset maintenance work or upgrades of existing assets are undertaken by either the Corridor Manager or the Utility Operator, opportunities may be present to reduce hazards at little or no extra cost.

***[Explanatory:** This may also be the time when a Corridor Manager or Utility Operator can undertake a review to see if the risk profile has changed and whether a significant hazard may now exist, which would initiate a formal assessment process.]*

### 5.8.3 Assessing above-ground structure hazards in targeted corridors

When significant safety issues due to loss-of-control 'run-off-the-road' crashes are identified in particular corridors by either the Corridor Manager or the Utility Operator, opportunities may be present to reduce hazards collaboratively. An assessment of potential safety hazard should take place for such corridors, and a decision taken as to whether a formal risk management process needs to be instigated. Full details of this risk management assessment process are contained in Schedule E.

## 5.9 Bridges and Structures

Placing or locating utilities on bridges requires consideration of the dead load of the utility and whether the dead load of the utility has been included in the design of the structure. The bridge may not have been designed to provide additional structural capacity to carry the additional loads imposed by the utility works.

Where a new or replacement bridge is being considered, the Corridor Manager must advise potential or known Utility Operators at the investigation/planning stage, so that considerations to accommodate utilities can be made in the design.

The Corridor Manager may install ducts on the bridge for utilities based upon Utility Operators' known requirements. Utility Operators (provided they have complied with the Corridor Access Request (CAR) process) may also install ducts on bridges for utilities. Utility Operators must maximise the use of ducts and other infrastructure before installing new infrastructure as space may be limited. Where practicable (and subject to commercial terms where appropriate), Utility Operators should share excess or additional space/infrastructure.

A Utility Operator that intends to add additional infrastructure to a bridge or other structure is responsible for upgrading existing facilities as necessary to install their new service. The intent is to maximise the efficient use of available space, reduce the number of separate service locations necessary and hence the risk exposure, and reduce the impact on structural maintenance activities.

Where a Utility Operator has existing utilities and infrastructure on a bridge, these must be fully utilised before new infrastructure is added. As space and/or capacity on a bridge may quickly become constrained, all parties must agree to design their new installations in such a way as to maximise use of any remaining space and/or capacity. When doing any works on their existing infrastructure (to maintain, upgrade or replace it), each party must undertake such work and make such changes as are practical and reasonable in the circumstances to maximise the remaining space and capacity of the bridge for other Utility Operators.

The preferred position for external utilities is on the downstream side of the bridge, away from the working zone that can be required when attending to flood debris during or after a flood event.

Bridges and other road structures require maintenance and renewal activities to be carried out to assist in retaining their service level and asset function. Utilities attached to the bridge or structure may be affected by these maintenance works, by way of temporary disconnection, shut down or interference to the utilities, and their presence may impact on the efficiency or effectiveness of the bridge maintenance work. All parties must acknowledge this in their work planning activities and address any cost sharing implications as needed.

If a bridge or structure owned by the Corridor Manager is no longer required and its ongoing presence or upkeep is not guaranteed, the Corridor Manager must advise all affected Utility Operators of the situation. The Utility Operators must be given adequate time to implement their own alternative arrangements for support of their utility, whether on a replacement bridge or structure (if any) or otherwise.

#### **5.10 Embankments**

Road embankments, particularly where sensitive soil types or complex road geometry exist, require special care and consideration, and specialist technical investigation such as slope stability or geotechnical design may be required. If embankments are modified, safety distances for utilities must be maintained.

Utility Operators intending to use formed embankments should satisfy themselves as to risks of land stability or earth movement on their asset.

#### **5.11 Cabinets, Pedestals and Other Above-ground Structures in Urban Areas**

Cabinets are the larger units used to accommodate utility network equipment. Pedestals are the smaller junction units used by Utility Operators to connect adjoining property customers.

The preferred position of a pedestal, cabinet or other structure is where there will be least nuisance or hazard to the public, adjacent property owners, road maintenance workers, postal delivery services or other legitimate activity within the corridor. Ideally this would be beside fences or boundaries and grouped near other similar structures but clear of driveways and high maintenance areas.

Many streets have a quality streetscape and recognition of this is important in regard to the placement of cabinets and pedestals so as to retain this amenity for the local community.

Where cabinets and/or pedestals are positioned in a footpath, preference must be given, where practicable, to maintaining or enabling a minimum footpath width of 1.5 metres in residential areas, 2.5 metres in commercial areas, or 3 metres for combined foot/cycle paths.

Utility Operators should consider the reasonable interests of adjoining property owners prior to the construction of any pedestal, cabinet or other structure.

The Utility Operator must maintain all above-ground structures, cabinets and pedestals in good condition. Damage and vandalism must be repaired as soon as practicable.

Consents given under this Code by any Party are not to be taken as consent in respect of any resource consent that may be required for any work or the conduct of any works.

### **5.12 Underground Chambers/Structures**

Underground chambers and structures must to the extent possible be sited outside of the road carriageway and size minimised so as not to interfere with the use of the corridor by other parties. Where service covers have to be in the carriageway, they must be positioned outside both the wheel path and/or the area within any intersection, unless impracticable to do so. Changes in road level do occur, and agreements are required between Utility Operators and Corridor Managers on whether lids for all underground chambers and service accesses within carriageways should be of the adjustable type that can be modified for changes in road level.

Prior to installation, the specific location of underground chambers and structures must be approved by the Corridor Manager, on a case-by-case basis, in consultation with affected Utility Owners. These must be placed where minimal traffic disruption will occur during construction and maintenance.

Chambers, covers and lids and structures must be able to support the expected traffic loading in accordance with the *NZTA Bridge Manual*, and be installed according to the manufacturers' instructions.

Underground chambers are potentially significant traffic hazards in higher speed roads. Where the operating speed is greater than 70 kph, the Utility Operator must endeavour to locate underground chambers outside of the carriageway areas. Where underground chambers must be located in carriageway areas and the operating speed is greater than 70 kph, the lids must be secured by bolts or other means of fixing.

Where an underground structure is in the carriageway, it must be designed in accordance with the *NZTA Bridge Manual*. The impact factor for dynamic effects due to traffic must be included.

### **5.13 Utility Covers and Lids**

Utility covers must achieve a skid resistance classification of either class 'V' or 'W' in terms of Section 5.2, table 2 in *AS/NZS 4586: Slip resistance of new pedestrian surface materials (1999)* (i.e. a British pendulum value of not less than 45 using a four S rubber foot on a wetted surface). It should be noted that chambers in footpaths may be required to match adjoining surfaces and in some circumstances due to footpath slope and angle can become unsafe for pedestrians. In these circumstances, the covers may require special surface treatment by the particular Utility Owner to remove the hazard.

### **5.14 Poles**

Positioning or placement of poles may be subject to the appropriate District Plan provisions or transport legislation. Poles must not be positioned in a road carriageway or in a position that unreasonably restricts access for pedestrians or to an adjoining property.

The preferred position of a pole is in the roadside as close as practicable to the property boundary. In determining the location of a pole, consideration must be given to:

- (a) The safety and the practicalities for those working in the road (for example utility workers accessing, maintaining, or operating above-ground structures, and workers maintaining the road);
- (b) The impact of the location on other utility assets;
- (c) The impact on adjacent property owners (for example, does the location create an aerial trespass and effects on access to/and use of the property?);

- (d) The safety of the travelling public (all modes of travel).

If the pole cannot be located close to the boundary, or if the Utility Operator considers another location would be more optimal, then the Utility Owner and Corridor Manager must discuss whether an alternative location or solution is acceptable. If there are safety issues, or if an agreement cannot be reached, the risk management process may be instigated (see Schedule E).

Where poles are positioned in the footpath, preference should be given to maintaining the width of the footpath at 1.5 metres in a residential area, 2.5 metres in a commercial area or 3 metres for a combined foot/cycle path, where practicable.

### **5.15 Utility Connections to Adjacent Properties**

The Utility Owner is responsible for all work it undertakes within the road corridor in regard to property connections where it is responsible for the connection.

*[Explanatory: Connections in high-density use areas such as large shopping precincts and other similar areas require special care as these are generally congested with other utility connections. The risk of damage to other utilities or to property access is high as many such connections may be shallow or may not be shown on utility plans.]*

*While much of the utility connection work would be undertaken by approved contractors or agents of Utility Operators, there are numerous instances where unspecified and unauthorised excavations in the corridor have been made to implement connections. The majority of these would be minor repairs to lines or drainage works associated with residential building projects. These unauthorised works are mostly commissioned by the adjacent property owner rather than by the utility owner. Where damage occurs to the berm, footpath, road or other utility the fault is often not found for some time and responsibility may be difficult to apply, leaving others to repair the damage. It is expected that any damage to the Corridor Manager's or another Utility Operator's assets should be followed up directly with the property owner by the parties whose assets are damaged.]*

### **5.16 Construction Techniques**

The Utility Operator and Corridor Manager must work together to achieve a balanced solution which considers public safety, the life of the utility asset, the road asset, the proximity and nature of other utilities, traffic and/or pedestrian volumes around the work site, traffic demands and cost of work. These considerations will have a bearing on the form of construction adopted.

Reticulation by trenchless construction rather than open trenching is encouraged. However this cannot be enforced if it is impracticable, technically infeasible, unsafe, uneconomic (see Chapter 12 Cost Sharing) or represents an unacceptable level of risk to other underground utilities or installations.

Trenchless technology involves installing, repairing or renewing underground pipes, ducts and cables using equipment and techniques that minimise or eliminate the need for excavation. The objective of trenchless construction is to minimise any adverse effects on the corridor environment. Special care must be exercised when trenchless construction is used to ensure that other underground utilities are not damaged.

Plans, locators and trial excavations must be used to locate existing utilities in the same way as for excavation methods. Clearances from other utilities will need to be increased, taking into account such factors as the construction of adjacent plant, ground conditions, bore diameter, the accuracy and reliability of the technique/equipment being used, and whether the other utilities are parallel to or crossing the proposed line.

The technique used must be agreed between the Corridor Manager and the Utility Operator, taking into account the design requirement and site constraints, including the presence of other utilities and traffic. The Department of Labour (OSH) *Guide for Safety with Underground Services (2002)* provides further information.

For trenched construction, the Utility Operator's operation must be in accordance with the Department of Labour (OSH) *Approved Code of Practice for Safety in Excavations and Shafts for Foundations (1995)*.

Where the Utility Operator cannot agree on the use or terms of use of trenchless technology with the Corridor Manager either party may invoke the Dispute Resolution Process in Chapter 13.

## **CHAPTER 6 WORKING IN ROADS – CONSTRUCTION GUIDELINES**

### **6.1 Purpose**

The purpose of this chapter is to provide a set of best practice processes at the construction site, for the purpose of the installation, improvement, maintenance and removal of utilities to ensure consistency and maximum protection of those assets. While motorways are covered specifically in Chapter 7, the requirements in this chapter also apply to motorways to the extent they do not conflict with Chapter 7.

### **6.2 Size, Nature and Positioning of Utilities and Associated Structures**

All utilities and associated structures must be of optimal dimension and number for their required purpose.

Wherever possible, unless otherwise agreed, utilities and associated structures must be constructed:

- (a) In accordance with the process outlined in Chapter 5;
- (b) Parallel to the centreline of the road corridor for linear construction;
- (c) At right angles to the centreline of the road corridor for lateral construction;
- (d) Outside of the road carriageway;
- (e) As close as possible to the road corridor boundary;
- (f) In areas designated for, or already used by, utilities;
- (g) Not less than minimum distances from other specific utilities or corridor assets;
- (h) At a depth that will maintain the future integrity of the utility under traffic loading or construction loading should future road works be undertaken;
- (i) To ensure that the integrity of the road construction asset is retained;
- (j) To ensure that the road surface matches the type and texture of the adjacent road surface;
- (k) To minimise the impact on the environment;
- (l) To provide separation from catchpits and subsoil drainage areas, preferably further than 300 mm from the vertical front face of catchpits or as agreed with the Corridor Manager; and
- (m) So that construction does not disturb road or other stormwater treatment facilities or subsoil drainage lines.

### **6.3 Minimum Cover**

Underground utility works shall be installed at the depth specified in the Works Approval Notice (WAN).

### **6.4 Locating Existing Underground Utilities Prior to Works**

Buried utilities are widespread and it should be assumed that they are present until it is proved otherwise. When new utilities are to be installed near existing utilities, the Department of Labour (OSH) *Guide for Safety with Underground Services* must be complied with.

Before commencing work, the party undertaking the work must locate and mark the underground utilities such as water and wastewater pipes, gas pipes, telecommunication lines, electricity cables, signal cables, road detector loops and survey marks, in accordance with the requirements of the asset owner. The excavation of test trenches by hand digging at appropriate locations must be used to find existing utilities unless otherwise agreed. **Utility Operators may assist by marking their service locations on the ground.**

The Utility Owners and other asset owners must be notified and any approvals required for work adjacent to or over their asset must be obtained prior to commencement of works.

It should be assumed that there is a field (subsoil) drain located under all kerbs or water channels, at a depth of up to 1 metre. These are not normally marked on plans.

Utility Operators are responsible for the activities of their agents (whether consultants or contractors) in respect to working around other utilities. Unless agreed otherwise, hand digging is required when in close proximity to the marked location of a utility and a Utility Operator may require that it be allowed to have personnel on site to observe during work in close proximity to its utilities.

Should hand digging not reveal the location of the expected service either at or in close proximity to the marked location, then the respective Utility Owner is responsible for identifying or correctly locating its utility on the site. Where the hand digging reveals an unmapped or inaccurately mapped utility, the party carrying out the work shall promptly notify all likely Utility Owners and the party that owns that utility must promptly provide any assistance reasonably required. In situations where the work of a Utility Operator is affected due to another party's failure to reasonably comply with their obligations under this agreement, the affected Utility Owner may seek to recover any additional costs incurred by it from the party that failed to comply.

## **6.5 Trenching**

### **6.5.1 Trench construction**

Trench construction requires careful planning and implementation by the Utility Operator. The road corridor contains a multitude of utilities and other assets both below and above ground that must be attended to, along with consideration of movement of traffic including pedestrians and cyclists on and near and consideration of environmental effects such as siltation of waterways or collapse of support for kerbs and channels. Construction sites must be protected so that the public are safe at all times near the site.

### **6.5.2 Trench cutting requirements**

When an excavation is required to be made through any concrete, asphalt or chip seal surface, the edges of the excavation or trench must be cut with a power saw prior to the excavation of the trench. The cut must extend through the full thickness of the surface layer in a clean straight line.

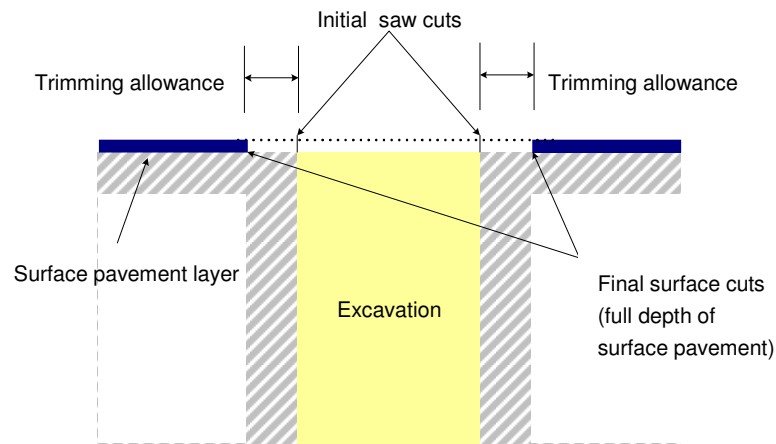
The objective of trench saw cuts prior to excavation is to minimise additional damage occurring to the surface and to control over break.

The initial saw cut must take place prior to excavation. A second saw cut may be necessary to ensure that all edges are essentially straight, smooth and parallel to the line of the trench and the minimum trench trimming allowance is achieved. Figure 1 shows a typical plan of saw cutting and surface reinstatement. If any over break occurs, a change in direction of the saw cut must not exceed an angle of 45° to the trenchline.

Prior to surface reinstatement a second cut is required to provide for a robust surface reinstatement that will be less likely to fail under traffic impacts. The separation distance (set back) from the original saw cut is called the trimming allowance, as shown in the following figures.

A minimum trimming allowance of 150 mm applies.

**Figure 1: Standard trimming for trench cuts**

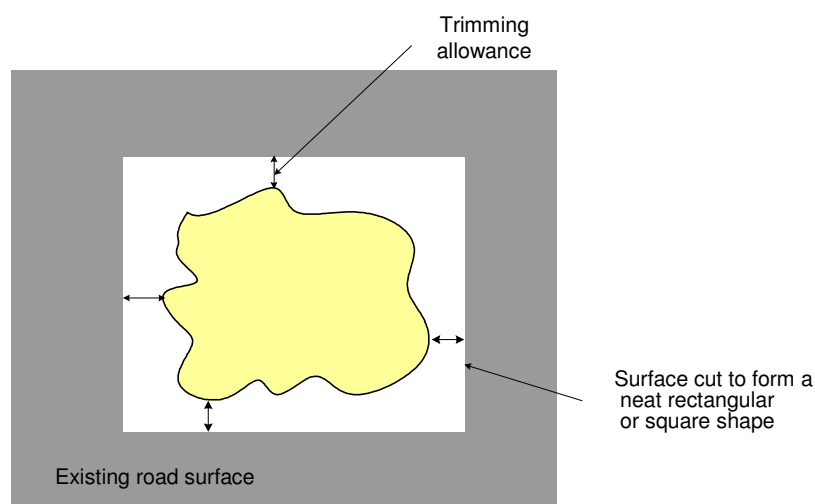


Areas adjacent to the excavation must not be undercut. If slumping of material from the sides of the excavation causes depressed areas adjacent to the excavation, or if the edges of the pavement are lifted during excavation, additional trench cutting outside the original line of the excavation and outside the area of damage must be carried out. This must be carried out before the final surface reinstatement.

Once the excavation has been backfilled, the surface may need to be cut again to form a neat simple pattern to include trimming allowances. Generally this will mean parallel saw cuts on the sides of any area, but for open graded porous asphalt saw cutting is not the recommended method. All joints must be cut to a depth sufficient to avoid disturbance of adjoining pavement. For effective surface cutting, the depth of cutting must be not less than 30 mm except that in concrete carriageways, footpaths and vehicle crossings the depth must be not less than 80 % through the concrete pavement layer.

Figure 2 is an example of how an irregular excavation ought to be expanded to form a more regular shape so as to minimise disruption to the road surface.

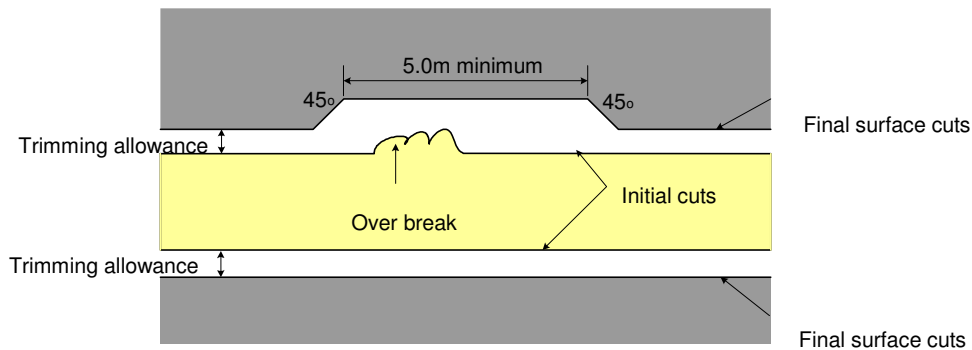
**Figure 2: Finishing of irregular shaped excavations**



A minimum trimming allowance of 150 mm applies to all trenches in the carriageway except in concrete carriageways where a minimum trimming allowance of 300 mm is required. In any event, it may be necessary to increase the width to ensure the integrity of the final trench reinstatement.

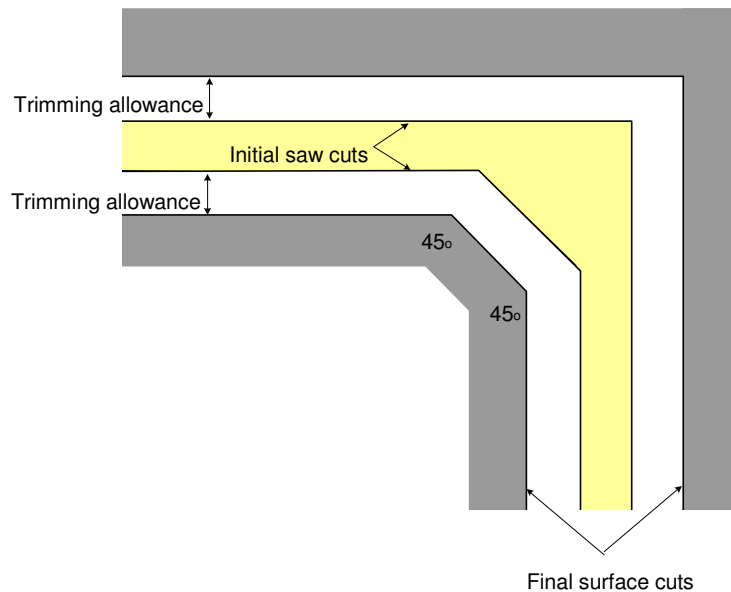
Total length of over break of the trench must not exceed 10% of its length. The length of trim at any single section of over break should not be less than 5 metres (see Figure 3). The purpose of these requirements is to avoid an undesirable visual impact.

**Figure 3: Parallel cutting of joints**



Additional allowances must be made when a trench excavation turns at corners. Figure 4 demonstrates correct excavation for a trench for cabling when the roadway goes around a corner.

**Figure 4: Trench excavation with corners**

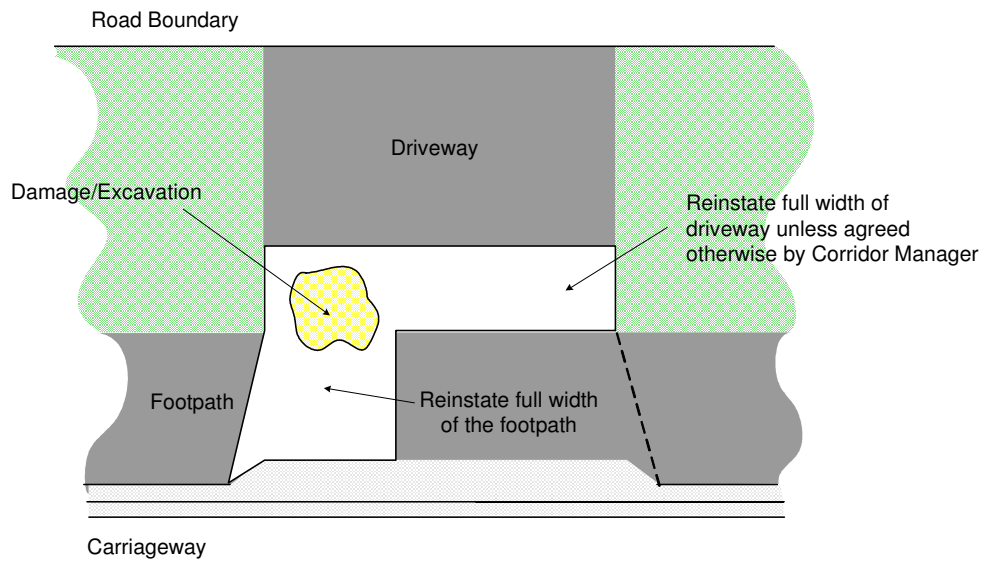


If the edge of the trench in a footpath or road carriageway is within 1 metre of a joint or existing edge of the pavement, then the existing pavement must be replaced as part of the surface reinstatement, and cut accordingly. This requirement is commonly referred to as the '1 metre rule'.

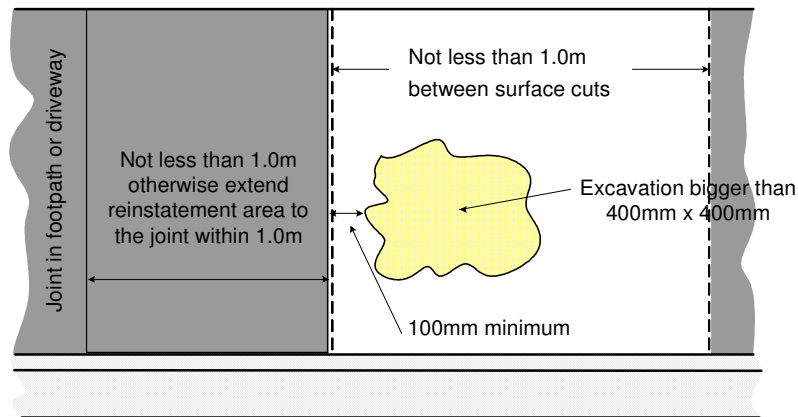
Excavations closer than one metre to the edge of the pavement should replace the pavement to its edge as well to avoid unsatisfactory visual consequences (see Figures 5 and 6).

The requirement to extend the width of reinstatement to a construction joint in a concrete surface may be waived by the Corridor Manager when the concrete is significantly cracked.

**Figure 5: Excavation in footpath or driveway**



**Figure 6: Reinstatement of concrete path or driveway**



### 6.5.3 Excavation

Unless otherwise agreed, excavation to profile/depth must be in accordance with the construction drawings. The length of open trench must be kept to a minimum and should be backfilled as soon as practicable.

Provision of temporary support/shoring (or other alternatives) to all trenches must be considered if required to provide lateral support to the excavation and/or to comply with health and safety codes, including the Department of Labour (OSH) *Approved Code of Practice for Safety in Excavations and Shafts for Foundations (1995)*. Alternative support can include battering, ground stabilisation and sheet piling.

This work must be certified in accordance with the requirements of the *Building Act 2004*.

### 6.5.4 Trench reinstatement

The objectives of trench reinstatement are to:

- (a) Restore a permanent quality surface in the road corridor;
- (b) Ensure the integrity of the road and utility assets; and
- (c) Achieve a stable subsurface structure.

Excavated material that is unsuitable for backfilling or surplus to requirements must be removed from site and not be used to backfill trenches. The intention of backfilling is to at least match the pre-trench surface and subsurface integrity.

All materials including bedding must be of sufficient quality and strength to support the imposed loading, including traffic and road construction loading.

