

**CODE OF PRACTICE FOR CITY SERVICES
& LAND DEVELOPMENT**

ENGINEERING STANDARDS MANUAL

SECTION 3 – Appendix A

**SPECIFICATION FOR THE EXCAVATION AND
REINSTATEMENT OF TRENCHES**

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EXCAVATION AND REINSTATEMENT OF TRENCHES

AIMS

- 1) To secure the co-operation of all authorities concerned in co-ordinating the use of space on and under roads, footpaths and Council reserves.
- 2) To achieve maximum safety and minimum inconvenience to the public.
- 3) To reduce the frequency and cost of opening and reinstating roads and footpaths by future-proofing new infrastructure and by a co-ordinated effort in the field.

The best results in any job are obtained when the parties involved work in a spirit of co-operation. While Operators aim to install or repair an underground utility at reasonable cost, it must be recognised that Contract Supervisors are instructed to enforce the standards of safety and quality of workmanship, as outlined in this specification.

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SPECIFICATION FOR THE EXCAVATION AND REINSTATEMENT OF TRENCHES

1.0

Introduction

Waitakere City Council has a number of strategies and policies in place in relation to the infrastructure assets of network utility operators ("Operators") which are intended to provide guidance to Operators wishing to install infrastructure in roads, reserves and other public open spaces owned by Waitakere City. In relation to roads the particular concern is to ensure not only that disruption to road traffic is minimised as far as possible by the co-ordination of activities of Operators but also that the increased competition for space for utilities within the road reserve is managed to the best advantage of the Council, Operators and the general public.

This specification stipulates Council's requirements for the opening, backfilling and reinstatement of roads and reserves, and the maintenance of surfaces that will be affected by the installation or repair to underground services.

When planning to undertake works an *Operator*, Government Department, ad hoc utility corporation, statutory corporation, Council department, or other organization with or without the statutory authority to install infrastructure in a road, reserve or other public open space owned by the Council, must give Council a Road Opening Notice ("RON") specifying the nature of the work proposed. This notice shall be submitted to Council before any trench is opened and may either apply to a job or a section of a continuing job. It shall provide advice to Council as to the arrangements which have been made to maintain the trench or excavation in a safe condition, to backfill the trench or excavation and to reinstate and maintain the surface. This notice shall be submitted to the Manager: Field Services, a minimum of 20 working days before excavation is commenced, during which time Council will respond in the case of any attached conditions.

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2.0

Definitions

"Council"	means the Waitakere City Council
"Carriageway"	means any portion of a road used by motor vehicles
"Engineer"	means the Service Manager: Traffic Assets or his representative
"Road" or "Street"	shall have the same meaning as in Section 315 of the Local Government Act 1974 in any area under the control of the City Council, whether used by motor vehicles or not. It includes the area from boundary to boundary, customarily referred to as " <i>Road Reserve</i> ".
"Main Road or Arterial Roads"	means those roads defined in the Waitakere District Plan as Major Roads, Strategic Arterial Roads, Regional Arterial Roads, and District Arterial Roads.
"Network Utility Operator", "Service Authority", or "Trenching Authority".	Means definition for Network Utility Operator set out in s166 of the Resource Management Act. This shall include any Board, Corporation, Government Department, Network Operator or any other legally constituted person or group of persons responsible for providing underground services.
"Operator"	means any person, or group of persons, responsible for carrying out the actual trenching work for or on behalf of any <i>Network Utility Operator</i> , <i>Trenching Authority</i> or other organization.
"Road Opening Notice"	means a notice in the form of Appendix 1 of this specification.
"Contract Supervisors"	means any person detailed by the Engineer to carry out the administration of the duties detailed in this document
"Trench"	means any excavation within a road or Council owned land for the purpose of maintaining, locating or installing services. Excludes shallow excavations for the purpose of constructing vehicle crossings.
"Urban Shopping"	means a group of two or more shops within Waitakere City.

NB: Roads and streets (with the exception of state highways) within the City boundaries are vested in the Waitakere City Council.

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3.0

General Road Opening Notice Requirements

Under the Telecommunications Act 2001, Council may impose any reasonable condition on an operator intending to undertake works on Council land. The Council reserves the right, when giving an approval, to impose any number of these standard conditions, depending on the location, scale and nature of the works, and may also impose additional conditions if reasonable and appropriate, having regard to the nature of the proposed works. The specifications below shall serve as standard conditions that may be imposed on the operator when notifying Council of their intent to open a trench or undertake excavation. Further conditions may be imposed where relevant to the nature of the proposed works.