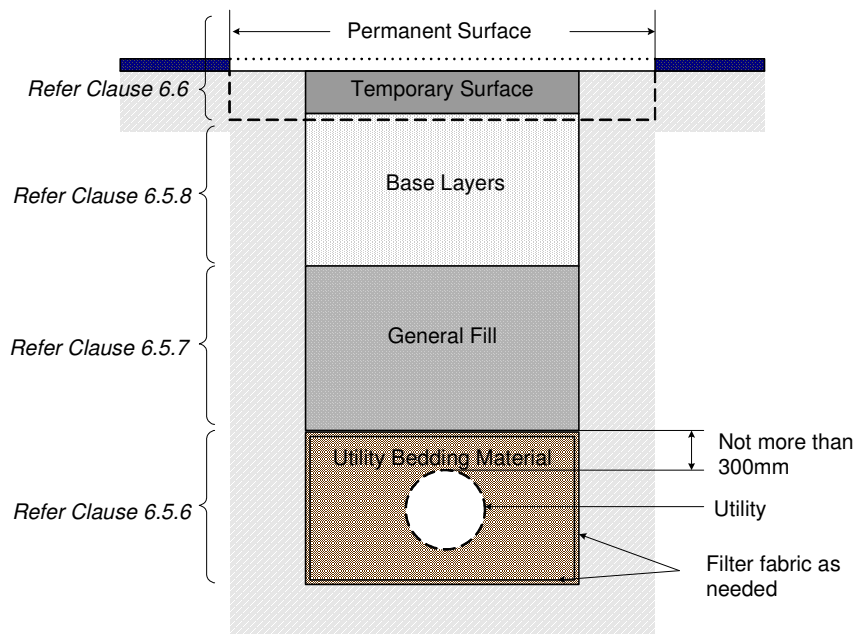
In the case of power cables, thermally stable backfill may be required. In such cases, the Corridor Manager and the Utility Operator must agree on the compaction and standard, prior to works commencing. It is important to have thermally stable backfill material surrounding electricity cables in specific locations.

When excavations make contact with trenches of power cables laid in thermally stable backfill, it is important that the thermally stable backfill is restored to the standards applying before the excavation.

### 6.5.5 Typical trench fill zones

There are normally a total of three or four zones in a trench. These are described in Figure 7 for three common environments (carriageway, footpath and berm) and details of each zone are included below.

**Figure 7: Fill layers in trench**



### 6.5.6 Bedding

Bedding material is as required by the Utility Operator(s). The bedding, unless otherwise agreed, must be placed either:

- (a) In a loose state (sand should be dampened) and tamped to achieve compaction and surround of utility; or
- (b) Deposited in a fluidised state where specifically approved by the Corridor Manager.

Where practicable, the bedding must be less than 300 mm above the top of the utility, unless specifically required by the Utility Operator and approved by the Corridor Manager. Any variance to the 300 mm requirement must be agreed between the Corridor Manager and the Utility Operator.

#### 6.5.7 General fill

In road carriageway, shoulder and footpath, this must be well graded granular material free of deleterious material with maximum stone size 75mm, and must be to the approval of the Corridor Manager.

Where the surrounding material is soft, the use of unbound granular fill is unlikely to prevent settlement of a trench. Special precautions should be taken by the Utility Operator in these circumstances.

In berms, suitable material excavated may be used with the Corridor Manager's agreement, provided required compaction standards are achieved.

#### 6.5.8 Base layers

For road carriageways there may be more than one base layer. The lower base layer (sub-base) material shall be well graded crushed granular, with maximum aggregate size 65 mm, and a controlled grading curve and weathering and crushing resistance meeting requirements of the Corridor Manager.

The upper base layer (basecourse) for the carriageway must comply with Transit New Zealand specification *TNZ M/4: Basecourse aggregate*, unless the Corridor Manager has approved an alternative basecourse product specification.

For footpaths the base layer must be well graded GAP40 granular material in accordance with the Corridor Manager's requirements.

For berms there may not be a need for a separate base layer other than general fill.

#### 6.5.9 Placing and compaction

Placement and compaction of all layers must be in layers not exceeding 200 mm (solid) thickness and mechanical compaction completed; for each layer in turn.

- (a) Where concrete or other stabilised layers, including geotextile material, exist in the road pavement, the trench must be reinstated with similar material unless otherwise approved by the Corridor Manager. Lapping of geotextile material must accord with the manufacturer's specification;
- (b) If over break or other disturbance of the pavement layers occurs, the surface of such areas must be re-cut, excavated as necessary and backfilled in compliance with the requirements of this Code;
- (c) Where groundwater is likely to accumulate as a result of utility works, excavations must be permanently drained. This is particularly important in rural situations where trenches run through cut areas, fill embankments or slip prone areas; and
- (d) Where strata exposed as side walls of a trench are relatively soft, then the Utility Operator must discuss backfill options with the Corridor Manager. These may include, for example, the application of a geo-textile liner in the trench, or the use of modified (lime or cement-treated) granular materials in the vicinity of the soft layer(s). The aim of the alternative is to reduce the risk of settlement arising from ongoing post-construction penetration of the granular fill material into the trench sides.

Compaction must be carried out using suitable plant and equipment to minimise any settlement for basecourse. Care must be taken in the vicinity of utilities to ensure no damage occurs.

The compaction standard for basecourse is 98% of maximum dry density on average with no value less than 94%. See Table1, which also deals with subbase and deeper fill. Compaction for sub-base and deeper fill should be confirmed by a Clegg hammer.

To achieve the desired outcome, it is necessary that appropriate compaction testing be carried out. A suitably qualified person must carry out and record all testing. The Utility Operator must retain the test recording and make them available to the Corridor Manager.

#### 6.5.10 Compaction testing

A testing regime as outlined below or equivalent must be included in the works and should be included in the Utility Operator's Quality Plan:

- (a) For trenches in berms, testing is required at a rate of at least one test per layer of backfill per 15 metres of trench, with a minimum of two tests;
- (b) For trenches in carriageways or under footpaths, testing is required at a rate of at least one test per layer of backfill per 5 metres of trench with a minimum of two tests;
- (c) Where the excavated area is greater than 0.5 m<sup>2</sup> and less than 5 m<sup>2</sup>, one test per backfill layer is required. For larger excavations, one test per 5 m<sup>2</sup> must be carried out;
- (d) It is important to note that more testing may be necessary to ensure that the required compaction standards are met. It is the responsibility of the Utility Operator to ensure that no settlement occurs;
- (e) All test locations must be uniformly spaced in the pavement; and
- (f) Subject to satisfactory test results the above frequency of testing may be reduced with the prior agreement of the Corridor Manager.

The Clegg hammer can be used for testing of general fill and base layers but not for the upper base layer of carriageways.

Compaction must not be less than that necessary to achieve the following at all depths of any backfill.

**Table 1: Compaction testing**

|             | Carriageway | Footpath | Berm   |
|-------------|-------------|----------|--------|
| Base        | 98% MDD     | CIV 25   | N/A    |
| Sub-base    | CIV 35      | CIV 25   | N/A    |
| Deeper Fill | CIV 25      | CIV 10   | CIV 10 |

**CIV = Clegg impact value**

Clegg hammer tests only indicate the compaction of the lift last laid of any backfill layer. These compaction tests must be carried out on every lift of each tested backfill layer to be assured of proper compaction of all of the backfill.

In the case of sand a lesser compaction requirement may be approved by the Corridor Manager if it can be clearly shown that the compaction is at least as much as the undisturbed sand in the adjoining ground.

The results of tests taken must be recorded and made available to the Corridor Manager.

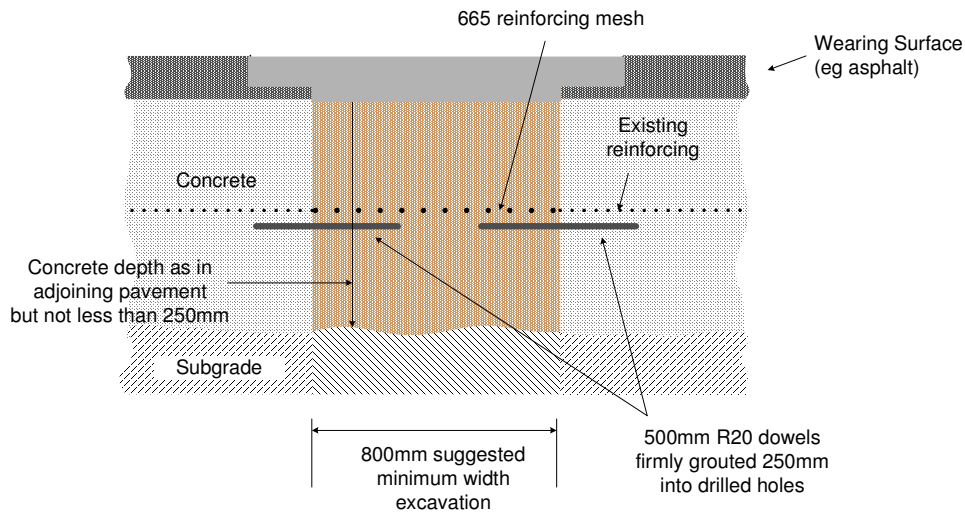
#### 6.5.11 Concrete road carriageways

Where concrete exists in the carriageway, the excavated concrete layer must be replaced with new concrete so as to retain the performance characteristics of the existing layer. The concrete must have a minimum depth of 250 mm, a 28-day strength of 20 MPa and be manufactured in accordance with New Zealand Standards *NZS 3104: Specification for concrete production – High grade and special grade* or *NZS 3108: Specification for concrete production – Ordinary grade*.

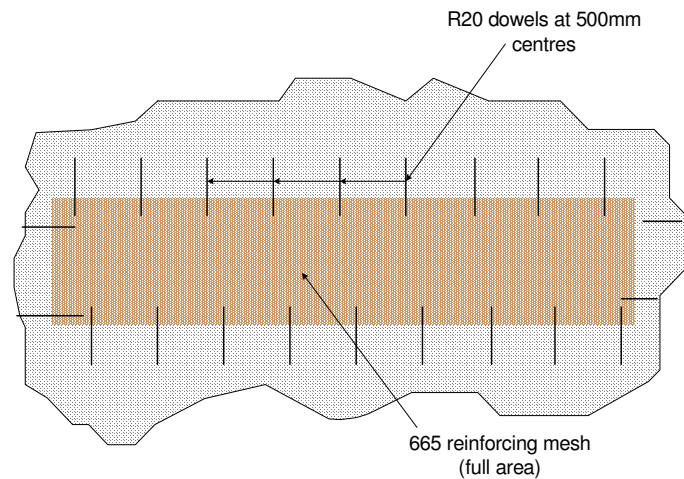
Interlocking of the new and old concrete is required using R20 steel reinforcing bars placed centrally perpendicular to the face at 500 mm spacings along all joint faces. The bars must be bonded 250 mm into the existing concrete and extend into the new concrete a minimum of 250 mm. The concrete must be reinforced with 665 steel mesh placed centrally unless otherwise required. Where expansion or contraction joints are affected these must be reinstated.

The concrete surface must have a coarse broom finish and match the line and crossfall of the road surface with allowance for asphalt overlay to be placed to the same thickness as on adjacent pavement as appropriate.

**Figure 8: Concrete road carriageways**



**Elevation**



**Plan**

**6.6 Surface Layer**

**6.6.1 General principles**

The Utility Operator must use suitably qualified and experienced persons for the construction of road surfacings. All surfacing materials, equipment and methods must comply with this Code and the respective relevant industry standards for these activities.

Trenches in the corridor must not be opened to traffic until either temporary or permanent resurfacing is in place unless agreed by the Corridor Manager. Temporary resurfacing is generally undesirable and must only be used if permanent resurfacing is not viable. To ensure inconvenience to the public is kept to a minimum, the resurfacing of trenches must be made permanent within seven days of completion of backfill or temporary surfacing, unless the Corridor Manager and the Utility Operator agree that this is not practicable.

The visual appearance of the finished surface of reinstated trenches is important. Clean, long, straight lines parallel to the kerb or footpath must be achieved. Transverse trenches must, unless otherwise agreed, be perpendicular to the kerb and channel.

The permanent resurfacing materials must match the surrounding surface in type, quality, texture, skid resistance and strength.

The Corridor Manager may require a road surface level survey to be carried out where an excavation is proposed, prior to work commencing. This survey would measure the surface level at 5 metre intervals on each kerb and immediately around the proposed excavation. Such a survey must be accurate and have sufficient offset marks for levels to be re-established at the same points at any stage of the work. The Utility Operator is responsible for the cost of these surveys.

The finished surface level must be shaped to avoid any ponding of surface water on either the reinstated trench or adjoining surface. The deviation of the surface from a 3 metre straight edge must not exceed 5 mm. In no situation may the surface level vary more than 5mm from the original surface. The surface level must be continuously graded towards drainage channels or gully entries. In pedestrian surfaces, no lip may be greater than 3 mm high.

The finished surface must match the pre-existing surface in smoothness or ride quality for vehicles (vertical movements). The Corridor Manager may require road surface roughness testing to be carried out on a before-and-after basis for large projects.

#### 6.6.2 Temporary surface reinstatement

Temporary surfaces must be 'cold mix' asphalt or an equivalent approved by the Corridor Manager, and must be laid in a manner and to a depth to be durable for both vehicular and pedestrian use. The Utility Operator must maintain the surface until permanent surfacing has been undertaken. The temporary surface level must be between 5 mm below and 15 mm above the original surface level, with a lip not greater than 5 mm in any part of the surface.

In special circumstances, the Corridor Manager may grant dispensation to leave an area of road carriageway and footpath without a proper temporary surface. Such situations will require:

- (a) Additional 'Uneven Surface' and 'Speed Restriction' signage;
- (b) The surface to be maintained so that it is within agreed tolerances of the surrounding surface level; and
- (c) The surface to be reinstated with a proper temporary surface within one working day.

Dispensation may be withheld on busy main corridors.

No dispensation can be given for pedestrian crossings.

#### 6.6.3 Steel plates

Unless otherwise agreed by the Corridor Manager, permanent resurfacing is required within seven days of a temporary seal being placed. All temporary surfacing materials must be removed prior to reinstatement with final surfacing.

As agreed with the Corridor Manager, steel plates may be used to cover trenches for up to seven days. The steel plate must be securely fixed in place so as not to be a nuisance or danger to passing traffic, including pedestrians and cyclists, or occupiers or users of local properties. Where steel plates are used, the following requirements apply:

- (a) They must be skid resistant, secured and cushioned to prevent them from rocking, moving or creating noise. They must be of sufficient strength and quality to support imposed traffic loading;
- (b) Appropriate temporary speed restrictions must be in place to warn traffic of the potential hazards. Guidelines for this can be found in Section C4 of the CoPTTM; for local roads, see the Local Roads Supplement;
- (c) A ramp must be formed and filleted to ensure safe pedestrian and vehicular access;
- (d) They must be fixed in place to prevent dislodgement; and
- (e) Temporary markings may be required by the Corridor Manager.

Any damage to the temporary surface must be repaired as soon as possible or an alternative arrangement made to the satisfaction of the Corridor Manager.

#### 6.6.4 Asphaltic concrete surfaces

All parts of the surface that are damaged during, or as a result of, the work being undertaken must be repaired. The construction must be as follows:

- (a) Asphaltic concrete surfaces less than 75 mm thick must be laid on a waterproof membrane seal coat;
- (b) All asphaltic concrete surfaces mix design is to be in accordance with Transit New Zealand specification *TNZ M/10: Asphaltic Concrete*, TNZ Mix 15 or other asphaltic concrete mix specified by the Corridor Manager;
- (c) Asphaltic concrete material must be laid and compacted to meet the requirements of Transit New Zealand specification *TNZ P/9: Construction of Asphaltic Concrete Paving*;
- (d) Paver laid asphaltic concrete is recommended to achieve the density and surface level tolerances of this Code. Extra care must be taken with hand placed asphaltic concrete;
- (e) Target air voids in the mix laid in situ for the wearing layer must meet any special or local conditions imposed by the Corridor Manager. This must be assessed by the party compacting the asphalt. The limited thickness of asphalt and limited width will usually make use of instrument confirmation impractical;
- (f) The basecourse layer must be swept free of all loose material before the membrane seal is applied. A hot bitumen or emulsion seal coat must be sprayed on the edges of the existing pavement and the surface of the basecourse at a residual bitumen application rate of 1L/m<sup>2</sup> with a Grade 4 chip surface;
- (g) The mix produced must comply with the approved mix design.

#### 6.6.5 Open graded porous asphaltic surface

Open graded porous asphaltic surface must comply with the following requirements:

- (a) Surface mix design must be undertaken in accordance with Transit New Zealand specification *TNZ P/11: Open Graded Porous Asphalt*;

- (b) The material must be paver laid and compacted to meet the requirements of Transit New Zealand specification *TNZ P/11: Open Graded Porous Asphalt*;
- (c) Joint sealing to the base must be carried out before to final application of the porous asphaltic concrete surface (see below);
- (d) The base of all areas to be covered by the porous asphaltic concrete must be chip sealed evenly with a bitumen emulsion complying with Transit New Zealand specification *TNZ M/1: Roading Bitumens*; and
- (e) The surface must be laid on self draining waterproof surfaces.

#### 6.6.6 Joint sealing of carriageway surfaces

Unless otherwise agreed with the Corridor Manager, within one week of final asphalt reinstatement, both sides of joints in the carriageway must be sealed with an approved hot poured rubber bitumen in accordance with Transit New Zealand specification *TNZ C/6: Repair of Surface Defects*. All joints must be clean and dry and the sealant must be applied and levelled with a sealing shoe in a 100 mm band across the joint with an overlap of 50 mm on either side of the joint.

#### 6.6.7 Structural asphalt concrete surfaces

Where the existing road pavement is constructed of structural asphaltic concrete, the pavement reinstatement detail must be specifically designed and constructed to restore the structural integrity of the pavement. The reinstatement details must be submitted to the Corridor Manager for approval.

#### 6.6.8 Trenches in chip seal carriageways

Trenches in chip seal carriageways must be reinstated using a two coat chip seal. The first coat must be a course grade chip (e.g. Grade 3) and the second coat a finer grade (e.g. Grade 4 or 5) to visually blend with the existing adjacent surfacing. The second coat must overlap the existing surface by not less than 100 mm.

Chip seal must be laid in accordance with the Transit New Zealand specification *TNZ P/3: First Coat Sealing* and the *Chipsealing in New Zealand Handbook*.

#### 6.6.9 Texturised asphalt reinstatement

Where a trench is in a chip seal area and has been reinstated using asphalt, then within one year of the initial reinstatement, the trench must be texturised with a single or two coat chip seal. Chip size must be selected to visually blend with the existing adjacent surface. The seal coat must overlap the existing surface by not less than 100 mm. Texturised asphalt must be laid in accordance with the Transit New Zealand specifications *TNZ P/4: Resealing* or *TNZ P/17: Performance Based Specification for Bituminous Reseals*.

Alternatively the Corridor Manager and Utility Operator may agree an equivalent fee to transfer the responsibility for texturising to the Corridor Manager and for the Corridor Manager to undertake this work in its own time.

#### 6.6.10 Special paving areas

The Utility Operator shall engage a specialist contractor to carry out the reinstatement of special paving areas, unless otherwise agreed with the Corridor Manager.

In areas where the Corridor Manager has applied special treatments to road carriageway areas such as a geogrid membrane under chip seal, high friction surface, or grooved asphaltic concrete to improve the strength and quality of that area, reinstatement must match existing construction.

Some special treatments, notably geogrids, cannot be effective unless the excavation is extended to facilitate anchorage of the product.

If materials are not available to match existing construction, an alternative approach must be agreed between the Utility Operator and the Corridor Manager.

The reinstatement of special paving areas must match the original standard, with the same quality, texture, type, colour and material of the existing pavement and minimal visible evidence of the trench reinstatement. Where the paving is laid out in panels, the whole panel must be replaced.

#### 6.6.11 Amenity areas and special decorative areas

The reinstatement of amenity areas must match the original standard, with the same quality, texture, type, colour and material as the existing pavement with minimal visible evidence of the trench reinstatement.

Urban design features, architectural finishes, gardens, artworks and landscaping must be properly reinstated to the pre-existing condition.

A contractor approved by the Corridor Manager must carry out the reinstatement of amenity areas, unless otherwise agreed by the Corridor Manager.

#### 6.6.12 Segmental block paved surfaces

Segmental block paved surfaces must be reinstated in the same materials and to a standard at least equivalent to the original surface. Segmental block paving must be laid in accordance with the requirements of the manufacturer and the Corridor Manager. Any chipped or damaged blocks must be replaced with the same type. Joint widths between adjacent blocks must meet the manufacturer's requirements.

To re-establish a tight interlocking pattern with specified joint widths between blocks, it is often necessary to remove all adjoining blocks and relay them up to a bordering physical feature such as the road kerb.

Reinstatement of the surface around poles or other surface features may be in coloured concrete to match the adjoining blocks or other surface as agreed with the Corridor Manager. The concrete must not extend more than one block length from the base of the pole or feature.

### 6.7 Settlement

The Utility Operator is responsible for correcting any settlement, particularly in trenches, resulting from the Works. Noticeable settlement in road carriageways and footpaths must be rectified within 48 hours of notification by the Corridor Manager, particularly where damage to road or vehicles or where noise or vibration nuisance may result.

### 6.8 Trenchless Construction

When constructing utilities by trenchless techniques, minimum cover requirements may also need to be increased due to soil conditions and their potential to deflect the bore or drill.

The Corridor Manager's preference is for trenchless construction in State Highways and main roads, particularly in the carriageway, unless it can be shown that this is either not reasonable or not practicable.

### 6.9 Separation from Other Utilities

Utilities must only be laid in a manner that reasonably protects the separation requirements of other Utility Operators as provided for in various codes/regulations (e.g. *NZEC 34:2001 – Electrical Safe Distances*, or *NZS4404: Land Development and Subdivisions*).

## 6.10 Separation from Kerbs or Water Channels

It is important to note that the drainage area at the roadside is for the placement of catchpits or sumps and subsoil drainage and, where practicable, utilities should not be placed within 300 mm of the kerb and channel or the vertical front face of the catchpit or sump. Placement must be as agreed with the Corridor Manager.

In road situations where there is no kerb, the water channel is the clearly formed side drain (if any) or must be taken as a 1 metre wide zone along which any stormwater can flow on the edge of the road formation.

Utility structures must not extend within 1 metre of the kerb or water channel, unless specifically agreed with the Corridor Manager, to allow for future kerb, channel and catchpit or sump repair works.

## 6.11 Property Stormwater Discharge Pipes to Kerb and Channel

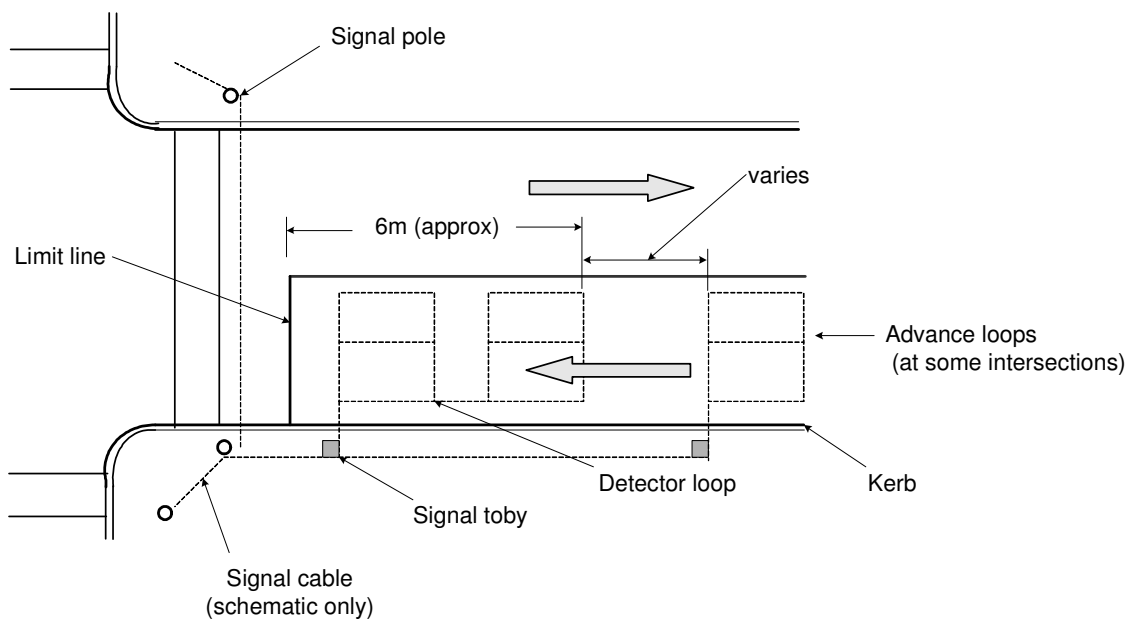
Stormwater drainage lines from residential private property to the kerbs are privately owned and management of these assets is not part of this Code. Such lines may not be recorded on any GIS or as-built plans, but Utility Operators must be aware that these lines (generally shallow) may exist and take account of them in their construction and reinstatement work. If impacted by utility works, these lines must be reinstated by the Utility Operator.

## 6.12 Traffic Signal Cables, Loops and Associated Equipment

Traffic signal, CCTV cables and detector loops exist in the vicinity of traffic lights. Most existing traffic signal cables carry 220 volts and are housed in ducts that can have 300 mm to 600 mm cover.

Traffic detector loops, including traffic counting equipment, are typically located in the road surfacing within 6 metres of a stop line at any signalised location and connected to the signal control box in ducts. In heavily trafficked roads, there may also be advanced traffic detector loops to detect queues at some distance from the traffic signals on the approach lanes. Figure 9 illustrates the approximate layout of buried cables around a traffic signal to help Utility Operators make necessary excavations without damaging them.

**Figure 9: Indicative locations for traffic signal cables, power cables and detector loops**



To prevent damage or changes to shallow loops and consequential disruption to traffic flows, before any excavation or saw cutting work near traffic lights the Utility Operator must liaise with the Corridor Manager to clarify the location of cables.

All traffic signal ducts, cables, chambers and poles affected by the utility works must be reinstated by the Utility Operator within 48 hours of final reinstatement of the excavation in the immediate vicinity. The Utility Operator must use a contractor approved by the Corridor Manager for this work.

The Utility Operator is liable for the full cost of repairing loops, toby boxes, cables or other signal equipment damaged by their works.

### **6.13 Working in the Vicinity of Trees**

The objectives are to protect and minimise damage to all protected trees as identified in the relevant District Plan for the preservation of the road environment.

Excavations in road land must not be carried out under the canopy of trees growing in the road without the prior approval of the Corridor Manager. Methods such as thrusting, hand digging or an alternative route for the utility may be required to avoid damage to the tree roots. Further details are given in Schedule D.

If an identified tree may be affected, further requirements may apply – including the work being overseen by an arboriculturist. A Resource Consent may be required for work adjacent to trees.

### **6.14 Existing Utilities and Other Assets**

Plans of all underground utilities must be kept on site while work is in progress.

All parties undertaking works are responsible for the protection of the road, road assets, property and existing utilities on, in or adjacent to the road that might be affected by the work being undertaken.

Before undertaking works, Utility Operators must make an assessment of the site. If there appears to be any damage to the road or immediately adjacent property(s), the Utility Operator shall ensure that photographs are taken that show the pre-existing condition of the work site before work starts. The condition of all road assets including the road and footpath pavement and all surfaces including road marking and signs must be recorded before and after execution of the works.

If damage is caused to infrastructure or assets owned by other parties (other than the road itself), the party who caused the damage must notify the infrastructure or asset owner and repairs or reinstatement must be carried out in accordance with the requirements of the asset owner. The asset owner will decide who is to carry out the repair work.

All road assets, properties and existing utilities that are damaged by any work must be repaired or reinstated to the pre-existing condition prior to the works being further undertaken, as soon as practicable after the damage occurs, unless agreed otherwise with the owner of the infrastructure or assets or with the property owner.

When damage occurs to the road, road asset, property or existing utilities and it is not clear who or what was responsible for the damage, all parties shall cooperate with the owner of the damaged infrastructure to assist in identifying the party responsible for the damage.

### **6.15 Reinstatement of Road Markings, Signs and Furniture**

#### **6.15.1 Road markings**

All road markings on sealed roads must be reinstated prior to completion of works and, in urban areas, preferably prior to reopening the lane or road to traffic. The Corridor Manager may be best placed to carry out this reinstatement on behalf of the Utility Operator, as it knows the necessary materials and standards and may hold the necessary equipment. Liaison with the Corridor Manager is encouraged.

Where work is likely to affect any road pavement markings, the Utility Operator must record the type of marking material, description of markings by type, their location and any special items. The Corridor Manager may hold records of existing road markings and, if so, must make this available as required.

Where road markings are removed, the Utility Operator shall note their locations by way of an offset mark at the side of the road to enable accurate remarking at the completion of the reinstatement. Photographic evidence of pre-existing markings should be created where significant impacts on markings are expected.

Temporary road markings may be required in the vicinity of, and for the duration of, the work or may be required on temporary surfacing for traffic safety purposes. Such markings must be in place prior to traffic usage of the road surface areas affected and remain in an effective condition for the period of use until the permanent situation is established. All temporary markings must then be fully removed so as to avoid an unsafe traffic effect being created. The materials used for temporary markings must be an approved type and suitable for the purpose as specified by the Corridor Manager.

#### 6.15.2 Signs and furniture

All signs and furniture, including edge delineator posts, raised pavement markers and/or other posts, owned by either the Corridor Manager or any other Utility Operator must be protected and maintained during the work and items that become damaged or lost must be replaced prior to completion of the work. Utility chamber lids and covers must be restored to the finished road level.

The road Corridor Manager may be best placed to carry out this reinstatement on behalf of the Utility Operator as they know the necessary materials and standards, and may hold the necessary equipment. Liaison with the Corridor Manager is encouraged.

#### 6.15.3 Clean up and make good

All restoration and tidying up work must be progressively carried out as work proceeds. At completion, all rubbish must have been cleared away, the area tidied, sealed surfaces swept and the site left in a similar condition to that which existed before the works commenced. Spillage due to the works on textured surfaces, such as open graded porous asphalt, must be cleaned by captive water blasting.

### 6.16 Traffic Management

The purpose of traffic management is to ensure the safety of, and minimal impact on, road users, and to ensure the safety of workers on site. This is achieved by ensuring safe and convenient passage for traffic around and through the site. A traffic management plan (TMP) must be prepared in accordance with the relevant Corridor Manager's requirements and approved by a suitably qualified person.

Should an audit of the worksite show that the traffic management does not comply with the CoPTTM and/or the CoPPTM *Local Roads Supplement* or any other agreed condition, all work, except for that work required to ensure the safety of the public, must cease until it is authorised to recommence. All instructions given by an officer of the New Zealand Police in respect of traffic management must be followed, except that any worksite ordered closed must be rendered safe to the public before it is vacated.

For working in State Highways and motorways, Utility Operators must use CoPTTM.

For local roads, Utility Operators may use the CoPPTM *Local Roads Supplement* unless the Corridor Manager requires otherwise.

### 6.17 Existing Survey Marks

Care must be taken not to disturb and/or damage survey marks, survey standards or boundary pegs. Where marks are likely to be disturbed or damaged, the Government agency responsible for maintaining the survey marks (Land Information New Zealand) must be notified and arrangements must be made to replace or offset the marks prior to the work being undertaken.

## 6.18 Hours of Work

Hours of work may be restricted to limit interference with property access, or to minimise noise, other environmental impacts and traffic congestion, and must be as agreed by the Corridor Manager and the Utility Operator or specified in the reasonable conditions. Except in emergency situations, work must not be carried out on road carriageways during times of peak traffic flows. High traffic volume roads and CBD streets may have further restricted hours for road works. Where the possible hours of work may be severely restricted and noise issues have significant impact on adjacent properties, the Utility Operator and Corridor Manager may agree on special arrangements to work extended hours.

## 6.19 Noise Levels

Noise levels must not exceed the limits specified in New Zealand Standard *NZS 6803: Acoustics – Construction Noise* and/or District Plan provisions. These requirements limit the levels of noise that may be received at locations around a work site.

All plant and equipment must be muffled in accordance with good industry practice. Care must also be taken to use work methods that minimise noise levels, such as avoiding the use of breakers and other similar loud noise when required to work at night. Care must also be taken to avoid any unreasonable nuisance to adjacent properties.

## 6.20 Environmental Factors

The *Resource Management Act 1991* prohibits unauthorised discharge of contaminants to open water channels. Further information to assist in managing pollution control appears in Schedule D.

## 6.21 Public Relations/Communication/Information Signs

Both the Corridor Manager and Utility Operator have an obligation to ensure that any works undertaken are based on safe, timely and efficient practice whilst minimising the impact on the public, adjacent property owners or occupiers, and that those who may be affected are kept adequately informed of proposed works and works in progress.

An appropriate communication strategy must be in place for all works to ensure that all affected parties are informed. A checklist for a communication strategy appears in Schedule D.

When major or project work is to be undertaken, a written communication strategy may be required in situations where there may be a significant effect on the public or property owners and occupiers. The Corridor Manager may require any or all of the following before construction work may start:

- (a) Production and distribution of a suitable leaflet advising the public of the forthcoming project at least one month before work starts;
- (b) Advertisement/public notice in specified local newspapers at least two working days before work is started; and
- (c) Advertisement/public notice on specified local major radio stations in advance of the work and throughout the period of the work. Typically this would be made regularly during the peak traffic times, both immediately before the peak traffic period and while peak traffic may be directly affected each day.

The Utility Operator must display signs at each end of the worksite, with minimum dimensions of 1200 mm wide by 800 mm high, clearly visible to pedestrians and other traffic, and including the name of the Utility Operator and contractor, the nature of the works and the likely duration and contact details, if required by the Corridor Manager. Colour and font size of the signs must conform to either the Corridor Manager's requirements or the requirements of the Land Transport New Zealand *Manual of Traffic Signs and Markings* (MOTSAM). A sample information sign is included in Schedule D.

The signs must be erected a minimum of two days prior to construction unless otherwise agreed with the Corridor Manager.

The Utility Operator must remove signs immediately the work has been finished and the site cleared.

Unless otherwise agreed, the signs must, to the extent practicable:

- Be at right angles to the road centreline;
- Not obstruct access to private property;
- Not obstruct visibility at pedestrian crossings or intersections;
- Not be on a handrail fence;
- Not be on a pole or structure without first obtaining the agreement of the owner of that pole/structure;
- Not obstruct the visibility of road users, particularly at or near intersections or entrances;
- Not physically obstruct road users including pedestrians and cyclists, and be at least 2.4 metres above ground level if mounted above pedestrian areas;
- Have lateral clearance from the edge of roadway and minimum mounting height to comply with MOTSAM;
- Be on frangible (easily broken) posts if placed in the clear zone as defined in Part 6 of Transit New Zealand's *State Highway Geometric Design Manual*; and
- Have contact details for the Utility Operator's representative or agent, should an issue of concern arise when no contact personnel are on site.

## **6.22 Warranty/Post-construction Maintenance**

A warranty in this context is a guarantee or promise given by one party to another stating that a product or service is free from defects, and that the warranting party will, without charge, repair or replace defective works within a given period.

A warranty or the expiration of a warranty does not restrict liability for other breaches of either the Code or of common law which will extend beyond the warranty period.

The Utility Operator is responsible for any damage it causes to the road corridor, road asset, other property or other infrastructure as a direct result of the work. This includes, but is not limited to, subsidence and/or settlement of trenches, or road infrastructure, road surface deterioration such as erosion of poor surface material, the appearance of the joint crack through the joint sealing or pot holing of the adjoining surface at the edge of the work. It also includes damage to any or all adjacent utility infrastructure affected by the works and any vehicles or any other private property damaged during the implementation of the works.

The Utility Operator is responsible for ensuring that all works comply with the conditions of the Works Approval Notice (WAN) issued by the Corridor Manager in relation to those works, and that the works are carried out and constructed to an appropriate standard (as set out in this Code). The Utility Operator warrants those works for a period of two years after completion (except where those works have been affected by subsequent works by other third parties) and is responsible for any repair or maintenance work required to those works for that period. Any repairs must be implemented on an agreed timeframe. Substantial repairs are warranted for a further two years after the repair has been completed.

Where a Utility Operator has established and maintained a good record for performance, the Corridor Manager may reduce the warranty period.

## 6.23 Emergency and Remedial Work

*[Explanatory: Some legislation has specific provisions relating to emergency and remedial works and such provisions must be complied with.]*

### 6.23.1 Emergency Work

#### **Definition:**

**Emergency Work** means work that requires an immediate response to restore the integrity of the utility or secure the situation for the safety of the community and generally relates to:

- (a) restoration of supply following an unplanned outage, or interruption of supply, to a community;
- (b) rectification of a dangerous situation including support requested by an emergency service; or
- (c) unplanned events that have a significant impact on a road, a bridge, public health, public safety or the security of supply to a network.

Emergency Work is the response needed to cope with an Urgent situation. To be deemed urgent work, the grounds for the action have to meet a high threshold and based on the facts, must rate as both urgent and necessary. The need must be immediate and give weight to the harm that may result due to the works not being undertaken.

Emergency work in the rail and motorway corridors cannot be carried out without the Corridor Manager's approval.

The development of agreed processes for use in the event of emergency work is encouraged and the Corridor Manager and Utility Operator must exchange contact details for use in emergency situations.

Where any work is rendered urgent and necessary by any defective equipment or other emergency, the Utility Operator shall be excused from the road corridor pre-entry notice in writing requirements, but shall provide information to the Corridor Manager on the location and nature of the work as soon as practicable. This may at times only be practicable after the emergency work has commenced or been completed, unless the Corridor Manager has a 24-hour emergency contact system.

In responding to an emergency event, prior to commencement of work on site the Utility Operator must secure the site of work and apply required safety measures to protect workers and the public.

### 6.23.2 Remedial Work

Response times for remedial work shall be agreed between the Corridor Manager and the Utility Operator. Where work in the road corridor has not been completed to the standard as agreed between the Corridor Manager and Utility Operator, the Utility Operator shall ensure that the remedial work is carried out within the agreed timeframe.

If the remedial work is not undertaken within the agreed timeframe the Corridor Manager may undertake the work and can recover all reasonable cost of completing the remedial work from the Utility Operator.

Where failure to undertake the remedial work in a timely manner creates an emergency work situation for the Corridor Manager or a third party the provisions of Clause 6.23.1 may apply and all reasonable costs to complete the emergency work shall be recoverable from the Utility Operator.

## **6.24 Health and Safety**

Work undertaken in the corridor must be carried out in such a manner as to ensure compliance with the *Health and Safety in Employment Act 1992* at all times.

Where lifting and construction equipment is used close to aerial utilities and trees the air space requirements for working must be established prior to work commencing. In particular, overhead lines and moving trains represent serious hazards, and care must be exercised when operating diggers, cranes or tipping trucks in their vicinity.

Minimum utility clearances must comply with Utility Operators' and Corridor Managers' guidelines.

## **6.25 Site Management**

The construction site (including any area of the corridor used for storage or that does not have a proper temporary surface for public use) must be clearly defined and where appropriate barricaded.

The Utility Operator must also ensure:

- (a) The size of the work and the road portion of the site is kept as small as is reasonably possible;
- (b) The site is kept tidy at all times;
- (c) Provision has been made for all transport corridor users including road and rail traffic, pedestrians and cyclists;
- (d) Access to properties adjacent to the site is not obstructed;
- (e) Stormwater and siltation control;
- (f) Rail corridor management control; and
- (g) The accepted TMP or equivalent document is followed.

## **6.26 Public Liability Insurance**

The Utility Operator and every contractor must hold a current public liability insurance policy. The terms and value of this policy may be specified by the Corridor Manager and must be reasonable for the circumstances. This must allow for sufficient cover to indemnify the Corridor Manager against any claims of loss for damage to property of the Corridor Manager or parties claiming against the Corridor Manager that may arise out of, or in consequence of, the construction or maintenance (or lack thereof) of the work. The period of cover must extend for a minimum period of two years from the date of the completion of the works or longer if required by the Corridor Manager but not, in any circumstances, longer than six years.

The policy must cover all insurable risks normally applicable to construction work in transport corridors including vibration and removal of support.

## **6.27 Quality Assurance**

Utility Operators must have a quality system in place and implement quality management plans for their proposed works. The Corridor Manager may request the Utility Operator's quality management plan(s) that are related to the proposed utility works prior to approval of the works.

There are a number of acceptable quality assurance systems. The Corridor Manager must identify the level of quality assurance appropriate to the size and complexity of the works, and the scale of the road, in the conditions for the proposed works. The appropriate level of quality assurance to be applied to the works should be at least equivalent to NZTA Quality Standard TQS1.

*[Explanatory: The quality plan for each project should address the key risk aspects of the job. In particular, the Utility Operator's plan should state the procedures and processes for addressing the key risks. It should also state the person responsible. Some processes and procedures may be delegated to suppliers or agents. For those items delegated, the supplier or agent should produce a quality plan stating the required procedures and processes for achieving the work standards and the person(s) responsible. The quality plans should include but not be restricted to:*

- (a) Obtaining the WAN through the CAR process;*
- (b) Ensuring that the standards of workmanship required by this Code are fulfilled;*
- (c) Providing a Works Completion Notice (WCN) to the Corridor Manager;*
- (d) Detailing outstanding works required to be completed;*
- (e) Ensuring environmental and public risks such as noise and pollution are managed;*
- (f) Producing and implementing a communication strategy for major and project works;*
- (g) Notifying affected residents and businesses of the proposed work;*
- (h) Reinstatement of all road assets including road markings and street furniture;*
- (i) Minimising any damage to key features such as trees and landscape features; and*
- (j) Operating the site safely, including:*
  - (i) Adhering to a site specific health and safety management plan and procedures;*
  - (ii) Developing, obtaining approval for and implementing the site's TMP;*
  - (iii) Obtaining the plans for underground and overhead utilities;*
  - (iv) Marking out the existing utilities on site;*
  - (v) Ensuring existing underground and overhead utilities are not damaged; and*
  - (vi) Notifying worksite accidents and property damaged by the works.]*

## CHAPTER 7 ACCESS TO MOTORWAYS

### 7.1 Purpose

The purpose of this chapter is to set out the Corridor Manager's access evaluation criteria. The ability to meet these criteria will determine whether a Utility Operator is able to utilise the motorway for the placement of their utilities.

Several Utility Operators currently have utilities located within the motorway corridor, and the Corridor Manager's intention is to continue to allow Utility Operators access to motorways, provided it is satisfied a number of key objectives will be met. Applications will be considered on a case-by-case basis. The Corridor Manager's consent is required to gain access to the motorway, and it is acknowledged that there will be circumstances where access will not be practical.

### 7.2 Acknowledgement of the Motorway Environment

All parties acknowledge that motorways are a special category of road, requiring the highest design standards to ensure traffic flows well and safely, given the high speeds and high volumes of traffic that operate within it.

All parties also agree that it is reasonable that access to the motorway is more discretionary and closely managed than for other roads, and that reasonable conditions may need to be more onerous than for other roads.

### 7.3 Key Objectives

To be granted approval for access in the motorway, Utility Operators will need to demonstrate that their work will:

- (a) Minimise the 'footprint' it leaves on the motorway environment. The traffic speeds and volumes on motorways mean it is critical that safety hazards are minimised. This includes any hazard presented from the location of aboveground structures, and any disturbance or damage to the road surface itself. The kinds of irregularities in the road surface that are tolerable on relatively low speed urban streets would cause a safety hazard on motorways that are intended for high-speed traffic. Therefore it is important to consider, when assessing the technical feasibility, that the following criteria should be applied to proposed on-carriageway works:
  - (i) Ensuring construction tolerances are met due to the difficulty of reinstatement in high performance pavements;
  - (ii) Health and Safety risks are managed during installation when exposing workers to motorway traffic; and
  - (iii) Ensuring the integrity of the road pavement to provide acceptable levels of structural performance, deformation and safety.

For these reasons it is unlikely that trenching options will be permitted in motorway carriageways.

- (b) Minimise the need for ongoing access. Any distraction presented while installing and maintaining the works can also present a road safety issue, as well as causing disruption to the traffic flow. The more the Utility Operator can demonstrate that the likely need for repair and maintenance is minimal, the more likely their application is to be successful. The Utility Operator may for example need to employ more expensive design and construction techniques than is normally appropriate. Where practicable, and where there is a reasonable expectation that this would be required in the future, the Corridor Manager may also ask that larger capacities are built in, to prevent the need for later upgrades.

Generally the issues with utilities crossing the motorway corridor are considered to be more minor than those that run longitudinally, since the incursion into the operational area is limited in terms of numbers, and in terms of laying and maintaining utilities. Where utilities cross a motorway at a logical network point, the Corridor Manager will encourage multi-use crossing projects that improve the use and utility for all parties.

#### **7.4 Cost Recovery of Consent**

The Corridor Manager has to provide considerable resources to assist the development of any proposal to place utilities in a motorway corridor. The Corridor Manager is able to charge to recover these costs. An estimate of these costs will be provided to the applicant at the beginning of the process, and will reflect a reasonable charge for the service required.

#### **7.5 Relevant Legislation**

While Utility Operators have a right of access to roads in general, under the Gas and Electricity Acts motorways are excluded. The Telecommunications Act does provide for access but does not override the need for consent by the Corridor Manager.

Section 78 of the Government Roadway Powers Act prohibits utilities on motorways or motorway land without the prior written consent of NZTA.

The parties acknowledge that the Corridor Manager will aim to facilitate access to underpasses and bridges, but that these are likely to be limited by space and/or structural capacity. It should be noted that in general terms the Corridor Manager would take responsibility for the structure and the Local Authority would take responsibility for the footpath and road carriageway over or under the structure (except where the other road is also a motorway). Both of these parties should be involved in the decision making process, which will otherwise be in terms of the process set out in Chapter 5.

#### **7.6 Evaluation Criteria**

The key objectives will be met when the following criteria (where applicable) can be demonstrated:

- (a) An application is only made requesting access to the motorway where alternative routes are not practicable;
- (b) When utilities are to cross motorways, they should use the shortest practicable route;
- (c) Longitudinal placements of aboveground structures are more likely to present increased road safety hazards. To be acceptable, the Corridor Manager would need to be satisfied that, for example, the width of the corridor and/or any associated treatments means the residual risk is acceptable. The preference is for placement as close to the boundary as possible. If approval is given for longitudinal placement, there will also be corridor pinch points with such a utility installation that must be specifically considered and resolved; namely interchanges, existing bridge structures, retaining walls and crossing local roads;
- (d) When utilities are underground, the reinstatement of the road pavement needs to account for the safety requirements of vehicles travelling at higher speeds;
- (e) The likelihood and/or impact of future maintenance must be minimised where practicable and reasonably foreseeable;
- (f) If practicable, the capacity of all utilities must be sized to cater for the maximum envisaged long term requirement to the area, to avoid the need for duplication or future replacements;
- (g) Where practicable and reasonably foreseeable, allowance must be made for planned future motorway developments. There will be a greater level of consideration of future needs where utilities are to be placed longitudinally, as the costs of moving them will be higher;

- (h) Where practicable, and with the exception of overhead electricity wires or cables, all utilities should cross motorways in ducts or gantries;
- (i) Multiple use of crossing ducts is encouraged;
- (j) The use of existing ducts or galleries within bridges and service culverts needs to be fully explored;
- (k) Attaching utilities, cables and pipes to the underside of bridges and viaducts is permitted providing that they do not overload the bridge, affect its load bearing capacity or reduce the clearance from the motorway carriageway and have otherwise considered possible safety issues resulting from vehicle impact strikes;
- (l) If a utility is to be located in a section of road that is scheduled to become a motorway in the future, then placement should consider the extra safety and traffic flow requirements of the motorway environment;
- (m) When utilities are being worked on for emergency and maintenance purposes, they need to be accessed from areas outside the motorway carriageway, and in such a way that minimises disruption and distraction as much as possible. Therefore a reasonable condition is likely to limit the times when work (including installation) is conducted to minimise the impact on traffic flows (i.e. it may have to be done at night);
- (n) Minimum depth of cover of the utility structure must be in accordance with Chapter 5;
- (o) After discussion with the relevant Utility Operator(s), the Corridor Manager may enter into the work site or area of the Utility Operator both during installation work and after for the purposes of installing, maintaining, repairing or removing any new or existing road asset over or under the utility or for any other lawful purpose, doing so in a way that will not adversely impact on the utility works, unless agreed otherwise; and
- (p) In the event of an emergency, the Corridor Manager will determine (in discussion, where possible, with other affected Utility Operators) the appropriate course of action to ensure the wider community's needs are best served when determining the relative priority for full reinstatement of the utilities. Under section 77(5) of the Government Roading Powers Act the Corridor Manager has the power to carry out work in an emergency, and the duty to notify the Utility Owner as soon as possible.

### **7.7 Corridor Access Request (CAR) Process for Motorways**

The requirement to consent obligates the Corridor Manager to ensure that all persons carrying out work in a motorway corridor do so in a manner that protects both the people carrying out the work and the public affected by it.

Where access is requested, the Corridor Manager will designate a person to liaise and provide technical support and assistance to help the Utility Operator meet the requirements to gain access approval.

As noted above, given the high speeds and traffic volumes, motorways require among the highest standards of risk management in terms of road safety. Schedule E provides useful guidance on the risk assessment and management process, including possible solutions to reduce risks.

If practicable, a meeting near the site will be held to identify the particular site requirements and possible solutions.

At the first formal stage of the process, the Utility Operator must seek approval in principle from the Corridor Manager, setting out clearly the reasons for the request for motorway access, for vetting by the Corridor Manager and explaining the evaluation of other options and the reason for their rejection. At the second stage of the process, the Utility Operator must produce a report document consistent with the provisions of Transit New Zealand's *Standard Professional Service Specification for Investigation & Reporting* to evaluate the proposal in detail and from which report the consent conditions to work on the motorway can be drawn. The report must also detail the likely future access requirements for maintenance so that the consent can include likely future access requirements.

Where the request is for access for maintenance of previously installed utility infrastructure, the two formal steps above must not be required, but there must still be an approval process to ensure that health and safety and availability of access needs are addressed.

While the Corridor Manager's first priority in the motorway is to ensure traffic flow and safety, the Corridor Manager will work with the Utility Operator to arrive at an acceptable solution to allow access, particularly where large numbers of consumers would be affected by not having the service, or where a small number of consumers would be significantly disadvantaged by the decision.

Where the Corridor Manager gives consent for utilities to be located on a motorway, the form of consent will be an Agreement to Work on Motorway.

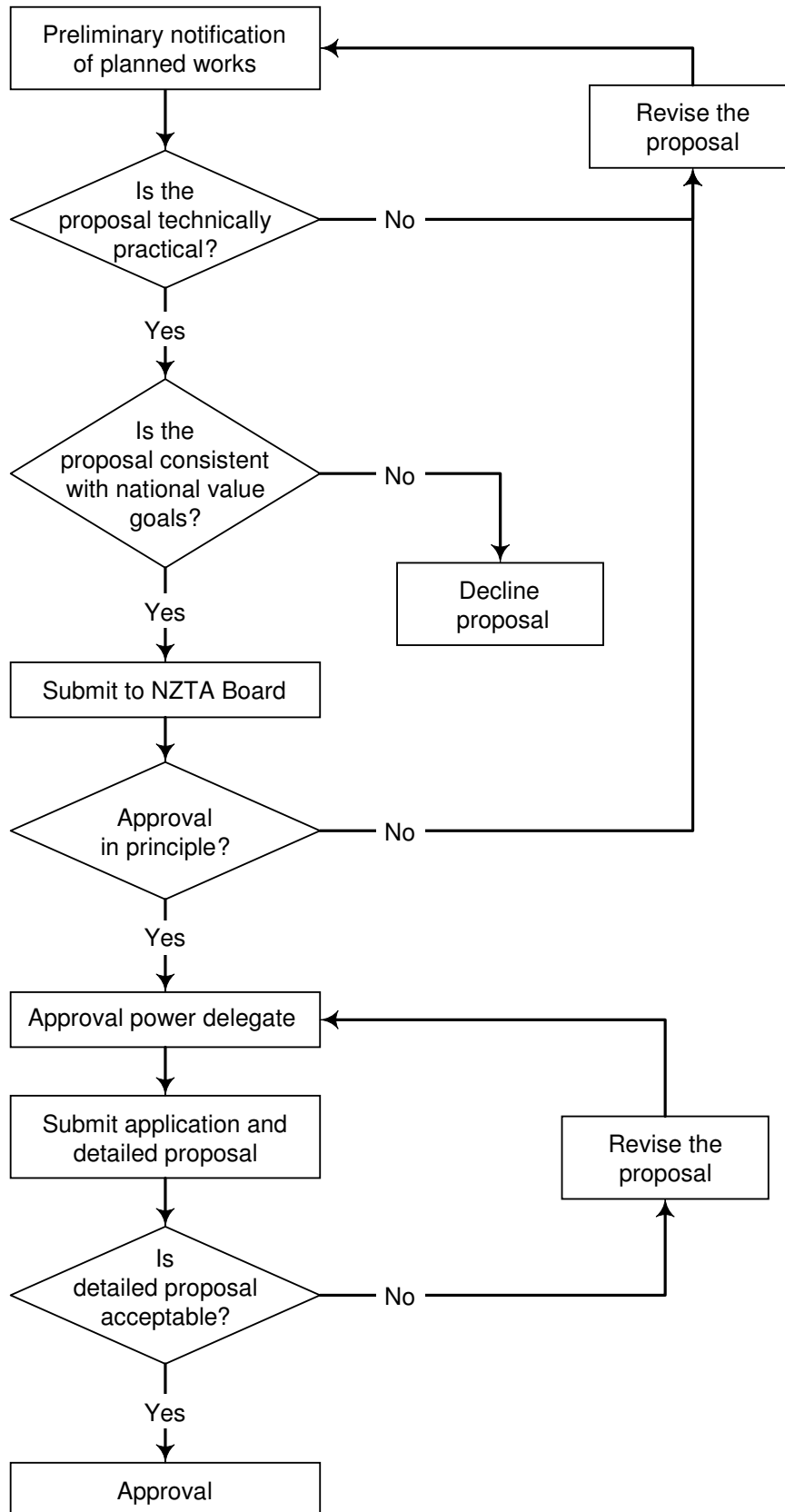
The process is shown pictorially in Figure 10: Approval Process for Utilities' Access to Motorways below.