1. The Operator must at all times comply with:
 - (a) These conditions;
 - (b) Any special condition;
 - (c) The requirements with all statutes and regulations relevant to the proposed work including, without limitation, the Health & Safety in Employment Act 1992, the Resource Management Act 1991 and the Council's District Plan made under that Act.
2. The following requirements shall be fulfilled before or at the time of lodging a RON:
Operators working in Waitakere City must attend Council co-ordinated meetings at 6 monthly intervals, whereby utility operators are required to submit a programme of works proposed in relation to the Operator's network over the next 6 month period. These forums shall be in accordance the NZUAG partnering approach and their purpose shall be to assist the co-ordination of the Operator's requirements with the Council's own capital works programme, and the programme of other Operators. In addition each Operator must consult with the Council and other Operators in respect of specific projects not less than 20 working days prior to lodging a RON application and commencing work. The Council may require the deferment of work to enable the alignment of work programmes.
3. In any case where emergency repair work is necessary, and lodging of a RON application for the commencement of work is impracticable before the commencement of work, the Operator shall notify Council's 24hour call centre of the intent to undertake works. The application is to be lodged, together with such supporting information as is reasonable practicable in the circumstances, within 5 working days of the commencement of that work.
4. Road Opening Notices shall be submitted to Council after the proposal has been deemed practical by other Service Authorities.
5. A copy of the Road Opening Notice issued by Council, all accompanying documentation and Council's approval, must be held on site and available for inspection at all times during the undertaking of the works. If the Operator is unable to produce this at the request of the Engineer, a stop work order will be issued on that site.
6. The Operator will afford all assistance to the Council to permit inspection at any time and from time to time during the conduct of the works.
7. Every application must be signed by an officer of the Operator or its duly authorised agent. Where an application is lodged by a contractor or on behalf of the Operator, the contractor will be deemed to be the duly authorised agent of the Operator.
8. All backfill and reinstatement works involving open trenching must comply with the standards set out in this specification.
9. These conditions of approval bind the Operator and any contractor employed by the Operator. Where the RON application is made by the Operator, the Operator will ensure that the contractor is fully informed of the condition of Council's approval to the RON. Compliance with the conditions of approval are joint and several liabilities of both the Operator and the contractor.

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10. The Operator acknowledges that records of underground infrastructure held by the Council, including information held by the Council in relation to its own infrastructure assets, may be unreliable and inaccurate. Information supplied by the Council to the Operator in relation to existing infrastructure, whether prior to an application for a RON or during the carrying out of proposed works, is supplied on the basis that no liability will attach to the Council if that information proves to be incorrect. The Operator agrees:

- (a) To take the road public open space or reserve in the condition in which it is found,
- (b) To undertake all investigations prior to the commencement of work at its own risk in all respects and
- (c) To carry out the works solely in reliance upon its own judgment.

The Council accepts no responsibility for damage to the works or to equipment caused by road users or other members of the public.

4.0

Plans

11. Plans of the proposed work and associated communications shall be submitted to Council with the Road Opening Notice. The Operator shall provide the following:
- (a) Details of consultation undertaken with other Operators in accordance with the general requirements.
 - (b) Plans and specifications of the proposed work. Plans are to be prepared to a scale of 1:500, or 1:200 where needed for clarity. The location and size of all existing and proposed cables, conduits, underground structures, proposed chambers or above ground structures, property boundary and kerb lines are to be shown together with dimensions to boundaries and kerbs, and the proposed depth below existing surface levels at regular intervals. Further confirmation may be required to demonstrate the ability to maintain a minimum separation distance of 250mm clearance in any direction from any water supply, wastewater and stormwater services;
 - (c) A timetable for commencement, undertaking and completion of the work;
 - (d) Evidence of the Operator's investigation of the location of existing underground services in the area of the proposed work. (Contact details for the organisations with underground services can be obtained from www.auog.org.nz);
 - (e) Where an opening is proposed within 10m of a WaterCare Services Ltd sewer or watermain, details of the consultation undertaken, or proposed with WaterCare Services Ltd;
 - (f) A traffic management plan, which must include details of hazards and warning lights to be use in circumstances of night work operations and/or the delineation of lanes left in place overnight;
 - (g) Details of any proposal for container, materials or equipment storage on site outside working hours;
12. As built plans are to be provided to Council within two weeks of the completion of the installation of the ICT Infrastructure. As built data shall be provided in accordance with the standards specified in the Quality & Release Chapter of this code.

5.0

Public Liability Insurance

13. Evidence of Public Liability insurance held by both the *Operator* and its contractor for a sum not less than \$2,000,000, shall be provided to Council on an annual basis. This cover shall be in a form acceptable to Wairakere City Council, indemnifying Council against liability for any damage, loss or injury for any claim, or series of claims, arising out of the existence of a trench or excavation or other obstacle associated with the work. This evidence is to be provided as a written certificate given by the insurance company (not the insurance broker). The cover must be for the work programme over the 12 month period following the receipt of this information.