## **7.8 Decision to Decline Access to Motorways**

A decision not to allow access will not be taken lightly by the Corridor Manager. The nature of motorways is that they can bisect large tracts of cities, and Utility Operators not being able to access them can impact on developing commercial and residential areas.

The Corridor Manager's decision, and its reasons, will be subject to the disputes process (see Chapter 13).

Figure 10: Approval process for utilities' access to motorways



## **CHAPTER 8 ACCESS TO THE RAIL CORRIDOR**

### **8.1 Purpose**

The purpose of this chapter is to set out the requirements for Utility Operators to access the rail corridor to carry out work.

### **8.2 Legal Framework**

The rail corridor is generally owned by the Crown and managed on the Crown's behalf by the New Zealand Railways Corporation trading under the name ONTRACK; however, in a few instances, other parties have control of parts of the rail corridor. The first contact should be with ONTRACK as they have details where the latter is the case.

As an SOE, ONTRACK is required to be an organisation that exhibits a sense of social responsibility by having regard to the interests of the community in which it operates and by endeavouring to accommodate or encourage these when able to do so. The carriage of utilities, where not in conflict with operation of the railway, is seen as both an economically and socially beneficial activity.

Section 35 of the *New Zealand Railways Corporation Act 1981* gives the NZ Railways Corporation the right to grant easements over railway land subject to such conditions and payments of rent as the Corporation thinks appropriate. The same section also states that any easement granted is subject to revocation without compensation at any time when the service of the public requires it or if any condition is breached.

Section 35(4) states that no person has the right to an easement, or to carry out works on any railway without a grant under section 35; though that is subject to the Telecommunications, Gas and Electricity Acts.

Section 75 of the *Railways Act 2005* then states that no person can exercise a right under an easement without the written permission of the access provider, and this is stated to override all other Acts. The same section also states that an access provider can refuse to grant a permission sought only if the provider has reasonable grounds to do so that relate to the carrying out or safety of rail activities, and cannot charge for considering applications for permission.

Some Utility Operators have existing rights in the rail corridor under their respective Acts and these existing rights may not constitute an easement under section 75 of the Railways Act 2005.

### **8.3 Utilities' Access to the Rail Corridor**

ONTRACK permits utilities to access the railway and railway premises (i.e. the track and corridor outside the track), but the principal use of the rail corridor is for the operation of trains. ONTRACK must ensure, and give priority to, safety and the ability to carry out rail activities in granting access for other activities. ONTRACK takes a pragmatic approach to access applications, with each application undergoing a comprehensive feasibility study.

### **8.4 Considerations for Granting Access**

ONTRACK's criteria when considering an application by a utility to place a service in the rail corridor include:

#### **8.4.1 Safety considerations**

In terms of the *Railways Act 2005*, ONTRACK must take all practicable steps on its part to ensure that none of the rail activities for which it is responsible causes, or is likely to cause, the death of, or serious injury to, individuals.

Safety issues in the rail corridor are significantly different from those in the road corridor. Trains are very heavy, take a considerable distance to stop and are not able to swerve to avoid people or obstacles. Access by third parties to the area within 5 metres of the centreline of any track generally requires the complete stopping of trains.

In addition, access from adjacent land or roads to parts of the railway may be constrained, as in some areas the corridor is narrow, and there may be no road access to the corridor.

#### 8.4.2 Ability to undertake rail activities

Rail is a commercial operation. Train operators pay a Track Access Charge which pays for the maintenance and operation of the rail track. ONTRACK must retain the ability to maintain the rail track and to provide access to the track for train operators.

#### 8.4.3 Space availability in the corridor

The width of the railway corridor can vary between 15 metres and, 300 metres. The width of the corridor can determine the ability to place utilities in the corridor. Even in a wide corridor, there can be 'pinch points' which may limit the ability to place a utility service longitudinally.

The space available in the corridor can be affected by what other utilities (rail and non-rail) are already in that part of the corridor.

Whether access should be provided to a rail corridor depends, in many circumstances, on the factors relating to the individual rail corridor and the need for the utility access.

Generally, the issues with crossing over (as opposed to running along) the rail corridor are considered to be more minor since the incursion into the rail operational area is limited both in terms of laying and maintaining utilities.

#### 8.4.4 National priority

In some cases there is only enough room for a few utilities to run parallel along the corridor. Where there is restricted space in a rail corridor, ONTRACK will give preference to uses with strategic arterial focus. For example, ONTRACK may decline an application to run a local authority water pipe for 200 metres along a corridor if this would prevent national or long-distance utility access.

There is a prioritisation process for public utilities provided in the national interest. Top of the priority order are:

- (a) major electricity transmission and distribution lines where reasonable alternatives are not readily available; and
- (b) other major utilities of national and regional importance (e.g. trunk communications cables).

#### 8.4.5 Existing agreements with other utilities

In some rail corridors there may be existing agreements with Utility Operators. These may need to be taken into account when access for another utility is considered. The existing agreements may also place constraints on the availability of the corridor.

#### 8.4.6 Future proofing the corridor

On some rail corridors it is likely that expansion of rail will occur in the future. Electrification, double and triple tracking, and other activities require additional space in the corridor and may limit the placing of utilities in the corridor. Even where no decision has been made on expansion it may be prudent to protect corridor space for expansion, or to let a utility service into the corridor only if it can be moved in the future.

## 8.5 Applications for Access

Generally, access to the rail corridors for utilities must be considered in the context of the carrying out or safety of rail activities. Those activities take precedence and access will only be granted where those activities are not compromised.

ONTRACK must act in good faith relating to all applications. In particular:

- It must act reasonably and in a timely manner;
- It must communicate fully and openly with applicants during consideration of the application;
- Before making a final decision it must advise the applicant of any reasons why a decision to decline the application is being considered (in case the application can be modified to mitigate the concern) and it must notify applicants in writing of draft conditions for comment before they are finalised;
- ONTRACK must provide full reasons for any decision to withhold access.

## 8.6 Making and Considering Applications

### 8.6.1 Application

Applications to place a service in the rail corridor must be made by a Utility Operator (or other party on their behalf) to:

The National Lease Manager  
Corporate Property Office  
ONTRACK  
PO Box 593  
Wellington

ONTRACK requires that applicants must:

- (a) Provide evidence that alternative routes (not including crossing the corridor) have been investigated and are impractical;
- (b) Show that the design and specifications of the crossing minimises the need for ongoing access;
- (c) Demonstrate that Health and Safety risks will be managed during installation, including a Permit to Enter being obtained;
- (d) Demonstrate that the minimum requirements in ONTRACK's codes and standards, as well as any relevant legislation, are met and complied with;
- (e) Ensure the integrity of the rail corridor continues to provide acceptable levels of structural performance;
- (f) Show that the least impact of intrusion into and/or along the corridor has been obtained;
- (g) Show that if work is to be completed on a Railway Level Crossing at which other Utility Operators and Corridor Managers have assets, they have been notified and, if required, their consent obtained;
- (h) Include location/site plans, design/route plans and/or photographs if applicable;
- (i) Demonstrate that the likelihood and/or impact of future maintenance will be minimised;

- (j) Ensure that the ONTRACK Network Control Manager will be notified (0800 808 400) in the event of an emergency.

Applicants are welcome to discuss proposed applications with the Regional Office before lodging the application. Applicants should visit the ONTRACK website [www.ontrack.govt.nz](http://www.ontrack.govt.nz) for further information relating to applications.

#### 8.6.2 Consideration

- (a) ONTRACK will ascertain where the crossing or service is in relation to rail boundaries;
- (b) The application is passed to ONTRACK National Office engineers, and also to the Area Manager/Field Engineer in the appropriate area office;
- (c) Area Managers/Field Engineers will review the application, undertake site visits and assess the application;
- (d) A copy of any application may be referred to other Utility and Corridor Managers if they have a service or assets in the vicinity.

#### 8.6.3 Documentation

- (a) If all approvals are given, the proposal will be captured the GIS and a new plan issued. A 'Deed of Grant' is then prepared;
- (b) The Grant documentation will then be sent to the applicant along with a letter of conditions with the engineer's comments and required conditions. Conditions could relate to site induction, site rules, hazards, any requirements to contact other parties, etc.
- (c) The applicant is requested to sign the 'Deed of Grant' documents and return them for completion and the allocation of a Grant number, before the works may proceed;
- (d) The Grant document (two copies) is executed and witnessed and scanned into the ONTRACK database. ONTRACK's original copy is kept secure off site and the applicant's copy is returned to them;
- (e) Following the completion of the Grant, the Area Manager will issue a 'Permit to Enter'. This will stipulate the conditions of entry including the time, date and place at which the works can proceed in the rail corridor – including the need for 'Train Protection' if required. (Train Protection is required for any works undertaken within 5 metres of the rail line. In these circumstances an ONTRACK-approved, qualified 'protector' is required to supervise and manage the safety of the third party contractors. Access can only be refused on reasonable ground related to the carrying out or safety of rail activities; and
- (f) Site inspections and Completion Certificates are issued by the Technical Engineer after the completion of the works.

### 8.7 Response Time for Granting Access

ONTRACK must acknowledge receipt of the access request within a reasonable time after its receipt.

ONTRACK must notify the applicant of any additional information required within 15 working days of receipt of the application.

Applications must be considered and resolved within 30 working days from the time of receipt.

### 8.8 Authority to Access Rail Corridor (Explanatory)

*All third parties must have a suitable authority to be on any rail land forming a part of the National Rail System, to ensure adherence to essential rail safety requirements. The authority can take the form of:*

- (a) *A statutory authority under law, for example Emergency Services, Health & Safety Inspectors; or*
- (b) *A special authority provided by a completed Permit to Enter form and a signed Indemnity form. This applies to most 'casual' entries, for example surveyors, third parties installing utility service crossings over the track or under-track, construction works immediately adjacent to a rail line.*

*Permission to enter certain rail areas away from the main rail lines, including rail terminals, freight yards, freight sidings, rolling stock maintenance depots must be obtained from the relevant parties.*

#### 8.8.1 *Permits*

*There are three basic permits:*

- (a) *Permit to Enter is required before any third party commences working on rail sites;*
- (b) *In addition to a Permit to Enter, any works undertaken within 5 metres of the rail line requires an ONTRACK approval, qualified 'protector' to supervise and manage the safety of the third party contractors; and*
- (c) *An Electrical Safety Permit is required before any third party commences working in or within 4 metres on an electrified area. Personnel are not permitted to work within 4 metres of electric traction systems unless they have been received specific Electrification Awareness and have been granted authorisation in the permit.*

*The permits specify:*

- *Conditions applicable (including site induction, site rules, hazards), and*
- *Any requirements to contact additional parties.*

## 8.9 **Fees**

As an SOE, ONTRACK is expected to operate commercially, including with those who access the rail corridor. This includes train operators, utility companies and those who lease rail land. Various fees will be charged and these are outlined below. (Note: Under Section 75 of the *Railways Act 2005*, all charges must be 'reasonable' and under the same provision, any rental charged to a public body for access on, over or under, a level crossing may be no more than nominal.) =Details of all fees and payment procedures are available on the ONTRACK website.

### 8.9.1 *Application fee*

A non-refundable application fee is required with the application. This is the standard fee for 'normal' applications and covers any engineering reviews or site inspections required. Additional charges may apply to any applications of an unusual, urgent or special nature.

### 8.9.2 *Administration fees*

ONTRACK will charge an administration fee and other fees depending on the services required (e.g. protection from trains on the rail corridor, deed fee for the preparation of the documentation for the Deed of Grant.)

### 8.9.3 *Annual grant fee*

Section 35 of the *New Zealand Railways Corporation Act 1981* enables ONTRACK to charge rental for access rights. However, when dealing with public bodies, that section and Section 75 of the *Railways Act 2005* requires that this charge may be no more than nominal.

## **CHAPTER 9 ROAD CORRIDOR ACCESS AND WORKS APPROVAL**

### **9.1 Purpose**

The purpose of this chapter is to outline the application process Utility Operators and Corridor Managers must use when Utility Operators want to install infrastructure in the road. The purpose of these processes is to minimise the time required for a Corridor Manager to assess a Utility Operator's proposal by providing a set of generic conditions that will cover most situations and a process for determining additional conditions where individual ('Special Conditions') or local ('Local Conditions') circumstances require it. The process is designed to ensure that the relevant interests of all the parties are considered and that conditions are fair and reasonable.

### **9.2 Outline of Application Process**

- (a) Preliminary notification of planned work;
- (b) Liaison regarding project works, major works and engineering assessments;
- (c) The submission of a Corridor Access Request (CAR);
- (d) The approval process and setting of conditions; and
- (e) The issue of a Works Approval Notice (WAN).

### **9.3 Preliminary Notification and Liaison**

#### **9.3.1 Preliminary notification of planned work**

When undertaking significant planned works in the corridors Utility Operators should provide Corridor Managers with preliminary notice of those works prior to lodging any CAR. Where a Corridor Manager receives preliminary notification they must, in the absence of good reason to the contrary, meet with the relevant Utility Operator to discuss the proposed works and jointly identify any issues that are likely to affect the works or the CAR.

The following information, where available, must be submitted by the Utility Operator with the preliminary notification of the proposal to allow the parties properly to consider it:

- (a) A preliminary plan indicating scope and scale of the intended works, including depth and route of any proposed utility and the presence of any adjoining utilities, kerbs, footpaths and trees;
- (b) Details of when the work is scheduled including times of day as well as dates; and
- (c) Proposed location of any chambers or above-ground structures.

#### **9.3.2 Liaison regarding project work**

The Utility Operator must discuss all significant planned work with the Corridor Manager. Such discussion to include at least:

- (a) Dialogue on the potential for coordination with any planned works to improve the corridor or any other planned works by other Utility Operators that the Corridor Manager is aware of;
- (b) Consultation with the Corridor Manager on any matters where there is a likely major impact on the public; and
- (c) Providing the key points of relevant meetings and public or other consultation to the Corridor Manager.

## 9.4 Corridor Access Request (CAR)

### 9.4.1 Lodgement of Corridor Access Request

Before carrying out any work in a corridor a Utility Operator must lodge a CAR. Utility Operators must lodge the CAR sufficiently early to give reasonable time for the Corridor Manager to set conditions. If the Utility Operator has delegated the responsibility of applying for a CAR, an agent may apply for a CAR. The CAR lodgement form is contained in Schedule B.

For minor work, the CAR must be lodged at least five working days before work starts, unless otherwise agreed.

For all State highway work, major and project work, the CAR must be lodged at least 15 working days before work starts, unless otherwise agreed.

For major and project work the following information must be supplied with the CAR:

- (a) A site specific traffic management plan;
- (b) A plan indicating intended scope and scale of the intended works, including depth and route of any proposed utility and the location of any adjoining utilities, kerbs, footpaths and trees, including any street furniture;
- (c) Details of when the work is scheduled including times of day as well as dates; and
- (d) Proposed location of any chambers or above-ground structures.

After receiving the CAR the Corridor Manager must consider the information provided and as promptly as practicable notify the Utility Operator of the reasonable conditions it will impose in accordance with Chapter 10 of this Code. If the Corridor Manager requires any special conditions or local conditions in relation to the works over and above the conditions contained in the template CAR approvals it must follow the processes outlined in Chapter 10.

### 9.4.2 Emergency work approvals

When emergency work is required, the Utility Operator shall be excused from the road corridor pre-entry notice in writing requirements and the notification requirements shall be in accordance with 6.23.1. If the work is of sufficient scale to require a follow-up formal approval for warranty purposes, then the CAR must be lodged as soon as practicable but no later than two working days after the work starts.

## 9.5 Corridor Manager's Decision

The Corridor Manager must set the appropriate conditions when issuing the Works Approval Notice. Schedule C contains a template for reasonable conditions developed by all parties which can be used by Corridor Managers when issuing the works approval. Corridor Managers must also consider and identify any Special or Local Conditions, additional to or in substitution for the template approvals contained in this Code, that they believe are required and must follow the processes outlined in Chapter 10 to introduce those conditions. If no Special Conditions or Local Conditions are specified with a WAN, then the standard reasonable conditions apply.

Special Conditions or Local Conditions are typically due to:

- (a) Unique topographical or geotechnical conditions;
- (b) Particular physical characteristics of the relevant corridor;
- (c) Unique District Plan or Regional Plan requirements;
- (d) Unique *Building Act 2004* requirements;

- (e) Unique land use policies (e.g. encroachment licence requirements);
- (f) Pollution control; and
- (g) Special dates and events.

## 9.6 Works Approval Notice (WAN)

The Utility Operator or contractor must keep a copy of the Works Approval Notice (WAN) with the reasonable conditions required by the Corridor Manager on site while work is being carried out.

The Utility Operator **should expect to** complete the works within six months of the WAN being issued. Where the WAN is issued for a set date or work period, any change to the expected date or work period requires the specific approval of the Corridor Manager.

An additional CAR and/or WAN may be required on a particular work site for each of the following situations:

- (a) When it involves more than one road;
- (b) Where another Utility Operator or contractor is working on the same work site and the Corridor Manager does not have any agreement between them for one to take complete responsibility for the site;
- (c) The location of the work site moves to a position not described on the WAN or CAR; or
- (d) The work has not been completed within six months of the WAN being issued (or such other period agreed between the parties).

Should the start of the work be delayed from the start date on the WAN then the Corridor Manager must be notified by the Utility Operator or agent (whoever applied for the CAR) as soon as practicable.

It is also the Utility Operator's responsibility to ensure that any necessary resource consents, building consents, or encroachment type licences are obtained prior to commencement of works.

Where practicable, the Corridor Manager may also request a Utility Operator to install additional ducts in conjunction with trenching work done by that Utility Operator. Additional ducts for the Corridor Manager's future use must be at the Corridor Manager's expense.

## 9.7 Works Completion Notice

Within three weeks of the completion of all work for which a WAN has been issued, the Utility Operator must lodge a Works Completion Notice with the Corridor Manager.

The Works Completion Notice must include the following as appropriate (unless otherwise agreed):

- (a) Any amendments to information supplied on the original CAR necessary to describe accurately the location and extent of the work;
- (b) Quality assurance records or certification;
- (c) As-built plans showing the extent and location of the work carried out;
- (d) A written statement confirming that the completed works fully comply with the conditions imposed by the WAN signed by a person authorised to bind the Utility Operator; and
- (e) Details of any outstanding work that the Utility Operator has agreed to complete, e.g. permanent surfacing, chip sealing or road marking.

The Corridor Manager may request further information if the notice as lodged is not adequate. A model Works Completion Notice appears in Schedule B.

#### **9.8 Notice of Completion of Maintenance Responsibilities**

The Utility Operator must notify the Corridor Manager as above that the work has been completed. Upon receipt of such notification, the Corridor Manager may carry out an inspection of the works and if so must notify the Utility Operator accordingly. The Utility Operator and Corridor Manager will agree an appropriate time for the inspection and must carry out that inspection (jointly if the Utility Operator so requires) as soon as practicable (but in no circumstances later than 10 days after the completion of works).

Within 10 days of completing the inspection the Corridor Manager will advise the Utility Operator of any issues with the standard of the works and any additional works required to ensure the works are of the required standard and comply with the WAN. The Utility Operator shall promptly complete this work at its own cost and advise the Corridor Manager accordingly. The Corridor Manager shall complete any additional inspections and when reasonably satisfied must advise the Utility Operator that the works are accepted as complete.

The two year warranty period starts from the date that the Corridor Manager signs the Works Completion Notice or advises the Utility Operator the works are accepted as complete.

Where other works are scheduled and agreed to be completed after that date (e.g. permanent sealing) the two year warranty period for that part of the works starts from the date that part is completed.

## CHAPTER 10 REASONABLE CONDITIONS

### 10.1 Purpose

The purpose of this chapter is to specify a framework to guide Corridor Managers and Utility Operators as to the processes and factors that will be considered in determining reasonable conditions for the completion of work.

The Code provides further detail on the scope of reasonable conditions to better ensure consistency and certainty, and where appropriate, to enable input from Utility Operators to facilitate informed decision making.

This chapter sets out:

- (a) The process to be followed by Corridor Managers and Utility Operators in determining conditions, including a template for reasonable conditions;
- (b) The process to be followed by Corridor Managers and Utility Operators in determining special or local conditions;
- (c) Further guidance on the factors that need to be considered when determining conditions and the limits upon what can be considered; and
- (d) Procedures where the Corridor Manager and Utility Operator have a dispute in relation to special or local conditions.

These processes are illustrated in Figures 11 and 12 below.

### 10.2 Framework for Setting Reasonable Conditions

#### 10.2.1 Statutory framework

Rights of access by Utility Operators to the road corridor are subject to reasonable conditions prescribed by Corridor Managers.<sup>1</sup> (CB pg 5)

The *Gas Act 1992*, the *Electricity Act 1992* and the *Telecommunications Act 2001* set out a range of criteria for setting reasonable conditions. Other considerations can be taken into account and what is reasonable may be informed by the particular circumstances of the location where the Utility Operator seeks access.

Under the Gas, Electricity and Telecommunications Acts a Utility Operator may request the Corridor Manager to impose conditions that it considers should be applied on any third party intending to carry out works that may affect assets belonging to that Utility Operator.

#### 10.2.2 Considerations for reasonable conditions

When considering whether a condition should be imposed, Corridor Managers must consider all or any of the criteria for setting reasonable conditions set out in any relevant legislation; and in general, these are:

- (a) The safe and efficient flow of traffic, whether pedestrian or vehicular;
- (b) The health and safety of any person who is, or class of persons that is, likely to be affected by the work on the road;

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<sup>1</sup> See for example Section 51 of the *Gas Act 1992* which provides that “no franchise holder shall open, break up, or cut into any road, nor lay any main in a road at any depth, otherwise than in accordance with such reasonable conditions as the local authority having jurisdiction over that road may prescribe”.

- (c) The need to lessen the damage that is likely to be caused to property (including the structural integrity of the roads) as a result of work on the road;
- (d) The compensation that may be payable for property that is likely to be damaged as a result of work on the road;
- (e) The need to lessen disruption to the local community (including businesses);
- (f) The coordination of installation of other works by other Utility Operators;
- (g) The coordination with road construction work by the Corridor Manager; and
- (h) The needs of the network Utility Operator to establish or maintain its network in a timely manner.

The Corridor Manager must also consider:

- (i) The protection of access to private land from the road;
- (ii) The need to facilitate completion of the works in a timely manner;
- (iii) Clearly defined proposed works that the Utility Operators have been advised of;
- (iv) Advice from a Utility Operator in relation to reasonable conditions on a third party who may be altering the position of that Utility Operator's assets; and
- (v) Its own works and other activities on the road.

For the avoidance of doubt, conditions should not:

- Have the effect of preventing, frustrating or unreasonably delaying the Utility Operator from constructing, placing, or maintaining lines or works in, on, along, over, across, or under any road;
- Have as their primary purpose the unreasonable avoidance of future costs incurred by the Corridor Manager under any legislation;
- Attempt to address matters that should properly be dealt with under the *Resource Management Act 1991*;
- Be so unreasonable that no reasonable Corridor Manager could have approved them; and
- Relate to the appropriateness of the works rather than the actual undertaking of the works itself.

### 10.2.3 Amenity Value

The costs of additional requirements primarily intended to improve amenity value must be met by the Corridor Manager, even if increased amenity values are included in reasonable conditions.

### 10.2.4 Distinction between Corridor Manager's and a local authority's roles

The Corridor Manager's role in setting reasonable conditions must be distinguished from the regulatory role that local authorities have under the *Resource Management Act 1991*. Environmental effects are managed by the District Plan process under the *Resource Management Act 1991* and it is not appropriate for the corridor access process to be used to achieve these effects.

Amenity values can be included as a Reasonable Condition where they are identified in the LTCCP, although the costs of achieving amenity values that are additional to 'like-for-like' must be met by the Corridor Manager.

### 10.3 Template for Reasonable Conditions

*Nationwide, there is a large degree of conformity as to reasonable conditions to be imposed on Utility Operators working in the corridor. Accordingly, a template for the conditions that should apply in most situations in relation to most works when a WAN is issued can be found in Schedule C.*

*These conditions will not cover every situation, and some flexibility is required to address different local circumstances.*

*These procedures have been developed to reflect best industry practice and to encourage cooperative, collaborative, open and prompt dialogue between parties, which will bring about the stated Government objectives as set out in Section 1.2 of this Code.*

In circumstances where a Corridor Manager considers it appropriate to impose further conditions due to either unique local circumstance or due to unique factors in regard to a particular work, then the procedures in Sections 10.7 (Special Conditions) and 10.8 (Local Conditions) must be followed.

(a) Local conditions are unique conditions:

- not already covered within the appropriate template WAN; and
- not specific to a particular CAR; and
- relate to a unique condition or event; and
- may affect a defined geographical area; and

(b) Special Conditions are unique conditions:

- not already covered within the appropriate template WAN or Local Conditions; and
- relate to a particular CAR only.

### 10.4 Template Works Approval Notice

*[Explanatory: The following provides general guidance on the matters that the parties have considered in creating the Standard Reasonable Conditions Template and that Corridor Managers may consider when determining additional special or local conditions.]*

#### 10.4.1 The location of works in roads

The road corridor is a unique and valuable space for a range of competing uses. While transportation is a primary function, the linear nature of the corridor means that it is particularly suited to network infrastructure. Conditions may be imposed on the location of utility infrastructure, particularly above-ground structures, to avoid conflict with other users of the road corridor.

Nationally, the demand for the space within the corridor both above and below the ground will vary. Where local circumstances mean that space is limited, conditions restricting location may be required that may not otherwise be identified in this code.

#### 10.4.2 Safe and efficient flow of traffic

Access by Utility Operators to the corridor can impact on the efficiency of the road corridor. This can affect both the immediate location and the wider road network. However, these impacts must be balanced against the need to enable Utility Operators to provide services to the community in a timely manner. Temporary interference with normal vehicle and pedestrian movement is accepted to gain the benefits of those services.

Conditions may be imposed to minimise the impact on road users, and to allow for the safe and convenient passage for traffic around and through the site. Traffic management must be appropriate to the situation.

#### 10.4.3 Health and safety of persons affected by work in the transport corridors

Conditions may be imposed protecting the health and safety of persons coming into contact with the work site, whether workers, pedestrians, cyclists, or vehicle occupants.

#### 10.4.4 To avoid or lessen property damage

There is a range of assets in the road corridor. They include other utilities, the road asset, council assets within the road corridor (street trees or furniture) and privately owned assets such as verandahs and vehicles.

This Code requires as a general principle that Utility Operators must respect others' property rights when carrying out works in the corridor. Appropriate conditions to protect property may include:

- (a) Conditions requiring the reinstatement of roads or berms where the surface is broken up and/or plants disturbed. Any requirements regarding reinstatement must relate to the condition of the existing asset. The general principle of this Code is that when reinstating the road it should be on the basis of a 'like-for-like' replacement. Methodologies are described in Chapter 6;
- (b) Conditions identifying restrictions that will apply to protect other assets in the road corridor.

#### 10.4.5 Minimising the disruption to the community

Conditions may be imposed limiting the time when works can take place in the road corridor. In some circumstances, access to the road corridor may be restricted for traffic management purposes (as contemplated in Clause 10.4.2) and the need to lessen disruption to the local community (including businesses). Any such restriction must take into account the need of Utility Operators to establish and maintain their infrastructure in a timely manner.

Both Corridor Managers and Utility Operators have an obligation to ensure that any works undertaken are based on safe and efficient practice while minimising the impact on the public. Conditions may be imposed by Corridor Managers requiring that an appropriate communication strategy be in place, including information signs. It is good practice to advise affected parties in advance when undertaking works that have the potential for significant disruption.

#### 10.4.6 Coordination of works within the road corridor

*[Explanatory: Uncoordinated works can create unnecessary disruption to road users and can create damage to the road asset.]*

The coordination of works between Utility Operators and the Corridor Manager requires cooperation and information sharing. This is the primary objective of the liaison meetings and all parties are obliged to disclose information to the Corridor Manager that will assist with the coordination of works.

The nature of providing utility services means that works cannot always be anticipated or coordinated. However, new installations of network infrastructure and road construction can often be anticipated and conditions may be imposed to provide for the coordination of such works with the installation of other networks and/or road construction work by the Corridor Manager. Those conditions must balance the nature of the works being undertaken and the effects on the community of any delays brought about by the conditions requiring coordination.

#### 10.4.7 Protect access to private land from a road

Private property owners are entitled to access to a road. This entitlement must be balanced against the rights of utilities to locate their infrastructure on or above roads. Therefore, in considering the location of aboveground utilities, the Corridor Manager must also consider the maintenance of reasonable access for private property owners to and from the road corridor.

#### 10.4.8 Facilitate completion of works in a timely manner

Any conditions imposed must ensure that work is completed in a timely manner with the least practicable disturbance to other parties or interested parties.

#### 10.4.9 Establish a network in a timely manner

Utility Operators need to establish a network in a timely manner. Any conditions imposed must ensure that any works undertaken in the corridor do not impede the establishment of a network in a timely manner and consider the effects on the community of any delay that may occur.

### 10.5 Identifying types of corridor

*[Explanatory: In addition to the factors listed in Section 10.4, traffic volumes, location, topography, climate and geology can all impose limits on what are acceptable reasonable conditions. The particular physical characteristics of the corridor or area must be recognised when setting reasonable conditions. In this respect it is acknowledged that the Corridor Manager has long term knowledge of the transport corridor.]*

*However, Utility Operators need certainty in order to plan for and provide utility services. The following identifies typical examples of types of corridors or locations, and provides some guidance on the types of issues that will need to be considered and the types of conditions that may be appropriate.]*

#### 10.5.1 Traffic sensitive roads

These roads are mostly high volume arterial and principal routes. In special circumstances, restrictions must be considered in areas or particular roads where annual seasonal or individual events are to take place and/or where there is a danger of causing significant disruption to traffic. In such cases, open trenching may not be the first choice option on or near the carriageway.

Motorways are a special case: often there is no other access to motorway reserve apart from interchanges or directly off the motorway itself. As motorways are congested in and around peak traffic periods, such access will have impacts that can cause severe consequences in traffic peaks. Access restrictions may apply even for emergency works.

#### 10.5.2 Tunnels and bridges

Even though tunnels and bridges are part of the corridor, the ability to provide access to them is very limited and restrictions may apply around the time when works can take place. Note that tunnels and bridges are also classified as buildings under the *Building Act 2004* and any alteration requires compliance with that Act.

#### 10.5.3 Retail or business areas

Uncoordinated works have a significant effect on retailers and other business. It is important to consider the needs of the business community and, by ensuring that all works are appropriately coordinated, reduce the impacts that these works may have. Where the intention is to upgrade a business precinct, or busy footpaths in retail areas, there must be co-operation to ensure that:

- (a) The parties are aware of any short to medium term planned works and that there is an opportunity to mitigate the potential effects of such works;
- (b) Other Utility Operators have a reasonable opportunity to provide or upgrade services, should they wish to do so; and

- (c) No further foreseeable works be allowed for an agreed period following completion of the works.

This does not apply to emergency repairs to services and/or customer service connections, but the owners of adjacent premises must, where practicable, still be advised of these works as well as their likely duration due to the direct impacts on the businesses.

#### 10.5.4 Pedestrian areas

Works in areas of high pedestrian use, areas of special paving, school and retail areas, may have special restrictions. These could relate to the timing of works, for example, avoiding peak traffic flows, special events, and peak trading periods.

#### 10.5.5 Rail corridor

It is recognised that the rail requirements have significant differences from roads and that access to rail corridors will be on a commercial basis. There are also particular safety requirements for working in rail corridors and the access for works can be severely limited where road access to rail is not available. These requirements are detailed in Chapter 8.

#### 10.5.6 Rail–road level crossings

These are areas not only where two transport corridors cross, but also where facilities and services cross and where worksite safety is at a premium. Extra care is required when planning works in these areas.

#### 10.5.7 Long term instability

A number of roads cross areas of mass earth movement. Utility Operators need to consider options that limit the impact on the existing instability and also consider ongoing movement impacts on their services to minimise the frequency and/or impact of works. Corridor Managers cannot guarantee the long-term integrity of roads in such areas.

Note that treatments for such areas often include buried horizontal elements such as bored drains or tied-back anchors.

#### 10.5.8 Steep topography

In areas of steep topography where there is limited shoulder width, options other than trenching may need to be the first choice option, particularly as such areas are often of marginal stability.

### 10.6 Special or Local Conditions

The parties acknowledge that there are some circumstances where unique local conditions or unique conditions relating to a particular work mean that the conditions contained in the template WAN will not be satisfactory for the work being carried out. In these instances further conditions may be required.

### 10.7 Special Conditions

#### 10.7.1 Issuing special conditions

When it considers special conditions are necessary in regards to a particular CAR, a Corridor Manager must issue such special conditions to the Utility Operator within 15 working days of receiving the CAR. If the Corridor Manager fails to provide a Works Approval Notice (WAN) within the stated period, special conditions cannot be imposed and the Utility Operator may commence work on the basis of the conditions contained within the template WAN.

#### 10.7.2 Discussion on reasonableness of special conditions

If the Utility Operator believes the special conditions are not reasonable it must advise the Corridor Manager and the two parties must, as soon as possible, enter into discussions with each other to resolve those conditions upon which they disagree. Such discussions are to be undertaken in good faith in accordance with the Working Together principle.

### 10.7.3 Options for resolving disputes over special conditions

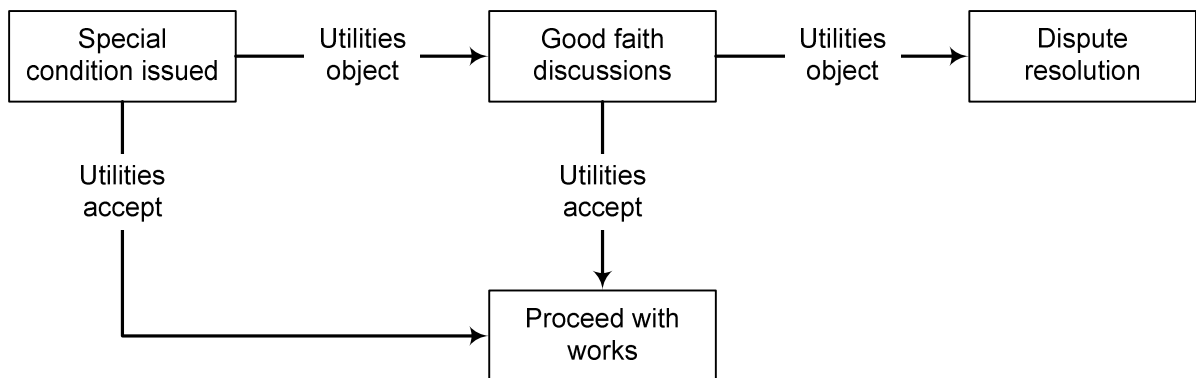
In the event that the Corridor Manager and the Utility Operator are unable to agree on the reasonableness of the special conditions imposed on them, the Utility Operator may either:

- (a) Invoke the dispute resolution procedures in Chapter 13 of this Code; or
- (b) Appeal to the District Court (subject to specific legislation).

### 10.7.4 Preference for using dispute resolution procedures in the Code

The parties acknowledge that the Corridor Manager and Utility Operator will not always be able to agree as to the appropriateness of proposed Special Conditions, and while an appeal to the District Court is available, the procedure in Chapter 13 of this Code (Dispute Resolution Procedure) is to be preferred.

**Figure 11: Process for determining special conditions, with one or more Utility Operators**



## 10.8 Local Conditions

### 10.8.1 Issuing local conditions

When a Corridor Manager considers a local condition is necessary (either in response to a particular CAR or as a result of meetings with Utility Operators), it must notify all Utility Operators affected by the proposed Condition and provide that Condition to those Utility Operators. If the condition is in response to a particular CAR it must be issued within 15 working days of receiving the CAR.

### 10.8.2 Discussion on reasonableness of local conditions

If any Utility Operator believes that the local condition is not reasonable, it must advise the Corridor Manager and all parties who have an objection shall as soon as possible enter into discussions with each other to resolve those conditions upon which they disagree. Such discussions are to be undertaken in good faith in accordance with the Working Together principle.

### 10.8.3 Options for resolving disputes over local conditions

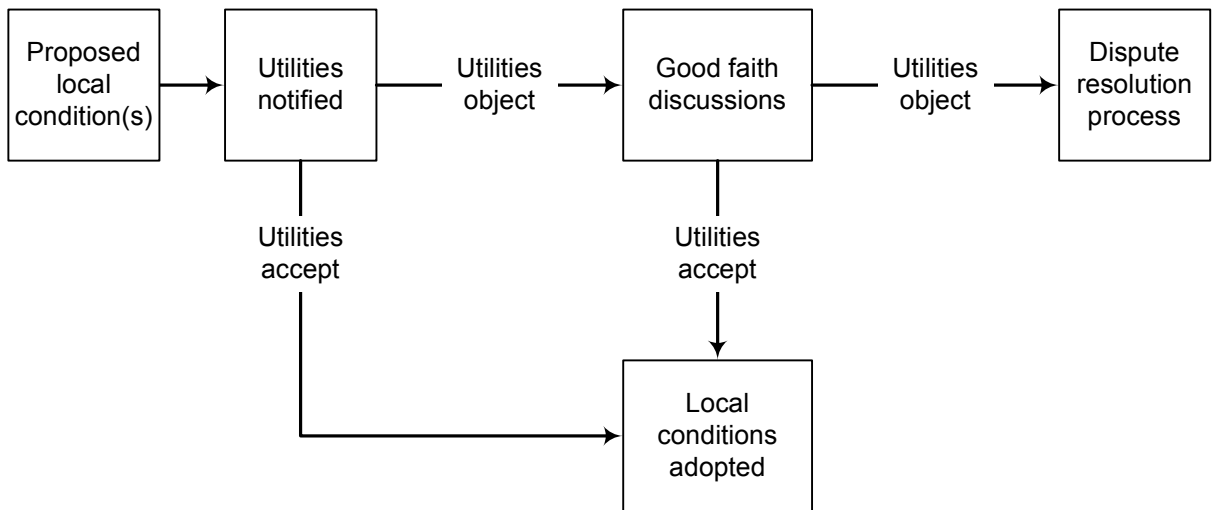
In the event that any Utility Operator still disputes the reasonableness of the conditions imposed the Utility Operator may either:

- (a) Invoke the dispute resolution procedures in Chapter 13 of this Code; or
- (b) Appeal to the District Court (subject to specific legislation).

10.8.4 Preference for using dispute resolution procedures in the Code?

The parties acknowledge that the Corridor Manager and Utility Operator will not always be able to agree as to the appropriateness of proposed conditions, and while an appeal to the District Court is available, the procedure in Chapter 13 of this Code (Dispute Resolution Procedure) is to be preferred.

**Figure 12: Process for determining local conditions with Utility Operators**



## CHAPTER 11 COMPLIANCE

### 11.1 Purpose

*The purpose of this chapter is to specify a model quality assurance system for guidance of the Utility Operator so that the Corridor Manager can be confident the performance requirements of the conditions will be met.*

*The intention is for the Utility Operator to provide a quality assurance system containing the following matters:*

- (a) *A company policy and commitment to produce quality work;*
- (b) *Assigned and documented responsibilities for quality;*
- (c) *A work plan (called the quality plan) showing how quality and the key contract requirements are to be achieved; and*
- (d) *Internal and/or external audits (not required for TQS2).*

### 11.2 Compliance with Code

A Corridor Manager may, at its discretion, audit the Utility Operator's quality plans for the proposed work.

#### 11.2.1 Quality assurance requirements

Auditing by the Corridor Manager covers only a small percentage of the work and is not to be relied upon by the Utility Operator. The Utility Operator is responsible for ensuring that regular quality assurance checks are carried out and documented until the completion of the period of maintenance responsibility.

#### 11.2.2 Audit process

The audit process is ongoing from the start date, as advised to the Corridor Manager by the Utility Operator, until the expiry of the period of maintenance responsibility. Where audits show that work is consistently of the appropriate standard, the Corridor Manager may limit the extent of audits being conducted. This should encourage consistently better performance and enable audit costs to be minimised.

The Utility Operator must make allowance for the Corridor Manager to make any independent inspections/audits and carry out any independent conformance testing on site so that the Corridor Manager is satisfied as to the standard of completion of the works.

#### 11.2.3 Audit principles

The Utility Operator must, unless otherwise agreed, audit the work site on all quality assurance matters including temporary traffic management. The Corridor Manager may conduct additional site audits for its purposes. The Utility Operator must make quality management records available to the Corridor Manager on request.

#### 11.2.4 Performance evaluation

Results of site audits may be collated and reported by the Utility Operator to the Corridor Manager on a regular basis. There may be a sharing of information amongst the Corridor Managers and Utility Operators within regions.

### 11.3 Non-conformance Notices

Work undertaken for or by the Utility Operator that does not conform to the required standards may be classified into two types, each of which requires a specific response. These are:

- (a) Health and Safety including traffic management – in the event of the Corridor Manager being of the opinion that urgent action is required in order to prevent injury to persons or damage to property; and
- (b) Other – where other issues, e.g. reinstatements, do not conform to the required standards.

In each case, non-conformance notice must be issued for remedial action within a specified timeframe.

#### **11.4 Stop Work Orders**

Failure to meet any of the requirements of the WAN, the Code or the reasonable conditions may result in a stop work order being issued by the Corridor Manager. An order allowing work to recommence may be issued by the Corridor Manager once requirements are met.

Examples of a stop work order and an approval to recommence work form appear in Schedule B.

#### **11.5 Non-actioned Notices**

Should a non-conformance notice not be actioned by the Utility Operator within the specified timeframe and if alternative arrangements have not been made with the Corridor Manager, the Corridor Manager may engage a contractor to complete the work and recover all associated costs from the Utility Operator.

#### **11.6 Questionable Work**

When the Corridor Manager is of the opinion that material or workmanship may not meet the required standards, the Corridor Manager may request information from the Utility Operator to demonstrate that compliance has been achieved to meet the requirements of the Code.

In the event of this information not being to the satisfaction of the Corridor Manager, the Corridor Manager may request an independent quality assurance audit. Should satisfactory compliance not be demonstrated and the Utility Operator does not respond appropriately, the Corridor Manager may elevate this matter to dispute.

The independent quality assurance audit may include more extensive sampling or testing and any additional investigation required. Responsibility for the costs of this audit, sampling and testing shall be as follows:

- (a) If the appropriate information is provided and materials/workmanship meet requirements, then the Corridor Manager is responsible for the costs;
- (b) If the appropriate information is provided but materials and/or workmanship do not meet requirements, then the Utility Operator is responsible for the costs; or
- (c) If the appropriate information is not provided, then the Utility Operator meets the costs.

## CHAPTER 12 COST SHARING

### 12.1 Purpose

*The purpose of this chapter is to identify the main issues relating to the apportionment of cost between parties involved in the management and use of transport corridors.*

*Included in this chapter is an outline of the legislative requirements for the treatment of costs by Corridor Managers and Utility Operators, and broad principles to guide Corridor Manager and Utility Operator decision makers in their dealings with each other (and other parties). The broad principles are intended to provide clarity and consistency where possible, and to improve the collaboration between the respective parties.*

### 12.2 Current Legislation

Legislation and Government Roothing Powers on cost allocation is set out in the Electricity, Gas, and Telecommunications Acts. The following is a summary of the implications of these legislative provisions, based on the Government's recent decision to bring the Telecommunications Act into line with the other utilities' legislation:

- (a) When a Corridor Manager requires utility structures to be moved, then the Corridor Manager is required to pay all reasonable costs of the work;
- (b) The exceptions to (a) are if the utility structures have been erected contrary to controlling legislation or are in a dangerous or unsafe condition, or (d) applies. In those cases, the Utility Operator must pay the costs. Also the parties may have a specific cost sharing arrangement;
- (c) When a reasonable condition is imposed on access to the road for the purpose of increasing amenity value (i.e. in addition to 'like-for-like') the Corridor Manager is required to pay the net costs of achieving this additional amenity value;
- (d) Where a Utility Operator elects to install utility structures on a road that is clearly identified in for future alteration or a road that is in an area that is to have road construction, the cost of moving the utility structures to accommodate the future changes is allocated in accordance with the *Electricity Act 1992*, the *Gas Act 1992* and the *Telecommunications Act 2001*;
- (e) Betterment is specifically excluded;
- (f) If ordered under the *Gas Act 1992*, the *Electricity Act 1992* or the *Telecommunications Act 2001* to raise, lower, or otherwise alter the position of utility structures; the Utility Operator pays the materials (fittings) costs;
- (g) If the Utility Operator chooses to install or upgrade fittings in a corridor when works are being undertaken by the Corridor Manager, any increase this causes to the cost of the Corridor Manager's works must be met by the Utility Operator;
- (h) If the original fittings cannot be obtained and the new fittings increase the cost of the works, the Utility Operator shall pay for the difference in cost between what it would have cost to build the works as near as possible to their original specification (taking into account any legal restrictions the location of the original works and the alternatives reasonable available to the Utility Operator) and the actual cost of the works.

The amount to be paid shall either be agreed between the parties or if no agreement can be reached the issue should go to the disputes process; and

These Acts have cost share provisions that replace those in the *Government Roothing Powers Act 1989*, but only for the electricity, gas and telecommunications industries.

For other works to which a cost share arrangement could apply (such as for water, wastewater and stormwater), the parties will need to resolve a business arrangement between them. Where the arrangements are internal to an organisation, that organisation is encouraged to separate the Corridor Manager and Utility Operator roles as much as possible and maintain a formal approach to the access process, at least similar to the Code. Where the Utility Operator is clearly a separate entity, then all Corridor Manager have recourse to moving utilities using Section 54 of the *Government Roadway Powers Act 1989* and the cost share provisions in that section can be applied. NZTA applies that approach for all State highway works not covered by the Electricity, Gas and Telecommunications Acts.

### **12.3 Broad Principles Supporting the Relationship**

Sometimes the legislative prescription described above may not be sufficiently comprehensive or refined to deal adequately with the ongoing relationship between a Utility Operator and a Corridor Manager (or a specific project) and a cost share agreement might be desirable. In these cases, the principles and ideas below might be helpful in developing that agreement.

Furthermore, where existing cost share arrangements conflict with legislative provisions or there are historical issues relating to cost share to work through, parties are encouraged to use the principles and approaches described below (in addition to the overarching principles in Section 12.2) to find a path forward.

For the purposes of clarification, nothing in this chapter prevents any parties (after the commencement of the Code) from agreeing to cost share arrangements that are different from the principles set out in this section.

#### **12.3.1 Equity**

All utilities should be treated the same. This is particularly relevant given that some utility operations (e.g. water, wastewater, stormwater, fibre optic cables) are owned and managed by territorial authorities or NZTA.

#### **12.3.2 Causer pays – with care**

Given the guidance provided in legislation, in most cases where utilities are located in the transport corridor the principle of ‘causer pays’ should hold – all costs arising from an action should be met by whoever is causing that cost to be incurred. However, this principle does need to be applied with care, particularly when it comes to approving utility location. For example, if the economic life of a road is say 40 years and the causer pays principle is applied, then a Corridor Manager will need to be careful in approving the location of utilities in a road if the utility has an economic life beyond the life of the road. The Corridor Manager will clearly prefer utilities to occupy locations that are unlikely to be affected by road requirements over the long term, unless this risk can be moderated as part of a ‘reasonable condition’.

#### **12.3.3 Direct costs only**

Another qualification to the causer pays principle is that costs have to be measurable and material. Indirect costs such as the delays and inconvenience caused by road works to road users, or the effect on adjacent property values or business trading while road works are underway are difficult to quantify accurately and are better dealt with by way of appropriate reasonable conditions when the works are being consented.

#### **12.3.4 Betterment**

This issue arises with the replacement of assets owned by the other party. A good rule of thumb is that assets are replaced or relocated on a ‘like-for-like’ basis. In other words, neither party should unduly benefit from work carried out on their asset by the other party without contributing to it.

A situation where cost share may arise is if a network asset or road is nearing the end of its useful life and is programmed for replacement or upgrade. Proposed work on one or the other may best be carried out earlier than would otherwise be the case to provide the optimal outcome for transport corridor users and utility consumers. In this situation there may be significant cost saving in coordinating asset replacement with the road works. This creates a reasonable case for sharing costs.

#### 12.3.5 Wrongly located services

Cases subsequently found in which services were not located in accordance with the approved plan (e.g. services were buried at 200mm when the plan required 600mm), or were located without an approved plan, cause problems with planned works. The Utility Operator should meet the full cost of relocating services and any direct (reasonable) consequential costs that would not otherwise have been incurred. Correspondingly, if services have been laid and a Corridor Manager subsequently changes key aspects such as ground levels, or reduces specified distances, the Corridor Manager should bear any costs of correction.

#### 12.3.6 Corridor intervention administration

Corridor Managers have the role of governing transport corridors efficiently and effectively, including the administration of the CAR and monitoring of consent compliance. Following the 'causer pays' principle it is appropriate that Corridor Managers recover the reasonable costs of managing the CAR activity from Utility Operators. Costs incurred by a Corridor Manager for this service should be separately identified and fees set through an appropriate consultative procedure.

#### 12.3.7 Seek the optimal overall solution for all parties

When looking at the costs of projects, Corridor Managers and Utility Operators should seek to optimise the overall costs and benefits to the end users of all services being impacted. This principle should be seen in the context of causer pays and betterment, which would normally override this principle when they conflict. Innovative solutions to minimise the costs should be encouraged, for example, by rewarding better performers in the road corridor with reduced audit requirements.

#### 12.3.8 Miscellaneous situations

A wide range of situations could arise where cost apportionment will depend on the circumstances. The cost might have to be met by the Utility Operator, the Corridor Manager or between the Corridor Manager and the Utility Operator or between two or more Utility Operators. Examples include:

- (a) Corridor management: utility services have to be relocated to allow access for new networks.
- (b) Interference: utility asset has to be relocated because it interferes with another utility. (Note: The New Zealand Committee for the Coordination of Power and Telecommunication Systems, NZCCPTS, has produced a guide which sets out principles for determining the apportioning of costs between electricity and telecommunications network operators in certain circumstances.)
- (c) Third-party damage: a third party (a contractor working for the Utility Operator or the Corridor Manager) causes damage to another party's asset. Assuming the third party was at fault, the third party will be liable for cost.

## CHAPTER 13 DISPUTE RESOLUTION

### 13.1 Purpose

The purpose of this chapter is to specify a dispute resolution process that must be followed by the parties in the event of a dispute. It is intended that the parties will use the dispute resolution process as means of 'last resort' when all efforts to collaborate and cooperate have been exhausted and a resolution is required to an ongoing situation.

### 13.2 General

Any dispute, disagreement, question or difference that arises between the parties in relation to this Code, must be resolved in accordance with the provisions in this chapter.

The parties may at any stage agree to suspend any dispute resolution under this section due to any proceedings under the respective utility legislation, but in the absence of any such agreement the provisions of this chapter must continue to apply and neither party is entitled to suspend or delay any dispute resolution under this chapter due to any proceedings.

#### 13.2.1 Notice of dispute

If a dispute arises, either party may give the other written notice (a Dispute Notice) requiring that the dispute be determined in accordance with this chapter. A party's dispute notice must specify:

- (a) The nature of the dispute;
- (b) Its representative for negotiations; and
- (c) Its suggestion for settling the dispute.

#### 13.2.2 Response to Dispute Notice

The party receiving the dispute notice must, within five working days of receipt, reply to the other party by notice in writing specifying:

- (a) Its representative for negotiations; and
- (b) Its suggestion for settling the dispute.

#### 13.2.3 Negotiations

The parties must enter into negotiations to resolve the dispute within 10 working days of receipt of the dispute notice. Negotiations must be held between a senior representative of each party who must have authority to settle the dispute. The senior representatives must endeavour to resolve the dispute within 20 working days of receipt of the dispute notice. If the senior representatives are not able to resolve the dispute within 20 working days of receipt of the dispute notice then the dispute will be considered to have reached a deadlock.

#### 13.2.4 Dispute resolution options where negotiations fail

If the dispute reaches deadlock then:

- (a) The parties may agree in writing to refer the dispute to expert determination in accordance with Clause 13.2.5; or
- (b) The parties may agree in writing to refer the dispute to mediation in accordance with Clause 13.2.6; or
- (c) Either party may refer the dispute to arbitration in accordance with Clause 13.2.7; or
- (d) If the dispute is a dispute that is capable of resolution in accordance with Section 141 of the *Telecommunications Act 2001*, Section 27 of the *Electricity Act 1992* or Section 28 of the

*Gas Act 1992 or section 54 of the Government Roading Powers Act 1989* either party may refer the dispute to proceedings in the District Court.

#### 13.2.5 Expert determination

Where the parties have agreed in writing to refer a dispute that has reached deadlock to expert determination, the following provisions will apply:

- (a) The expert must be appointed by agreement between the parties. If, within 15 working days of the agreement in writing to refer the dispute to expert determination the parties are unable to agree on the appointment of an expert, then either party may by notice in writing to the other refer the dispute to either mediation or arbitration;
- (b) The expert must adopt a procedure which, in the expert's opinion, is the most simple and expeditious procedure practicable in the circumstances;
- (c) The parties must provide the expert with any information that the expert reasonably requires;
- (d) The expert must act as an independent expert and not as an arbitrator. The expert will be entitled to rely on his or her own judgement and opinion;
- (e) The expert must provide his or her written determination (which must include reasons for that determination) to the parties within 20 working days of the expert's appointment. The expert's determination will, subject to Clauses 13.2.6 and 13.2.7 or any adjudication proceedings, be final and binding upon the parties; and
- (f) The costs of the expert must be borne equally by the parties. Each party must bear its own costs in relation to the expert's determination.

#### 13.2.6 Mediation

If the dispute reaches deadlock and the parties:

- (a) Agree to refer the dispute to mediation; or
- (b) Have not agreed to refer the dispute to expert determination, or
- (c) Have agreed to refer the dispute to expert determination but are unable to agree on the appointment of an expert as set out in Clause 13.2.5(a); or
- (d) Agreed to refer the dispute to expert determination and the expert has not made a determination within 20 working days of the expert's appointment; or
- (e) Have agreed to refer the dispute to expert determination but either party is not satisfied with the expert's determination; then
- (f) The parties may agree that the matter in dispute that has reached deadlock be referred to mediation and the following provisions will apply:
  - (i) The mediator must be appointed by agreement between the parties. However, if the parties can not agree on a mediator within five working days of the agreement to refer to mediation, then the mediator will be appointed at the written request of either party by the president for the time being of LEADR – Lawyers Engaged in Alternative Dispute Resolution, New Zealand (or his or her nominee) or its successor body. The party making this request must copy the request to the other party;
  - (ii) Unless the parties agree otherwise in writing, the terms of reference for the mediation will be the model mediation terms suggested by LEADR; and

- (iii) Either party may, by written notice to the other, revoke the agreement to refer the dispute to mediation at any time.

#### 13.2.7 Arbitration

If the dispute reaches deadlock and the parties:

- (a) Have agreed to refer the dispute to mediation and have not resolved the dispute by the earlier of the conclusion of the mediation or the revoking of the agreement to refer the dispute to mediation; or
- (b) Agreed to refer the dispute to expert determination and the expert has not made a determination within 20 working days of the expert's appointment; or
- (c) Have not agreed to refer the dispute to mediation or expert determination, or
- (d) Have agreed to refer the dispute to expert determination but are unable to agree on the appointment of an expert as set out in Clause 13.2.5(a); or
- (e) Have agreed to refer the dispute to expert determination but either party is not satisfied with the expert's determination;

then either party may refer the dispute to arbitration by a sole arbitrator (being a New Zealand resident) under the *Arbitration Act 1996*, by written notice to the other (Arbitration Referral Notice) and the following provisions will apply:

- The arbitrator must be appointed by agreement between the parties. However, if the parties cannot agree on an arbitrator within 5 working days of receipt of the arbitration referral notice, the arbitrator will be appointed at the written request of either party by the president for the time being of the New Zealand Law Society (or his/her nominee) or its successor body. The party making this request must copy the request to the other party;
- In the absence of agreement, the arbitration will take place in Auckland or Wellington (at the arbitrator's discretion);
- The arbitrator must adopt a procedure which, in the arbitrator's opinion, is the most simple and expeditious procedure practicable in the circumstances;
- The arbitrator may determine the dispute without a hearing unless either party gives notice requiring one, in which case the arbitrator must treat that as a material consideration in assessing costs;
- The Second Schedule of the Arbitration Act 1996 applies;
- Where the dispute has been referred to mediation, neither party is entitled to call the mediator as a witness and any determination of the mediator must not be referred to in the arbitration;
- The parties must co-operate to ensure the expeditious conduct of the arbitration. In particular, each party must comply with any reasonable time limits sought by the other for settling the terms of reference, interlocutory matters and all other steps preliminary and incidental to the hearing and determination of the dispute; and
- The award in the arbitration is final and binding on the part of parties.

#### 13.2.8 Good faith and continuity

Pending resolution of any dispute, each party must:

- (a) Make all reasonable efforts in good faith to resolve the dispute promptly and in a manner which minimises any impact on the performance of this agreement; and
- (b) Continue to perform its other obligations under this Code.

#### 13.2.9 Interlocutory or injunctive relief

Nothing in this chapter 13 prevents either party from seeking urgent interlocutory or injunctive relief.

#### 13.2.10 Multiple Parties

Where there are more than two parties to a dispute (e.g. more than one Utility Operator involved, or a utility whose operations affect more than one Corridor Manager) this Chapter 13 applies with the necessary amendments so that each separate party has the same rights and obligations; unless they agree that their interests coincide and that one party can represent other parties as one party.

## CHAPTER 14 CODE MANAGEMENT

*[Explanatory: This chapter is subject to finalisation following the introduction of the expected legislation and the consideration of the management structures needed to meet the legislative requirements.]*

### 14.1 Purpose

The purpose of this chapter is to outline the management of the Code after it has been authorised by the Minister of Economic Development. This includes the body to oversee and coordinate all the processes required to ensure the Code is effective, readily available and up-to-date at all times.

### 14.2 Code Management

#### 14.2.1 Code administration

The Code is mandated by Government through the Minister of Economic Development. The Minister will also acknowledge the role of a Code Management Board (CMB), representing the wider industry sector, to manage the Code.

Administration of the Code will include:

- Ensuring the Code is up to date with legislative changes and current best practice;
- Ensuring the Code is freely available to the sector;
- Collecting and maintaining key performance indicators; and
- Managing the review and amendment process, and ensuring all parties are involved in the amendment process as appropriate.

The Board is also required to maintain good working relationships with government representatives and liaise on policy issues as they arise.

#### 14.2.2 Authorisation of Code changes

The authorisation of Code changes will be given following assessment by the Ministry of Economic Development, as the policy-making agency for the Government, that the Code meets the criteria specified in current legislation. It will be critical that:

- The Code changes have been developed by the industry across all appropriate sectors;
- There is a reasonable level of agreement between industry on the content of the Code changes; and
- The Code content continues to include as a minimum:
  - The principles by which the parties will collaborate, including how works can be coordinated;
  - The scope of reasonable conditions which can be specified by Corridor Managers;
  - Operational and maintenance procedures;
  - How the risks from roadside hazards are assessed and managed; and
  - Dispute resolution procedures.

### 14.2.3 Amendment to the Code

Reviews of the Code should occur at regular intervals and are the responsibility of the CMB. The CMB may delegate authority to any industry sub-group to oversee a full review of the Code on its behalf. The CMB shall notify the industry through representative industry groups that it proposes to carry out a review of the Code. The CMB shall consult with industry while carrying out the review.

In addition, any party may advise the CMB of changes it proposes at any time. The CMB shall consider any submitted changes proposed at each meeting it holds and advise the proposing party of its recommended action in respect of the proposed change. A summary of recommendations and proposed changes shall be provided to the industry for comment and the comments shall be reported back to a subsequent meeting for a final decision on adopting amendments to the Code. Agreed amendments to the Code may not need to be actioned immediately after adoption and may be held off to be actioned at an appropriate time when a number of amendments may be made together. However, when advising parties of its final decisions on proposed changes, the CMB shall also advise when the consequent amendments will be made.

Any proposed amendments to the Code shall be forwarded by the CMB to the Ministry of Economic Development for approval by the Minister and must be accompanied by a report:

- Outlining the issue;
- Describing the options considered to resolve the issue;
- Analysing those options including how parties may be effected;
- Identifying the preferred option and reasons supporting this preference;
- Proposing amendments to the Code and commenting on any implications arising from the proposed change; and
- Describing the consultation process that was used to develop the proposed amendment, citing evidence of the level of industry support for the amendment, and identifying and explaining any dissenting views.

Amendment requests shall be submitted to the Ministry of Economic Development for consideration once the CMB is confident that the process and amendments meet the criteria set out in 14.2.2 above.

## 14.3 Monitoring, Reporting and Key Performance Indicators

### 14.3.1 Principles

Monitoring of Code performance will be undertaken. Key principles for monitoring include:

- (a) Monitoring must provide meaningful, cost effective information for decision-making;
- (b) All parties have a responsibility to provide information in accordance with the monitoring framework;
- (c) Monitoring should be undertaken within existing processes or processes mandated by the Code; and
- (d) The monitoring framework must have an identified outcome, and be based on the development of key performance indicators (KPI). These may include:
  - indicators to identify the effectiveness of the code to deliver party outcomes;
  - indicators to identify the effectiveness of the processes and procedures developed under the Code; and

- indicators that identify trends that are detrimental to the ongoing effectiveness of the Code or compromise the industry's ability to deliver party outcomes.

The CMB shall consult with the industry on the KPI that it proposes to monitor the industry against. Benchmarks may be created using the data from the KPI reports, which may also assist to identify sections that may need adjusting in the Code.

#### 14.3.2 Monitoring information reporting

Monitoring information will be collected in a format determined by the CMB. Monitoring information will be forwarded annually by each party to the CMB to be aggregated on a national basis by the CMB, and formally reported back by the CMB to the industry sector and to the Government.

Where unscheduled events occur, the CMB may require some analysis to be undertaken to identify whether Code compliance, operational understanding and/or the quality control process needs attention, and whether any amendments to the Code may be necessary.

## SCHEDULE A: INTERPRETATION AND CONSTRUCTION

The definitions in this section shall apply to this Code, unless inconsistent with the context. The meaning of any provision should be determined by its text and in the light of the purpose of the Code.

**Amenity Areas** means generally areas that are essentially of a decorative nature where streetscape and pavement are of high quality.

**Applicant** means the Utility Operator applying for access to the transport corridor.

**Asset Owner** means the owner of the utility or corridor assets.

**Berm** means the strip of land between the property boundary and the edge of the carriageway, whether that is defined by the edge of the seal or dish channel.

**Bulk Services** means services not permitting private connections or not servicing the adjacent properties.

**Business or Commercial Area** means any area of land where the dominant activity includes at least one of the following activities: retailing, offices, business and financial services, manufacturing, warehousing, factory shops and restaurants.

**CAR** means a Corridor Access Request.

**Carriageway** means that portion of the road devoted particularly to the use of travelling vehicles, including the sealed shoulders.

**Central Business District** or **CBD** means that central part of an urban area zoned as a business and commercial area in the appropriate District Plan.

**Commercial Area** – see Business Area.

**Congested Urban Areas** means areas where little or no space is available in the lay position.

**Contractor** means any authorised agent, appropriately qualified, that undertakes physical work in the corridor on behalf of the Utility Operator and/or Corridor Manager.

**Corridor** includes road, as defined in the Local Government Act and the Government Roadway Powers Act, the berm, the carriageway, and includes State Highways and motorways. In the case of rail, the track and all land on either side of the track which is owned or managed by ONTRACK.

**Corridor Access Request** or CAR means the application to undertake works in the road corridor.

**Corridor Manager** in relation to any road, means the authority in which is vested the control of the road; and may include a Minister of the Crown or NZTA, as the case may be, where the control of the road is vested in a Minister of the Crown or NZTA, and includes a person acting under and within the terms of any delegation or authorisation given by the controlling authority; and in relation to rail means ONTRACK.

**Developed Urban Areas** means areas of steady growth. Space is still available or the space available is not effectively used. This would mean for example that redundant services exist.

**Electricity Lines** means works that are used or intended to be used for the conveyance of electricity.

**Emergency Work** – see Works.

**Existing structures** means furniture and other structures in or adjacent to the work site that are required to be considered as part of the works.

**Footpath** means areas of road formed specifically for pedestrian use.

**Greenfields** means any newly constructed roads where there are no utilities present, any existing roads where there are no utilities present or any large stand alone structure to be built in an existing road.

**Greenfield Areas** means areas in which alignment of services is primarily based on NZ4404 Land Development & Subdivision or on Corridor Manager requirements.

**Lay Position of Services** means the position and alignment of existing services within the road or rail corridor.

**Lids** include infill lids for special paving areas and areas with high traffic volumes such as arterial routes. Normal design lids may be used outside of the special paving areas and/or arterial routes.

**Local Residential Road** means any road in a residential area that does not meet the definition of main road.

**Local Conditions** means local conditions as defined in Chapter 10.

**Local Road** means any road in a non-residential area that does not meet the definition of main road.

**Main Road** means all roads classified as motorways, State Highways, strategic, arterial, principal, collectors and/or roads with high traffic flows as defined by the relevant council.

**Major Work** – see Works.

**Minister** means the currently appointed Minister of Economic Development or his/her delegated deputy.

**Minor Work** – see Works.

**Motorway** means:

- Means a motorway declared as such by the Governor-General in Council under section 138 of the Public Works Act 1981 or under section 71 of the Government Roading Powers Act 1989; and
- Includes all bridges, drains, culverts, or other structures or works forming part of any motorway so declared; but
- Does not include any local road, access way, or service lane (or the supports of any such road, way, or lane) that crosses over or under a motorway on a different level.

**NZTA** means New Zealand Transport Agency.

**ONTRACK** means that part of the New Zealand Railways Corporation responsible for the provision of the rail corridor.

**Permit to Enter** means written authority from ONTRACK to a Utility Provider as defined in Clause 8.6.3(a).

**Project Work** means planned major works in, on, along, over, across or under the road that exceed 28 calendar days from establishment to final reinstatement.

**Public** means any person other than the parties bound by this Code.

**Quality plan** means the quality assurance document and process to be provided and implemented by a contractor or Utility Operator.

**Rail Infrastructure Owner** means the 'owner' of the rail track within a rail corridor or rail premises who has legal obligations associated with the rail corridors and access thereto. Rail infrastructure is not considered to be analogous to the road corridor.

**Road** has the same meaning as in Section 315 of the *Local Government Act 1974*; and includes a road under the jurisdiction of any local authority; also including a public footpath or service lane; and also includes a State Highway within the meaning of section 2(1) of the *Government Roding Powers Act 1989*; but does not include:

- A private road within the meaning of section 315 of the Local Government Act 1974; or
- A motorway within the meaning of the Government Roding Powers Act 1989; or
- Any roadway laid out by order of the Maori Land Court under Part 27 of the *Maori Affairs Act 1953* or under any former Act, except where that order has been cancelled, or where the roadway has been declared under section 421 of that Act to be a road; or
- Any level crossing.

“Roding” has a corresponding meaning.

Note: the *Telecommunications Act 2001* has its own definition of road.

**Road(ing) Structure** means any bridge, underpass, overpass, culvert, walls, or tunnel.

**Service Provider** means a provider of a utility service, whether electricity, gas, telecommunications, or water or wastewater services. See Utility Operator below.

**Shoulder** means the (sealed and unsealed) portion of the carriageway beyond the traffic lanes that is contiguous and flush with the surface of the pavement.

**Special Paving Areas** includes those areas that are essentially of a decorative nature and have been constructed and maintained to a higher standard. Such areas are to be identified by each Corridor Manager.

**Site Traffic Management Supervisor** or **STMS** means a person authorised by the contractor in accordance with the Traffic Management Plan to control activities at the work site and duly warranted by Transit New Zealand in accordance with the *Code of Practice for Temporary Traffic Management*.

**Special Conditions** means special conditions as defined in Chapter 10.

**Telecommunication** means the conveyance of voice or data.

**Territorial Authority** or **TA** means a city council or district council.

**Traffic** includes pedestrians, cyclists and vehicles.

**Traffic Management Plan** or **TMP** means an approved site-specific plan identifying location of works, which adequately addresses the management of vehicles and pedestrians through the Work Site and the safety needs of both the community and the Contractors in accordance with the Code of Practice for Temporary Traffic Management.

**Transport Corridors** means road and/or rail corridors.

**Trench** means any excavation within a road for the purpose of maintaining, locating, or installing services.

**Utility or Utilities** means water and wastewater, electricity, gas, communications, street furniture and any other utility equipment or structures above or below ground.

**Utility Operator** means the recognised owner of the utility network, also referred to as a Service Provider as defined in the *Telecommunications Act 2001*; a Line Owner as defined in the *Electricity Act 1992*; a Pipeline Owner as defined in the *Gas Act 1992*; an Infrastructure Owner as defined in the *Railways Act 2005*; a Network Utility Operator as defined in Section 166 of the *Resource Management Act 1991*, the *Local Government Act 1974*, and the *Metropolitan Drainage Act 1960*, a postal service as defined in Section 40 of the *Postal Services Act*, or any other legally constituted organisation that is responsible for the provision of services or utilities which are situated above or below the corridor, and, in relation to any Utility Structure, means the Crown, or any Minister of the Crown, local authority, company, or person lawfully authorised to construct, maintain, utilise, or use the structure.

**Utility Structure** means any tower, pole, pillar or post lawfully upon or in or over a corridor or any pipes, cables, chambers, cabinets, enclosures, drains, or other services lawfully in or under a corridor; and includes any equipment that must be removed with the structure if the structure is removed; but does not include:

- Any part of a bridge, culvert, tunnel or walls;
- Any fence, gate, or cattle stop;
- Anything provided for the assistance or control of traffic; and
- Any structure that was erected when the land was not a road.

**Works Approval Notice (WAN)** means a written approval from the Corridor Manager to enable works on a road corridor to proceed, as defined in Chapter 9.

**Works Completion Notice (WCN)** means a written acknowledgement from the Corridor Manager that the work has been satisfactorily completed, as defined in Chapter 9.

**Works** means work in, on, along, over, across or under the road. Works may be major, minor, or emergency as follows:

(a) **Major Work** means work in, on, along, over, across or under the road which is deemed 'major' by the Corridor Manager. Generally this will apply to works that fit any of the following situations:

- a trench extending more than 20m along the road;
- a traffic lane needing to be closed on a Main Road (Refer to list of Main Roads provided by the Corridor Manager);
- a road closed for more than 2 minutes;
- work proposed on a State Highway (Refer to list of State Highways provided by the Corridor Manager);
- metered parking or other restricted parking areas may be affected;
- work affecting a road structure such as a bridge, tunnel, or retaining wall;
- work needing to be done outside normal hours of work;

- property access is restricted for more than 10 minutes for business or 1 hour for residential;
  - a footpath diverted for more than 8 hours;
  - a variation sought from either the requirements of this Code of Practice or any other known requirements of the Corridor Manager;
  - a financial contribution sought such as towards the reinstatement of the road surface.
- (b) **Minor Work** means work in, on, along, over, across or under the road, that has lower impacts than that for major works.
- (c) **Emergency Work** means work that requires an immediate response to restore the integrity of the utility or secure the situation for the safety of the community and generally relates to:
- (a) restoration of supply following an unplanned outage, or interruption of supply, to a community;
  - (b) rectification of a dangerous situation including support requested by an emergency service; or
  - (c) unplanned events that have a significant impact on a road, a bridge, public health, public safety or the security of supply to a network.

**Work Site** means any one area of work being carried out above or below the road as approved by the Corridor Manager.

## **SCHEDULE B:      FORMS**

- Preliminary Notification of Work in the Road
- Corridor Access Request (CAR)
- Works Approval Notice (WAN)
- Works Completion Notice
- Maintenance Notice
- Stop Work Order
- Standard Letter Advising Utility Works

**Preliminary Notification of Work in the Road**

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|       |  |
|-------|--|
| To:   |  |
| From: |  |
| Date: |  |

(Corridor Manager)

(Utility Operator)

**Preliminary notification is provided for the following major work:**

|  |
|--|
|  |
| (The plans <span style="float: right;">are attached</span> ) |

**Major work situations that occur on this job are (tick all those that are applicable):**

|                          |   |
|--------------------------|---|
| <input type="checkbox"/> | A trench is to extend more than 20m along the road  |
| <input type="checkbox"/> | A traffic lane needs to be closed on a Main Road (Refer to list of Main Roads provided by the Corridor Manager)                     |
| <input type="checkbox"/> | A road needs to be closed for more than 2 minutes   |
| <input type="checkbox"/> | Work is proposed on a State Highway (Refer to list of State Highways provided by the Corridor Manager)                              |
| <input type="checkbox"/> | Metered parking or other restricted parking areas may be affected   |
| <input type="checkbox"/> | Work may affect a road structure such as a bridge, tunnel, or retaining wall  |
| <input type="checkbox"/> | Work needs to be done outside normal hours of work  |
| <input type="checkbox"/> | A variation from either the requirements of this Code of Practice or any other known requirements of the Corridor Manager is sought |
| <input type="checkbox"/> | A financial contribution is sought such as towards the reinstatement of the road surface  |

**Comments:**

|   |
|---|
| (e.g. about above situations/ when the work is scheduled to start and finish) |
|---|

|        |  |            |  |
|--------|--|------------|--|
| Signed |  | Print Name |  |
| Phone  |  | Email      |  |

**Corridor Access Request No .....**

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|              |  |                   |
|--------------|--|-------------------|
| I (name)     |  | (‘the Applicant’) |
| Address:     |  |                   |
| as agent for |  | (‘the Owner’)     |

hereby notify you

|                     |  |
|---------------------|--|
| Corridor Manager(s) |  |
| Address:            |  |

of our intention to undertake the following work:

**Type of work:**     Project     Major     Minor     Emergency

**Details of proposed work (indicate all aspects):**

|                          |                         |                          |  |
|--------------------------|-------------------------|--------------------------|--|
| <input type="checkbox"/> | Open trenching          | <input type="checkbox"/> | Installing cabinet/s                         |
| <input type="checkbox"/> | Trenchless construction | <input type="checkbox"/> | Installing pedestal/s                        |
| <input type="checkbox"/> | Installing chamber/s    | <input type="checkbox"/> | Installing other structure/s (Specify below) |
| <input type="checkbox"/> | Installing pole/s       | <input type="checkbox"/> | Removing/pole/cabinet/pedestal/structure/s   |

|                       |  |           |  |
|-----------------------|--|-----------|--|
| Description of work:  |  |           |  |
| Address:              |  |           |  |
| Location in road:     |  |           |  |
| Estimated start date: |  | Duration: |  |

**Contractor details**

Role in work to be undertaken:

|                          |                  |                          |            |                          |            |                          |       |
|--------------------------|------------------|--------------------------|------------|--------------------------|------------|--------------------------|-------|
| <input type="checkbox"/> | Utility Operator | <input type="checkbox"/> | Consultant | <input type="checkbox"/> | Contractor | <input type="checkbox"/> | Other |
| Company name             |                  |                          |            | Contact person           |            |                          |       |
| Postal address           |                  |                          |            |                          |            |                          |       |
| Phone (W)                |                  |                          |            | Phone (H)                |            |                          |       |
| Phone (Mob)              |                  |                          |            | Fax number               |            |                          |       |

**If the above information is not provided, the CAR will be deemed not to have been lodged. Lodgement will be deemed when the information required has been specified.**

We hereby agree for/or on behalf of the Utility Operator to comply in full with the requirements of the Code: *Utilities’ Access to the Transport Corridors*, and any other reasonable conditions required by the Corridor Manager and to keep this notice on site while work is in progress. This request is valid for 6 months from date of issue.

NOTE – All work must comply with Health and Safety Act 1991 or any amendments thereto.

|        |  |      |  |
|--------|--|------|--|
| Signed |  | Date |  |
|--------|--|------|--|

## Works Approval Notice

|                  |  |
|------------------|--|
| Registration No: |  |
|------------------|--|

|                     |
|---------------------|
| Space for logo here |
|---------------------|

### 1. The Parties

- (a) ..... being a body corporate in accordance with the Local Government Act 2002/Land Transport Management Act 2003\* (\* delete as appropriate) or a licensed access provider in accordance with the Railways Act 2005 ('the Corridor Manager');
- (b) ..... being an approved Utility Operator in accordance with the Telecommunications Act 2001/Electricity Act 1992/Gas Act 1992\* (\* delete as appropriate) submitting a request for access in accordance with that Act);
- (c) ..... being the agent of the Utility Operator submitting this request on behalf of the Utility Operator and in accordance with the Utility Operator's statutory rights ('the Applicant').

### 2. Attachments (delete as appropriate)

Attachment 1 being the Corridor Access Request.

Attachment 2 being the Schedule of Reasonable Conditions.

Attachment 3 being plan ..... showing the agreed service location.

### 3. Background

- (d) The Utility Operator wishes to carry out the works stated on CAR Number ..... and thereafter maintain the utility services established in the corridor;
- (e) The Corridor Manager is required to provide a written consent in accordance with its governing legislation and to provide a schedule of reasonable conditions, if required, by the utility legislation under which the request for access has been made; and
- (f) In accordance with the Code: *Utilities' Access to the Transport Corridors* and on behalf of the Corridor Manager, I give my written consent for access to the corridor at the agreed location and attach my schedule of reasonable conditions:

|        |  |      |  |
|--------|--|------|--|
| Signed |  | Date |  |
|--------|--|------|--|

Acting pursuant to delegated authority.

### FOR Corridor Manager APPROVAL USE ONLY

|                        |                      |               |                          |
|------------------------|----------------------|---------------|--------------------------|
| Time spent processing: |                      |               |                          |
| Approved Contractor    | Route Plan Submitted | TMP Submitted | Stockpiling arrangements |

## Works Completion Notice

|       |  |
|-------|--|
| To:   |  |
| From: |  |
| Date: |  |

(Corridor Manager)  
(Utility Operator  
or their agent)

This is to advise that work on CAR No.:

on:  (street name)

is now complete.

Please find attached:

|                          |   |
|--------------------------|---|
| <input type="checkbox"/> | <b>Amendments to information provided on the CAR as follows:</b>  |
| <b>Type of work:</b>     | <input type="checkbox"/> Project <input type="checkbox"/> Major <input type="checkbox"/> Minor <input type="checkbox"/> Emergency |

### Details of Proposed Work

|                       |  |           |  |
|-----------------------|--|-----------|--|
| Description of work:  |  |           |  |
| Address:              |  |           |  |
| Location in road:     |  |           |  |
| Estimated start date: |  | Duration: |  |

### Contractor Details

Role in work to be undertaken:

|                          |                  |                          |             |                          |            |                          |       |
|--------------------------|------------------|--------------------------|-------------|--------------------------|------------|--------------------------|-------|
| <input type="checkbox"/> | Utility Operator | <input type="checkbox"/> | Consultant  | <input type="checkbox"/> | Contractor | <input type="checkbox"/> | Other |
|                          | Company name:    |                          |             | Contact person:          |            |                          |       |
|                          | Postal address:  |                          |             |                          |            |                          |       |
|                          | Phone (W):       |                          | Phone (H):  |                          |            |                          |       |
|                          | Phone (Mob):     |                          | Fax number: |                          |            |                          |       |

|                          |  |
|--------------------------|--|
| <input type="checkbox"/> | <b>A copy of the compaction tests</b>  |
| <input type="checkbox"/> | <b>A written statement confirming that the completed works fully comply with the conditions of the CAR</b> |
| <input type="checkbox"/> | <b>A sketch or plan showing the extent and location of the work carried out</b>                            |
| <input type="checkbox"/> | <b>Details of any work for the Corridor Manager to complete as follows:</b>                                |

Works meet required standards. Signed by Utility Operator or their agent:

|       |  |            |  |             |  |
|-------|--|------------|--|-------------|--|
| Date: |  | Signature: |  | Print Name: |  |
|-------|--|------------|--|-------------|--|

Works comply and 2-year warranty commences. Accepted by Corridor Manager:

|       |  |            |  |             |  |
|-------|--|------------|--|-------------|--|
| Date: |  | Signature: |  | Print Name: |  |
|-------|--|------------|--|-------------|--|

**Maintenance Notice**

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|       |  |
|-------|--|
| To:   |  |
| From: |  |
| Date: |  |

(Corridor Manager)

(Utility Operator or their agent)

This is to advise that the 2-year warranty audit of CAR No. ....

on:  (street name)

Type of work:  Project  Major  Minor  Emergency

has been completed and complies with the conditions of the CAR.

This audit was accomplished by:

|                          |  |
|--------------------------|--|
| <input type="checkbox"/> | A site inspection  |
| <input type="checkbox"/> | Not inspected, but was one of a batch covered by random inspections in accordance with the Quality Plan agreed with the Corridor Manager |

Audited by:

|            |                      |             |                      |
|------------|----------------------|-------------|----------------------|
| Signature: | <input type="text"/> | Print Name: | <input type="text"/> |
| Company:   | <input type="text"/> | Date:       | <input type="text"/> |

Works meet required standards. Signed by Utility Operator or their agent:

|       |                      |            |                      |             |                      |
|-------|----------------------|------------|----------------------|-------------|----------------------|
| Date: | <input type="text"/> | Signature: | <input type="text"/> | Print Name: | <input type="text"/> |
|-------|----------------------|------------|----------------------|-------------|----------------------|

Date audit undertaken by the Corridor Manager:

Works comply and 2-year warranty concludes. Accepted by Corridor Manager:

|       |                      |            |                      |             |                      |
|-------|----------------------|------------|----------------------|-------------|----------------------|
| Date: | <input type="text"/> | Signature: | <input type="text"/> | Print Name: | <input type="text"/> |
|-------|----------------------|------------|----------------------|-------------|----------------------|

## Stop Work Order

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Pursuant to the authority and responsibilities of the ..... Corridor Manager (CM) as stated or assumed in either the Local Government Act, Health and Safety in Employment Act, and various Utility Acts, an order is hereby given to stop work on the following job/s:

|  |
|--|
|  |
|--|

The reason for this is that the work does not comply with the following requirements:

|  |
|--|
|  |
|--|

In the meantime the only work to be carried out is work that is necessary to remedy either the above aspects that do not comply, or work necessary to protect the safety of road users, and to remedy any inconvenience to pedestrian and vehicular traffic.

The stopped work is not to recommence until appropriate remedial work is carried out and an 'Approval to Recommence Work' authority is signed and issued by ..... (Corridor Manager).

|                   |  |
|-------------------|--|
| Signed by:        |  |
| Corridor Manager: |  |
| Time:             |  |
| Date:             |  |
| Received by:      |  |
| Time:             |  |
| Date:             |  |

(Utility Operator)

## Approval to Recommence Work

This is to confirm that following the 'Stop Work Order' issued for the following work:

|  |
|--|
|  |
|--|

on .....(date), the remedial work has been satisfactorily completed and the stopped work may now re-commence.

|                   |  |
|-------------------|--|
| Signed by:        |  |
| Corridor Manager: |  |
| Time:             |  |
| Date:             |  |

## Standard Letter Advising Utility Works

Space for logo here

To: The Property Owner / Resident / Business

### PROPOSED UTILITY WORKS

This is to let you know that utility work will soon be carried out in the road.

Location of work:

Description of the work:

This work is being done for:

Expected duration (dates):

Hours of work:

(Normally 7.00 a.m. to 6.00 p.m. Mon to Sat)

Any parking restrictions:

Problems you may experience:

We regret any inconvenience that may be caused by this work.

If you have a problem or any queries please contact us on the telephone number below.

Contractor:

Phone:

|     |  |                              |  |
|-----|--|------------------------------|--|
| Day |  | Night (24 hour availability) |  |
|-----|--|------------------------------|--|

## **SCHEDULE C:      TEMPLATE FOR REASONABLE CONDITIONS**

### **General**

- 1      A Corridor Access Request has been received from an approved Utility Operator and in accordance with the Code: *Utilities' Access to the Transport Corridors*. The Corridor Manager may request reasonable conditions to be placed on the works in accordance with the governing legislation (*Telecommunications Act 2002, Electricity Act 1992 or Gas Act 1992*). The schedule below constitutes in its entirety the reasonable conditions to be applied to the works.
- 2      All work shall be carried out in accordance with the Code.

### **General Conditions**

- 3      The installation shall be laid more or less in the location shown on the attached plans. The exact location and level of all installations are to be made known and agreed between the Utility Operator (or applicant) and the Corridor Manager before work commences.
- 4      It is deemed all work undertaken by the Utility Operator is subject to the Acts of Parliament and mandated codes of practice that relate to their industry and the type of work described within the plans and methodology submitted.
- 5      The works are to be available at all times for inspection by any person authorised by the Corridor Manager.
- 6      The Utility Operator shall pay, if requested, the reasonable costs of the Corridor Manager in connection with the processing of this notice and for the monitoring and auditing of the works.
- 7      A full copy of the Works Approval Notice including the Schedule of Reasonable Conditions shall be kept on site at all times during construction.
- 8      Where the Utility Operator is found not to be complying with the relevant conditions or specifications and / or does not have permission to work there, all personnel involved in the work can be instructed to leave the site by a duly authorised agent of the Corridor Manager or an officer of NZ Police, having made the site safe for the public.
- 9      The Utility Operator shall compensate the Corridor Manager for any damage or costs incurred to the corridor due to the work or for costs resulting from the removal of abandoned installations, structures, components and equipment that belong to the Utility Operator.
- 10     The Utility Operator shall repair all corridor assets that are damaged as a result of the works, should such repairs become necessary, in the opinion of the Corridor Manager, during the warranty period. Remedial work shall be undertaken within an appropriate reasonable timeframe, as set by the Corridor Manager or the Utility Operator, of receiving notification from the Corridor Manager that repairs are necessary. Should the Utility Operator fail to carry out the remedial work within the expected time, the Corridor Manager may arrange for the work to be done and recover the costs incurred from the Utility Operator.
- 11     The Utility Operator, at its own cost, is to gain all the necessary consents, approvals and permits from the relevant statutory and regulatory authorities.
- 12     On completion of the works, the Utility Operator is to keep plans of the installed work and make them available to the Corridor Manager on request.
- 13     Where maintenance work is being undertaken by the Utility Operator within the 2-year warranty period, then the Corridor Manager is to be notified and reserves the right to assess the suitability of the action proposed and impose conditions that will maintain the integrity of the road assets.
- 14     At the completion of the works, the Utility Operator shall complete a Works Completion Notice form. The 2-year warranty period shall commence from the date the Corridor Manager has given signed acceptance that the work is complete.
- 15     The agreement is valid for 6 months from the date of approval on the Works Approval Notice.

- 16 The applicant shall provide a full description of the construction methodology, reinstatement, resurfacing and compaction, and this shall be subject to agreement with the Corridor Manager prior to work commencing.
- 17 Traffic management is to comply with the Code. The Utility Operator shall have in place an approved traffic management plan (TMP) appropriate to the works prior to work commencing on the site.
- 18 The Utility Operator shall ensure that the work is carried out under the control of a warranted supervisor in accordance with the Code and ensure that there are sufficient people on site specifically to control the flow of traffic through the site in accordance with the TMP. Instructions concerning the use of additional traffic control measures from an officer of the NZ Police Traffic Safety Branch or a duly authorised agent of the Corridor Manager shall be complied with.
- 19 The Corridor Manager's Traffic Management Co-ordinator (TMC) shall be given two clear days notice before commencement of work on site. This notice, setting out the timeframes for the work to be undertaken, may be sent to the TMC by any expedited means, together with a copy of the approved TMP. Confirmation must be received that the programme does not conflict with any other prior approved work at the location and permission to proceed is granted, prior to commencement of any work on site.
- 20 The reinstatement of all trenches and surfaces must comply with the Code.
- 21 The Utility Operator shall restore to their original condition any surface or structure that was damaged or removed so the work could proceed.
- 22 The Utility Operator shall control the surface water channels so as to cause minimal interference to existing flows and shall fully restore the surface water channels at the completion of the works.
- 23 The minimum cover requirements and pipe location parameters shall be in accordance with the Code.
- 24 Any structures (manholes, chambers, cabinets, poles, etc.) shall be located in the agreed position shown on the drawings and are to be kept clear of the carriageway, corridor furniture and kerbs, drains, manholes, etc. Where structures are agreed to be installed within the trafficable part of the road, they are to be flush with the surface and designed to withstand full heavy traffic loading (HN-HO-72 Loading– see Schedule F).
- 25 Works are to be completed in one continuous operation. Works can be suspended for up to five days; longer periods will require the permission of the Corridor Manager.
- 26 During the progress of the work, the Utility Operator is responsible for protecting and maintaining all corridor signs, markers, signals, barriers and associated marking and replacing them to the appropriate industry standard where they have been damaged by the works.
- 27 Where otherwise required due to traffic volumes or specific residential or central business district requirements, the hours of work shall be as specified in the Local and Special Conditions.
- 28 No work shall take place on or near a State Highway during and one day either side of a public holiday or public holiday weekend.
- 29 In granting this consent, no vested right is created and this consent is not transferable.
- 30 After satisfactory completion of the works, the Utility Operator shall give the Corridor Manager prior notice on each separate occasion of any maintenance works that may be required. If the services are located under any road carriageway or road shoulder, the Corridor Manager reserves the right to re-assess the implications and either decline the application or impose new or amended conditions to protect the corridor assets.

### **Local Conditions**

These are attached to the Schedule of Reasonable Conditions as Attachment I

### **Special Conditions**

These are attached to the Schedule of Reasonable Conditions as Attachment II

## **SCHEDULE D: PROCESSES**

- Communication Checklist
- Information Sign
- Pollution Control
- Guidelines for Working Around Trees in the Road Reserve
- Risk Assessment for Depth of Underground Utilities

## Communication Checklist

A communications process is a means of ensuring all parties affected by works are informed of the project and its impact on them. When the works are deemed to be major, then a written communication is preferred. The checklist below identifies the key actions points for communicating with all parties.

### Description of Project:

1. The purpose and description of the project is: \_\_\_\_\_
2. Benefits of this project are: \_\_\_\_\_
3. Key parties include: \_\_\_\_\_
  - Customers who will benefit from the project;
  - Business associations and affected retailers or business in the area;
  - Pedestrian and vehicle or road users who travel the route;
  - Media;
  - Emergency services including Police, Ambulance and Fire;
  - Transport companies including passenger transport operations;
  - Schools, hospitals or other community facilities;
  - Community boards and Corridor Manager;
  - Local residents.

### Objectives

- To minimise disruption to residents, business and commuters along the route of the project by addressing matters of potential inconvenience;
- To ensure access for emergency services at all times;
- To reach agreement with passenger transport operators to ensure access is maintained or alternative arrangements are in place;
- To keep all affected parties informed and give them certainty about the scope and duration of works;
- To demonstrate high standards of professionalism and competence in consultation processes.

### Key Matters for Communication:

- Route – an evaluation of options;
- Timing and extent of disruption to residents and business and other parties;
- Process of notification;
- Method of installation and reinstatement;
- Process of complaint for customers (who they will call, how and when);

- Measures to be taken to minimise disruption to residents and/or business and other parties.

## **Parties**

It is important that the benefits associated with the project are clearly communicated to the affected parties. Key parties will be approached and provided with the appropriate level of information. Regular updates must be provided on the progress of the project.

*Key messages: (Examples)*

- The new service will provide you with more choice of suppliers;
- The route and methodology has been carefully designed and consultation has taken place with Corridor Manager;
- Disruption will be minimised and regular updates of the project will be made available;
- Reinstatement will take place in accordance with the Corridor Manager's Code of Practice;
- Acknowledgement of your patience and cooperation;
- You can call 0800 Example to address any concerns you may have.

## **Business Areas**

Undertaking work in business areas requires the following considerations:

- That all efforts are made to minimise disruption;
- That coordination of planned works between principal providers themselves and between Corridor Managers and principal providers takes place;
- Consultation with the business association concerned must take place at least three weeks prior to project works commencing;
- All utility connections and minor works undertaken in retail areas must be reinstated within 36 hours;
- Access must be maintained at all times.

## **Letter Drops**

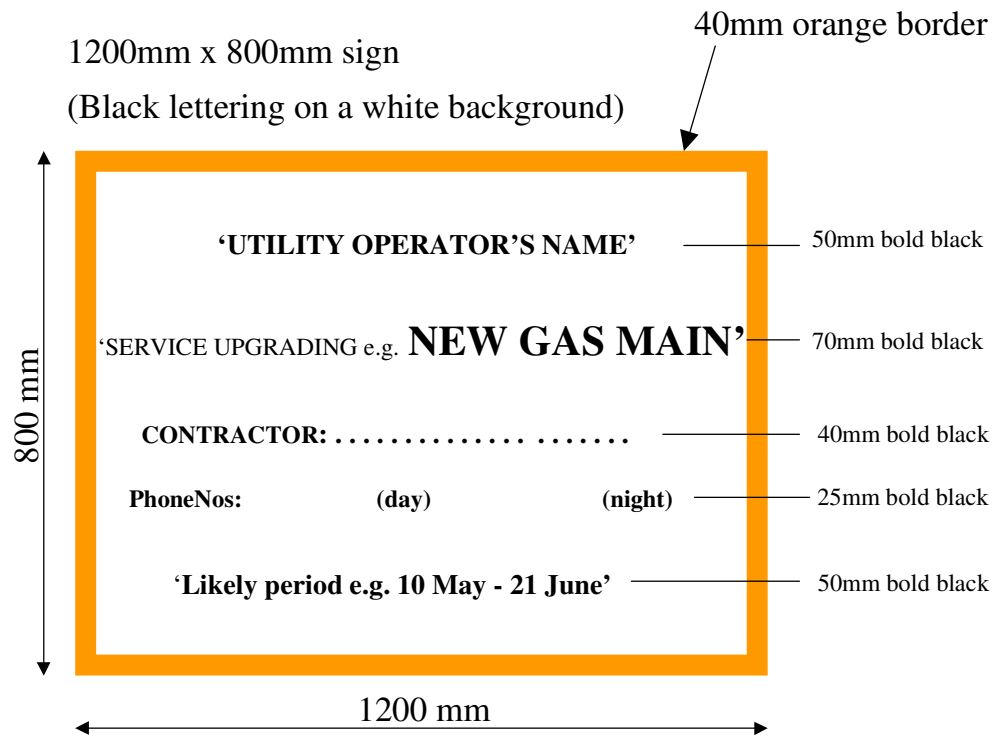
When undertaking any major work or project work, written notification shall be given to affected parties at least five days prior to the commencement of works (a suggested format is included in Appendix B).

Affected parties are public who are working or residing within 100 m of the worksite in any of the following situations:

- Work is to be performed outside normal hours of work (7am–6pm);
- Where parking or access from a street may be affected;
- Resurfacing or trench work within 50m of a shop during shopping hours;
- Resurfacing or excavation work within 50m of a school during week days;
- Where the use of breakers, road profiling, saw cutting, pile driving or other very loud equipment is likely to extend for more than an hour.

## Information Sign

The information displayed, lettering size, colour and size of sign, should match the example below:



## **Pollution Control**

The following is available to assist in controlling pollution. Contact should be made with the appropriate regional, district or city council's officers for further assistance.

### **Regional Council Role**

The regional council helps residents of the region prevent pollution and enforce the *Resource Management Act 1991* when necessary. Most operate a 24-hour water pollution hotline, conduct site visits and provide education on water pollution issues.

The main focus related to utility activities in the road is to:

- (a) Protect ground and surface water from point source pollution and minimise any impacts on waterways;
- (b) Advise and educate councils, Utility Operators and their contractors on the management of:
  - (i) Sites/products/chemicals
  - (ii) Emergencies/spills
  - (iii) Land contamination issues and
  - (iv) Wastes;
- (c) Consider legal liability and enforce where needed.

### **Regional Council Educational Material**

Most regional councils produce a series of information sheets that provide advice on how to recognise and prevent pollution from the activities outlined above. These are usually available on the regional council website.

### **Joint Responsibilities and Obligations**

Within this Code, both the Utility Operator and the contractor need to recognise their joint responsibilities.

Environmental risks should be identified and sufficient written instructions and supervision included in the Utility Operator's contracts to avoid discharges of contaminants to the environment from its own or contractor activities.

The contractor and his/her staff must be aware of the issues, prepare appropriate action plans and consider associated costs related to pollution prevention and control.

## Guidelines for Working Around Trees in the Road Reserve

### Restriction on excavations near trees

All tree roots encountered that need to be severed and are between 10mm and 75mm diameter are to be neatly cut with a saw or other suitable pruning equipment. **Under no circumstances may a digger be used to sever the roots.** If there is to be any delay in backfilling, roots are to be protected from drying out until they can be covered in new topsoil.

Prior approval must be sought from the Corridor Manager when excavation is within the canopy dimension – see Figure D1.

Further, the Corridor Manager may require the Contractor to be supervised by an arboriculturist or competent person with horticultural experience when working around trees.

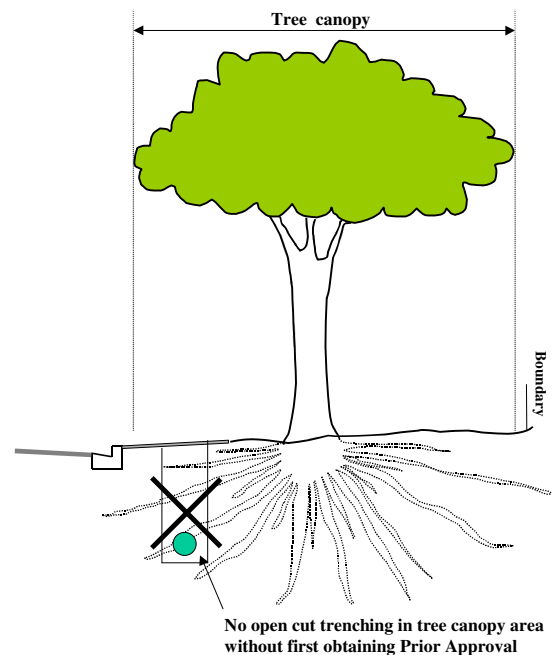


Figure D1: Excavating near trees

### Aboveground

When machinery is working in close proximity to established trees and shrubs, adequate protection measures should be used to avoid accidental contact that may adversely affect the health and value of the plants.

Where pruning is required to maintain clearance between a service and a tree trunk or branch, the pruning operation must be carried out by an experienced person with horticultural training. Pruning or removal of branches larger than 50mm in diameter should be carried out in consultation with the Corridor Manager.

The use of machinery close to overhead conductors must comply with the requirement of NZECP 34.

For more information, refer to Parts 1 and 2 of *Approved Code of Practice for Safety and Health in Tree Work*.

### Below Ground

Wherever practical, the trenchless method should be used for the installation of utilities near trees and shrubs. Roots larger than 25mm diameter should be retained in an undamaged state and protected. Exposed roots and cut root ends should be protected from drying and frost with damp sacking (scrim, polythene sheet or similar material) if not backfilled immediately.

Prior to working in the vicinity of protected trees, consent should be obtained from the Corridor Manager.

When undertaking open cut trenching near trees, hand excavation should be used when working within the distances specified in Table D1.

**Table D1: Distances within which hand excavation must be used**

| <b>Diameter of tree trunk</b> | <b>Distance from edge of trunk</b> |
|-------------------------------|------------------------------------|
| 100–300mm                     | 1.0m                               |
| 300–500mm                     | 2.0m                               |
| 500mm and above               | 5.0m                               |

**Near cables**

Trees in the vicinity of cables have the effect of removing moisture from the surrounding area and may create a thermal hot spot. Before working near trees, careful consideration and consultation will be necessary between the Corridor Manager and Utility Operator.

**Near services**

Trees in the vicinity of other services may also create problems such as physical damage to pipes, or root infiltration through joints. Before working with trees, the Corridor Manager and Utility Operators must be consulted and careful consideration given to avoid damage.

**Compliance with Electricity Regulations**

The *Electricity (Hazards from Trees) Regulations 2003* are applicable in any work around trees.

## **Risk Assessment for Depth of Underground Utilities**

The process as outlined below should be followed in developing an understanding of the risks to all parties when determining the optimal depth for the placement of underground utilities. Figure E1 may be a useful aid in understanding risks.

The Utility Operator should:

- Establish the minimum separation distances for safety of its own asset;
- Establish the minimum separation distances for safety from other utility or roading assets;
- Determine other minimum separation requirements such as for maintenance works for its own and others assets in the corridor;
- Consider utility, road and third party factors (see below) and known future requirements of all parties;
- Prepare their design proposal for discussion at liaison meetings; and
- Discuss risk issues with the Corridor Manager.

The Corridor Manger should:

- Provide traffic loading, future road construction, events and other information which may impact on utilities in the corridor,
- Consider utility road and third party factors (see below) and known future requirements of all parties,
- Where appropriate provide details of possible alternative corridors which could be used,
- Discuss risk issues with Utility Operator.

### **Utility Factors**

In general, costs, time and the level of disruption increase as depths increase. These include:

- The performance rating of electricity cables can be significantly reduced by the depth, at which they are laid;
- Additional hazards (e.g. water egress into gas pipes);
- Higher initial trenching costs (e.g. workplace safety requirements);
- Higher ongoing trenching costs for asset maintenance or emergency work; and
- Greater disruption to the public using the road.

The choice of method of installation may be influenced by relative construction costs (e.g. trenchless) or by the complexity of the underground location (presence of rock or other utilities).

When a utility is required to move or relocate its services there may be disruption to the services that the customer has contracted to receive and/or additional cost to provide temporary services during the relocation. These costs are highest when there are a high number of customers or the service is of a high rating (e.g. gas or water pressure). When there is damage there is the added cost of urgent repairs, loss of power gas or water and environmental damage from spillages.

Traffic management costs can be a significant factor, especially when utility equipment or vehicles occupy traffic lanes during works. There may be opportunity to negotiate alternatives, such as use of berms instead of the carriageway where reinstatement may be less costly than the traffic management. It may be simpler and less costly, for example, to occupy the footpath and then replace it, rather than protect it.

The relationship or proximity to other utility services may be a factor, along with any special protection requirements and effects of contamination should a breakage occur.

Some utilities are regulated and the associated economic framework may not recognise associated or increased road costs (i.e. all costs may not be recoverable through the regulatory process).

## **Road Factors**

Roads are in a dynamic state and by both the initial construction and ongoing environmental factors (climate, rainfall, pavement strength, traffic, age, surface condition, ground movement and intrusions into the road formation below the surface) influence their deterioration.

Traffic loadings form a significant element of road deterioration and this is a major consideration in the design of renewal and reconstruction of roads. The economic life of a road is traditionally 25 years and road asset owners aim to achieve this period between major construction events.

Roads in New Zealand have been built using thin flexible pavements that require a high level of maintenance. Combined with increasing traffic volumes and greater axle loads, road construction may occur with greater frequency and in some instances at short notice. Generally, reconstructed roads have a greater depth of pavement than the existing road.

In order to reconstruct pavements it may be necessary to excavate below the subgrade of the existing road to obtain the required road strength, particularly in locations where there are restrictions on raising the road surface level (e.g. to match the new surface to existing kerb, channel, footpath levels or for overland drainage flow control). In such situations it is important that utility services are not damaged by heavy construction equipment or compaction techniques, and a suitable separation or engineering solution may need to be considered in some localities to provide protection between the base of a road and top of a utility service.

Rural roads do not have fixed vertical edge constraints, which allows reconstruction to be above the existing level, so there are significantly different minimum cover requirements between urban and rural roads.

Other factors are the impacts of tree root zones, vibration due to vehicles, trench compaction and carriageway surfacing reinstatement costs.

## **Third Party Factors**

There can be a significant effect on third parties using the roads when disruptions occur to the mode of travel. These effects are highest on the more busy roads and include the following:

- Delay: this is greatest for business trips
- Vehicle operating costs: e.g. wear on tyres, suspension, damage to goods, due to rough or uneven surfaces
- Crash effects: cost of repairs to vehicles, medical and rehabilitation costs to those injured, trauma to families and loss of business productivity due to down time.

The selection of work methodology and timing of the work can have both positive and negative influences on third party effects by reducing the likely effects at any one time or increasing the duration of the work being undertaken.

There are also effects on the utility customers when a service is disrupted during works in the road. Apart from the nuisance and complaints there is an associated cost for the reduction in service to the customer.

## **SCHEDULE E: RISK MANAGEMENT PROCESS OF ABOVE-GROUND STRUCTURES**

### **Purpose**

The purpose of this schedule is to provide a framework to improve road safety outcomes in regard to aboveground structures, in a practicable way (i.e. in a way that is both pragmatic and efficient).

It sets out the preferred industry practice for the placement of new structures in the corridor, and for determining priorities in regard to existing structures where a Corridor Manager or Utility Operator has identified a safety issue, or is undertaking a safety initiative, in their area.

This preferred industry practice was developed in 2007 by a group that included Transit New Zealand, Land Transport New Zealand, Utility Operators and local government representatives.

Preferred industry practice is that, working together for community outcomes, risk and solutions are assessed in a holistic and collaborative way. The framework is not prescriptive, but sets out some principles, resources and processes to guide safety improvements.

The Corridor Manager or the Utility Operator can initiate the process and the process shall be undertaken collaboratively.

While it is acknowledged that there is only an implied duty on the parties to enter into the collaborative approach in this Code, it is also noted that all parties wish to contribute to the goals of the Road Safety 2010 (or subsequent) strategy to the most practicable extent. All the parties involved are agreed that the objective is to reduce the socio-economic costs of having structures where they pose a safety risk, provided that this can occur in a practicable manner and also that, in dealing with such structures, the risks and solutions are dealt with holistically, looking at all the risks and opportunities in the Corridor, rather than in isolation.

Aboveground structures represent only one type of roadside risk and not every structure represents the same level of risk. The level of risk can be identified from several sources including the available crash data and from the local knowledge of any of the parties as to repetitive occurrences of 'run-off-the-road' crashes in specific locations.

### **Context**

One of the key issues in looking at road safety with regard to above-ground structures in the road corridor is the sheer number of structures required for the provision of utility services. It is not intended that all existing above-ground structures should be assessed and evaluated, as the volume and actual risk profile of these assets as a whole dictates that this expectation is unrealistic.

A risk management process should be undertaken both when placing new structures in the corridor, and when determining priorities in regard to existing structures. This may be where a Corridor Manager, Utility Operator or third party has identified a safety concern, or is undertaking a safety initiative, in their area. Opportunities to efficiently assess and reduce risks should also be considered at sites where routine and planned works are to occur. When significant asset maintenance work or upgrades of existing assets are undertaken by either the Corridor Manager or the Utility Operator, opportunities may present to reduce hazards at little or no extra cost.

This guideline sets out processes and methods to address the various requirements that relate to the road corridor and the location of utility services, and will assist in prioritising safety responses to ensure funding is being spent where there is greatest need, taking into account opportunities that future planned work/budgets will allow.

In the case of existing structures, where an above-ground structure has been identified as a priority for treatment after a risk assessment, then a range of solutions is to be considered to determine the optimal risk reduction strategy. This will include considering ways to keep the vehicle from leaving the carriageway, and ways to minimise the likelihood and/or consequence of hitting an above-ground structure, should a vehicle travel off the carriageway.

In the case of new installations, the intent is to provide the maximum practicable separation from the road carriageway. In some circumstances, a combination of solutions may need to be agreed and employed if this distance is not considered to be wide enough, after a risk assessment of the particular site.

In addition to considering safety from the perspective of the travelling public, safety and practicalities for those working in the road need also to be taken into account (for example, utility workers assessing, maintaining or operating above-ground structures and those maintaining the road). Any decision on the location of new installations needs to consider access for installation and ongoing needs for access as well as future planned works. Impacts on other utilities and other property owners also need to be considered (for example, does the treatment create an aerial trespass?).

### **Catalogue of Existing Resources/Agencies**

Both Corridor Managers and Utility Operators have a number of data sources within their own organisations that identify risks from their own perspectives. Part of the issue when considering safety improvements is that the various agencies have not shared their data and considered their opportunities for joint initiatives. Utility Operators will have good records of where their structures are being damaged. Corridor Managers are required to have and use Safety Management Systems that are intended to identify hazards within their corridors. Sharing that data will provide a wider perception of where the priorities are to address safety issues.

In addition there are a number of other data sources that provide information on safety incidents in transport corridors. NZTA requires reporting on incidents in rail transport corridors. NZTA maintains a database of road crashes sourced from crash reports completed by the New Zealand Police.

This data can be sourced and combined to give priorities for action based on the highest likelihoods for 'lost control' incidents in transport corridors.

### **Risk Management Process**

The following stages have been developed so that Corridor Managers and Utility Operators can work together, following a logical sequence through a simple process to arrive at good outcomes. The following considerations are for guidance and can be used for major and minor work scenarios to establish consistency in application and decision-making.

#### *Process and Methods*

Figure E1 outlines the five stages of the risk management process:

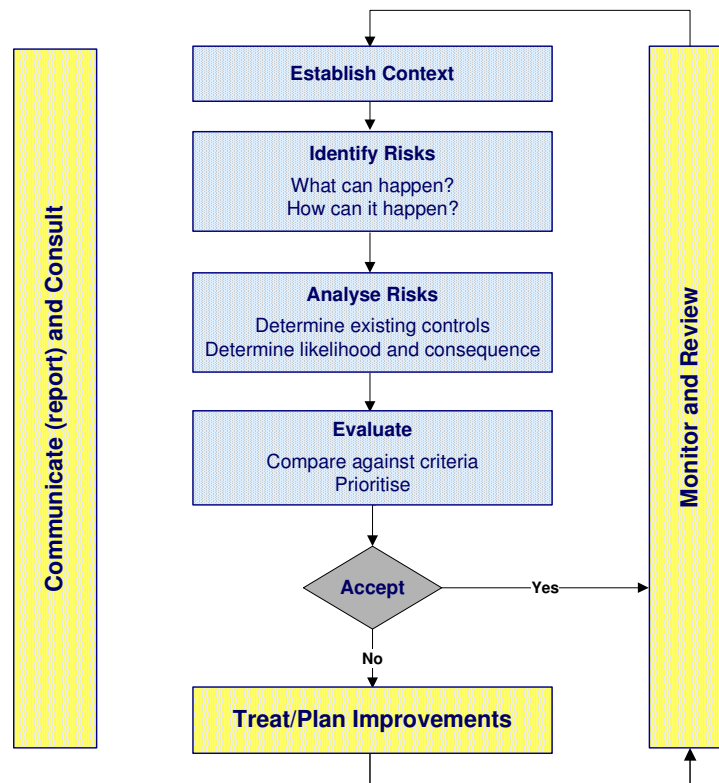
Stage 1: Establish context;

Stage 2: Identify risks;

Stage 3: Analyse and evaluate risks; and

Stages 4 & 5: Determine optimum treatment/s and implementation strategy

**Figure E1: The risk management process**



These processes can be used whether the above-ground structure is existing, or new. However, 'greenfields' situations are treated slightly differently. Higher levels of safety can often be achieved at little or no extra cost during the design and construction stages.

*Greenfields*

The design and construction phase of roading and utility projects provide the ideal opportunity to reduce the likelihood of vehicles leaving the roadway and to reduce the likelihood and/or consequence of an incident involving an above-ground structure, should a vehicle leave the carriageway.

Here, 'greenfields' means any newly constructed roads where there are no utilities present, any existing roads where there are no utilities present or any large standalone structure to be built in an existing road which currently does or doesn't have utilities present.

In the case of new above-ground structure installations, the intent is to provide the maximum practicable separation from the road carriageway. In some circumstances additional solutions may need to be agreed and employed if this distance is still not considered to be wide enough after a risk assessment of the particular site. Some of the possible treatments/solutions are listed below (see Stage 4).

The Corridor Manager may determine an ideal lateral requirement for the site, and the minimum vertical separation is specified in the appropriate utility legislation. Target separations should consider a number of factors, including the speed of the roadway section, topography, traffic conditions (AADT), alignment and the roadside slope, and the type of traffic using the road (for example over-dimension loads).

The importance of a route should also be considered when a route for a greenfields installation is being determined. For example, if a road has high speeds and/or traffic volumes, or if a network is particularly important to a Corridor Manager or Utility Operator for some reason, then the feasibility of the Utility Operator using another route should be considered. The Corridor Manager is encouraged to facilitate that where it can.

*Stage 1: Establish context*

The various parties are encouraged to assess the size and context of the problem, before automatically instigating the risk assessment/treatment process. Could a significant risk be easily mitigated, for example, as part of upcoming planned work, at minimal cost? Parties may quickly agree the appropriate course of action, or common sense may indicate that the issue is out of proportion to the time and resources required to undergo a more rigorous risk management process.

The importance of the route in relation to each party's infrastructure should be taken into account, and each party (the Corridor Manager and Utility Operator) will advise how important the route is to managing their network. It may be more critical for a Utility Operator to avoid service loss if, for example, it is a main line than if it is part of 20 interconnected supply routes. A Corridor Manager may wish to consider the road hierarchy and the importance of the route, for example, medical emergency response times or additional travel times by alternative routes.

The higher the route importance for both the Corridor Manager and the Utility Operator, the more critical is the need to minimise risks to road and utility network disruption. The disruption caused during any remedial Corridor Manager or Utility Operator work will also need to be taken into account.

Other contextual matters include the consideration of other parties who may be affected: the road does not exist in isolation from its wider environment. Private or other property owners and other utilities may be affected by the movement of an above-ground structure, for example. Others may have risk passed on to them by a solution that minimises road hazard, but increases a hazard in another area (Stage 4 discusses risk transfer in more detail). Conversely a Corridor Manager may have increased risk passed onto them as rural areas become more urbanised.

#### *Stage 2: Identifying risks*

This step asks parties to identify the range of risks by considering 'What can happen?' and 'How can it happen?' This step provides useful information when later determining which treatments, if any, are appropriate.

Risks relate not only to road safety, but also to loss of service and wider safety considerations. For example, a pole that is struck may fall down, causing loss of service and live wires may fall on the road and/or footpaths.

A possible risk may be raised by a variety of sources. For example:

- A third party may bring their concerns to a Corridor Manager or Utility Operator;
- A Corridor Manager or Utility Operator may identify a possible issue while undertaking routine work;
- A Corridor Manager may identify a potential area for concern during a safety initiative.
- As part of such an initiative, potential risk areas might be identified from several sources including:
  - Local crash data;
  - Knowledge of any of the parties as to repetitive occurrences of run-off-the-road crashes in specific areas;
  - Local risk factors; and
  - A site assessment of accident potential.

#### *Stage 3 – Analyse and evaluate risks*

This step asks the parties to determine the likelihood and consequence of the risks identified in Stage 2. This may result in agreement (possibly with some conditions) on a party's proposal or it may lead to a site inspection to assess the need for, and type of, possible solutions.

Risk is a measure of the exposure to the consequences of an event. It has two components:

- (a) Likelihood of the event occurring; and
- (b) The consequences of the event.

Traditionally, risk management is undertaken either quantitatively or qualitatively, but it is accepted industry practice to undertake qualitative risk management because it is very difficult to calculate a monetary benefit and the effects of, say, adverse publicity cannot be taken into account.

Likelihood and consequence can be identified by considering (but is not limited to) the following:

- Contextual considerations identified in Stage 1 above;
- Local crash and 'run-off-the-road' history;
- The volume of traffic (AADT);
- The number of above-ground structures within the affected length of road (includes both sides);
- The separation between the carriageway and the above-ground structure;
- The location of the above-ground structures – there may be local variations as to which types of locations are more likely to be hit, but typically structures located on the outsides of corners and those near intersections are more likely to require a risk assessment/site inspection;
- Speeds – speed is a determinant of both the likelihood and severity (consequence) of an impact with an above-ground structures; and
- Type of above-ground structures – the type and nature of the above-ground structures will also impact on severity (consequence).

A standard risk assessment matrix is given as a guide in the example later in this Schedule.

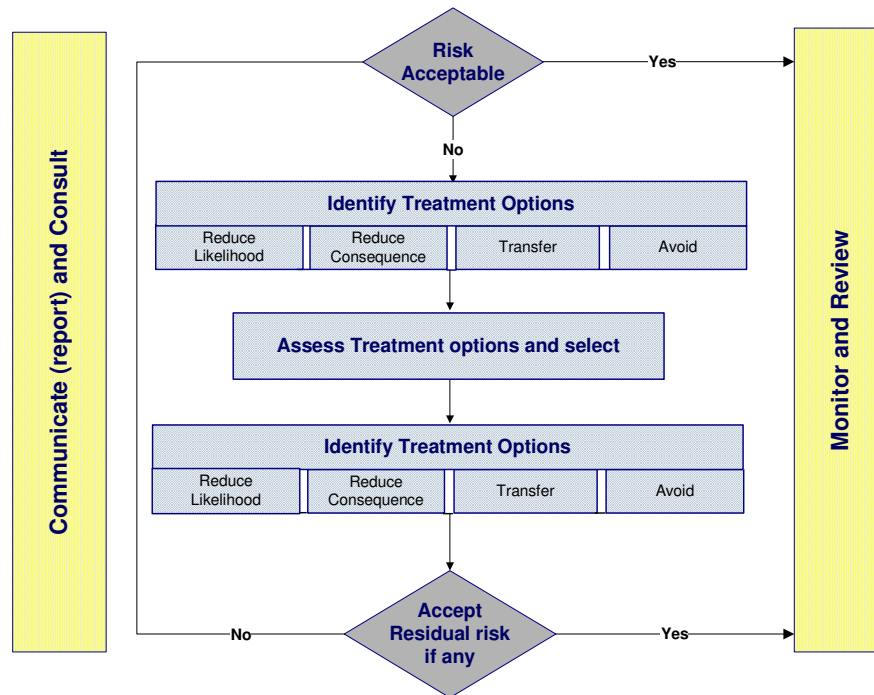
#### *Stages 4 & 5: Determine optimum treatment/s and implementation strategy*

If action is required based on the assessment at Stage 3, then Stage 4 establishes what the optimal solution/s are to reduce risk and improve safety at reasonable cost, based on site observations and consideration of a range of possible treatments. The acceptability of residual risks should be considered, along with the effects of any risk transfer.

If more than one site is being considered, work may need to be prioritised, considering budgets and future work programmes to arrive at the optimal risk reduction strategy (Stage 5). If at the end of this stage, agreement cannot be reached, the parties can agree to initiate a disputes process.

Given the variable nature of each corridor environment, the associated safety risks, and the practicalities involved, site specific judgement will most often be needed to determine the most appropriate solution. Therefore, visits or meetings at the site will be very useful.

**Figure E2: Risk acceptance treatment process**



Consideration needs to include, but is not limited to:

- The deficiency;
- The range of available solutions (see 'Possible Treatments' below);
- The practicalities and costs of those solutions;
- The relative costs/benefits of different risk reduction strategies (i.e. treatments);
- Relative priorities and budgets; and the
- Opportunities presented in future planned works (e.g. an area identified as a risk may already be scheduled for work through which risk can be reduced).

Risk transfer occurs when risk is moved to another party. Sometimes a road safety risk may be reduced by a treatment that effectively shifts that risk elsewhere. If an above-ground structure is moved from a roadside to a park, for example, there may be increased risks and costs for other parties in managing the risks in the new location. These impacts must be considered and, if still the preferred option, then discussed with affected parties.

*Possible Treatments*

Possible treatments fall into three broad categories. To reduce the number and consequences of loss of control crashes consideration should be given to:

- Keeping the vehicle from leaving the carriageway;
- Minimising the likelihood of crashing if the vehicle travels off the carriageway; and
- Reducing the severity of a crash.

Reducing the consequences and/or likelihood of driver error may require a number of treatments at any particular site.

Possible treatments for achieving the above three outcomes are suggested below (They are not an exhaustive list.)

Keeping the vehicle from leaving the carriageway:

- Install shoulder rumble strips;
- Provide delineation e.g. line markings or profile markings to show where the road is going;
- Install centre line rumble strips;
- Provide an enhanced shoulder;
- Provide improved highway geometry;
- Provide improved skid resistance surfaces;
- Apply shoulder treatments;
- Improve signage;
- Improve lighting;
- Improve texture;
- Improve safety barriers;
- Education;
- Enforcement; and/or
- Improve camber.

Minimise the likelihood of crashing if the vehicle travels off the carriageway:

- Design safer slopes and ditches;
- Relocate hazards;
- Redirect vehicles away from the hazard using, for example, soft earth mounds and barriers;
- Underground or otherwise remove structures;
- Select an alternative route with lower risk exposure;
- Co-locate above-ground services to minimise the number of above-ground structures; and/or
- Reduce the frequency of structures (note that there is often a trade off with bigger structures).



Using the standard risk assessment matrix, above, the two parties agreed the probability of an event is 'Likely' given the history of crashes and traffic volumes. The consequences of a crash with a sewer valve would be 'Major' for both the utility and road user. The initial risk assessment was therefore rated 'Very High'.

The local Corridor Manager and the sewerage infrastructure provider agreed then to proceed to Stage 2, to look further into the risk the valve would present, determine if treatments would be required at the site and, if so, what the optimal solution would be.

*Stage 2: Identify risk*

The two parties agreed to meet at the site to see what could happen and how. The site is on a straight, near an intersection and it was thought most likely that an inattentive or fatigued driver would be at risk of hitting the structure if they left the carriageway. Another risk was someone losing control after an incident at the intersection.

The two parties noted that this was an area where the speed limit was often exceeded.

*Stage 3: Analyse and evaluate risks*

Using a table based on local risk factors, the two parties discussed further what the risk factor would be of a driver leaving the road and impacting with the proposed valve.

**Table E2: Risk assessment factors** (Note: this is an example only.)

|                              | <b>Risk factors in local area (based on local crash history data in 100km/h area)</b> |  |   |   |                             |
|------------------------------|---|--|---|---|-----------------------------|
| <b>Traffic Volume (AADT)</b> | Is the above-ground structure on outside of a corner?                                 | Is the above-ground structure located at an intersection ? | Is there very limited separation between roadway and above-ground structures? | Is there another risk factor for example based on local data? | None of these factors apply |
| Rural                        |   |  |   |   |                             |
| > 10,000                     | Extreme   | Extreme  | Very High   | Very High   | Medium                      |
| 4000–10,000                  | Very High   | Very High  | High  | High  | Medium                      |
| 1000–4000                    | High  | High   | Medium  | Medium  | Low                         |
| < 1000                       | Medium  | Medium   | Low   | Low   | Low                         |

Being near an intersection, with 7,000 AADT, the risk based on risks in a 100 km/h area was 'Very High'. In this case the speed limit is 80 km/h, and as consequences and likelihood are therefore likely to be lower, the two discussed whether the risk indicator of 'Very High' might be downgraded to 'Medium'.

The parties then applied their site knowledge to see if a greater or lesser priority was appropriate. Given the proposed aboveground structure was located in a road noted for its speed limits being regularly exceeded, and their overall assessment at the site, they felt that risk assessment remained 'Very High', and that some form of treatment would be advisable.

It was agreed to proceed to Stage 4.

*Stage 4: Determine optimum treatment for the site*

The risk has been identified as 'Very High'. Options considered to mitigate the risk included:

- Speed Reduction: as the speed limit was regularly being exceeded in the area, increasing the likelihood and consequence of an accident, ways to ensure motorists travel at the recommended speed would reduce risk. These could include improved signage and enforcement.
- Provide an earth-mound: an earth-mound would protect the valve but the slope of the mound and closeness to the edgeline could be a potential roll over hazard.
- Provide a rumble strip: this would reduce the risks from driver inattention and fatigue, but would not mitigate the risk for drivers taking evasive action to avoid a crash at the intersection.
- Barrier protection: a barrier would protect the air valve, although it would also reduce the sealed shoulder.
- Moving the proposed location of the above-ground structures: Not practical in this case as this would require moving the whole sewerage line.
- Is there an alternative valve type? An automated valve had been proposed for the site, which was much larger in height than a manual valve. If a manual valve were installed this would protrude less than 100mm above-ground. The negative aspect is the valve would require manual operation and monitoring.

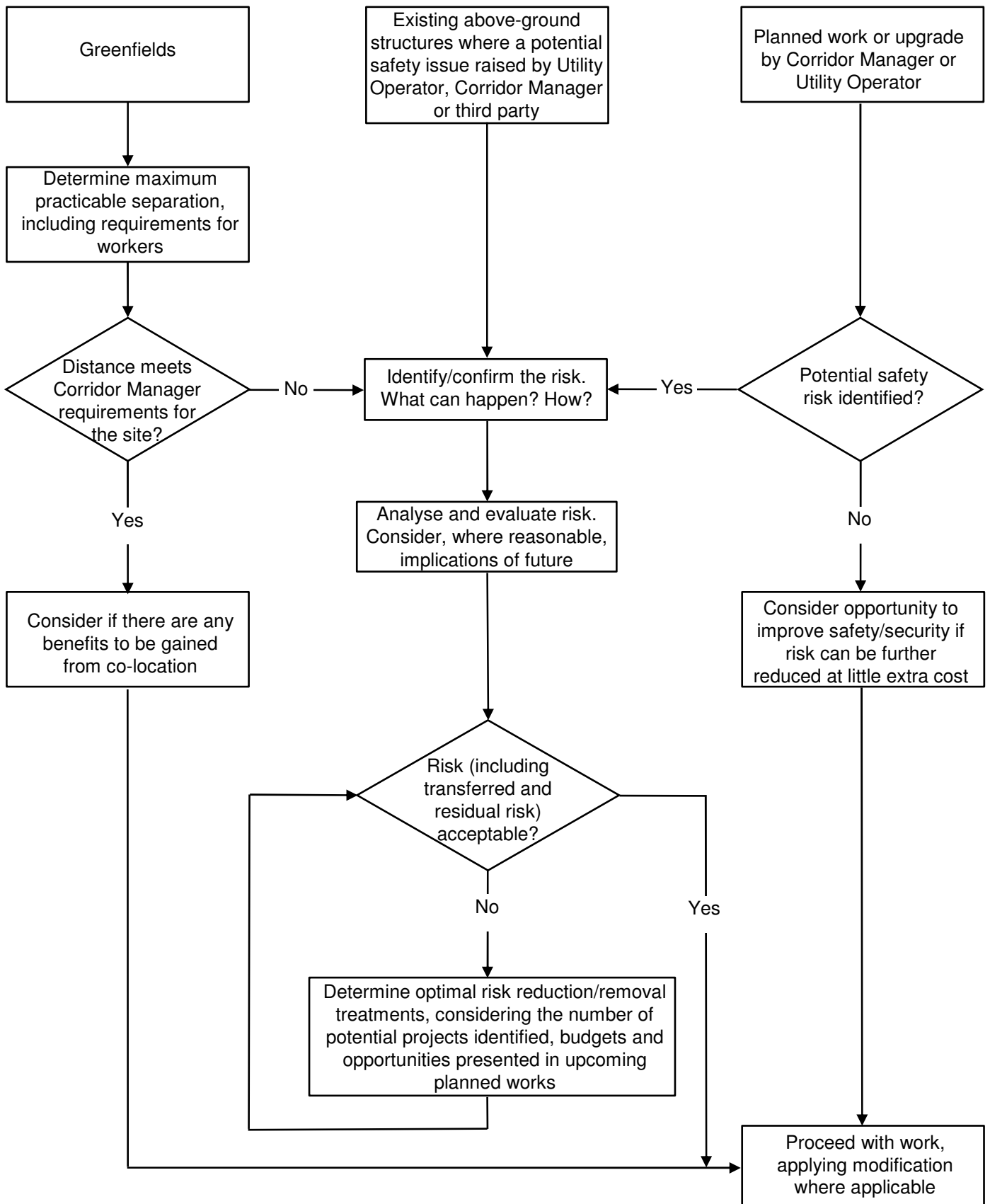
Optimal solution

It was agreed that it was appropriate to ensure drivers adhered to the posted speed limit (using improved signage and traffic enforcement), as this would reduce risk significantly. It was also decided after consideration of all the various factors at the site, including the importance of there being no interruption to the sewerage infrastructure, that it was also advisable to install a barrier.

*Stage 5: Determine implementation strategy*

The two parties set out the project timeline and each party's actions. Costs were apportioned using the cost sharing methodology outlined in Chapter 12.

**Figure E4: Risk Assessment Flowchart**



If an outcome cannot be agreed then the disputes resolution process may need to be instigated

## **SCHEDULE F: REFERENCED DOCUMENTS**

### **New Zealand Standards**

|               |  |
|---------------|--|
| NZS 3104:1991 | Specification for concrete production – High grade and special grade |
| NZS 3108:1983 | Specification for concrete production – Ordinary grade               |
| NZS 4404      | Land Development and Subdivisions                                    |
| NZS 5258:2003 | Gas distribution networks  |
| NZS 6803:1999 | Acoustics – Construction Noise                                       |

### **Joint Australian/New Zealand Standard**

|                  |   |
|------------------|---|
| AS/NZS 4586:1999 | Slip resistance of new pedestrian surface materials |
|------------------|---|

### **Australian Standard**

|              |   |
|--------------|---|
| AS 3996-1992 | Metal access covers, road grates and frames |
|--------------|---|

### **Transit New Zealand**

These documents are downloadable from [www.transit.govt.nz](http://www.transit.govt.nz)

#### *Specifications*

|          |  |
|----------|--|
| TNZ B/2  | Construction of unbound granular pavement layers       |
| TNZ C/6  | Repair of surface defects                              |
| TNZ F/1  | Earthworks construction                                |
| TNZ M/1  | Roading bitumens                                       |
| TNZ M/4  | Basecourse aggregate                                   |
| TNZ M/6  | Sealing chip   |
| TNZ M/7  | Roadmarking paints                                     |
| TNZ M/10 | Asphaltic concrete                                     |
| TNZ M/12 | Raised pavement markers                                |
| TNZ M/13 | Adhesion agents  |
| TNZ M/20 | Thermoplastic roadmarking materials                    |
| TNZ P/3  | First coat sealing                                     |
| TNZ P/4  | Resealing  |
| TNZ P/9  | Construction of asphaltic concrete paving              |
| TNZ P/11 | Open graded porous asphalt                             |
| TNZ P/17 | Performance based specification for bituminous reseals |

#### *Manuals*

|                |  |
|----------------|--|
| SP/M/010       | Code of practice for temporary traffic management (CoPTTM) |
| SP/M/033       | Transit Quality Standard (TQS1)                            |
| SP/M/034       | Transit Quality Standard (TQS2)                            |
| MOTSAM: Part 1 | Manual of Traffic Signs and Markings Part 1: Traffic Signs |
| SHGDM          | State Highway Geometric Design Manual (draft)              |
| HN - HO 72     | Traffic loading  |
| SP/M/022       | Bridge Manual  |

## **OTHER PUBLICATIONS**

### **Building Industry Authority**

The New Zealand Building Code (NZBC)

### **Department of Labour (OSH)**

Approved Code of Practice for Safety in Excavations and Shafts for Foundations, 1995

Approved Code of Practice for Safety and Health in Tree Work

Part 1 Arboriculture, 1994

Part 2 Maintenance of Trees Around Power Lines, 1996

Approved Code of Practice for Safety and Health in Forest Operations, 1999

Guide for Safety with Underground Services, 2002

Safe Working in a Confined Space, 1997

### **Ministry of Consumer Affairs**

NZEC 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances

### **New Zealand Utilities Advisory Group**

These documents are downloadable from [www.nzuag.org.nz](http://www.nzuag.org.nz)

Network Utilities Within the Road Corridor: The Role of the Resource Management Act: A Guide to Best Practice

Valuing Utility Networks for District Valuation Rolls National Guidelines

### **Transit New Zealand, Road Controlling Authorities' Forum and Roothing New Zealand**

Chipsealing in New Zealand Handbook

## SCHEDULE G: INDEX

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