14. The Council accepts no responsibility for damage to the works or to equipment caused by road users or other members of the public.
15. The Operator agrees to indemnify the Council from or against all proceedings and costs (including legal costs on a solicitor/client basis), claims, damages arising out of injury to persons or damage to property occasioned by, directly or indirectly, the carrying out of the works authorised by the RON.

6.0

Legal Requirements

16. Waitakere City's powers to control work on roads is under Part XXI of the Local Government Act 1974 but also in the Gas Act 1982, the Telecommunications Act 2001, s.24 of the Electricity Act 1968, s.25 of the Gas Act 1992, the Resource Management Act 1991, ss.48 and 48A of the Reserves Act 1977, the Local Government Act 1974, the Local Government Act 2002, and Waitakere City Council Bylaw Chapter 2, Section 208.1 and 209.1. Other Acts deal with less common utility situations. The Council will consider the application and will either approve the application, or decline it, having regard to the nature of the works proposed in the RON and any statutory provisions that may be relevant to the proposed work.
17. In carrying out all works, the Operator shall comply with the provisions of all statutes, regulations and bylaws of central and local government and other authorities that may be applicable to the works. Particular attention is drawn to the Noise Control Act 1982, the Construction Act 1959 and the Construction Regulations 1961 and any amendments. The Contractor shall meet all their obligations under the Health and Safety in Employment Act 1992 and subsequent amendments and The Health and Safety in Employment Regulations 1995.
18. In any case where the Operator, or its contractor, is in breach of any of the conditions of this approval or in the Council's opinion the works are being carried on in such a manner that the site is not safe either for workman and/or members of the public then the Council may serve a notice in writing upon the Operator and/or the contractor directing that work cease until the breach has been remedied or the safety concerns have been adequately addressed.
19. The Operator will pay the Council's reasonable costs of and incidental to:
 - (a) Approval of the RON;
 - (b) Any inspections related to the works;
 - (c) Any work which it is necessary for the Council to undertake to remedy a breach by the Operator or its contractor of any conditions of this approval.
20. The costs of any work under clause 27(c) may include an administration fee and shall be a debt due and payable to the Council upon demand and will bear interest from the date of demand to date of payment at a rate of interest equal to the Bank of New Zealand commercial base lending rate plus 5% calculated on a daily basis. Interest will continue to accrue at this rate both before and after judgment.
21. The Operator shall execute a performance bond in favour of Council to the value of \$50,000.00. This bond shall cover all works in the road reserve and shall be annually renewed. Alternatively a bond of \$50,000 may be raised on a project specific basis.

7.0

Protection of Property and Existing Services

The positions of existing watermains, sanitary and stormwater sewers, traffic signals, and detector loops and other services or structures above or below ground, as far as they are known, are available for the information of the Trenching Authority and/or its agents and the trencher at the offices of the Council and the respective service authorities. The locations should not be taken as guaranteed.

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22. The Operator shall make itself fully aware of the position of all underground services in the locality, before commencing work, as required by Clause 12(d) of the Construction Act 1959.
23. The following requirements relating to construction works shall also apply:
- (a) Each utility authority shall maintain a complete and accurate record of all its works within the road reserve and will make appropriate parts of these records available to anybody authorised by Council to trench within the road reserve.
 - (b) Where the owner of any service decides that one of their lines is unduly vulnerable because of proposed trenching by another Trenching authority, it shall take whatever additional measures it considers warranted to protect the service, such as locating and marking the position of its work on the surface, providing site supervision etc.
 - (c) A trencher may not use mechanical digging closer to an existing service than the distances specified by 500 horizontally or 300 vertically from the recorded position of any service until the service has been located by hand digging unless more stringent conditions are imposed by any service owner.
 - (d) Access to all hydrants and valves on watermains, sumps, manholes and inspection chambers on underground structures of any kind shall be kept free from obstruction as far as possible at all times.
 - (e) Street trees and ornamented planting or gardens within the street shall not be interfered with without the consent of the Engineer.
 - (f) Mechanical excavation of trenches within the dripline of street trees is not permitted. All excavation must be hand dug.
 - (g) Infrastructure under vehicle crossings shall be thrust bored.
 - (h) Where piping ducting or cabling crosses Council's stormwater and sewer pipelines, on the completion of installation of CCTV inspection of the pipes is to be made to ensure that no damage has occurred.

Special restraints are imposed for work near the following services unless agreed otherwise by the service owner:-

24. Underground electricity power cables:

- (a) 400-230 volt cable protection to be located by hand-digging. Supervision by power authority required for excavation greater than 1.5m.
- (b) 11,000 volt cable protection to be located by hand-digging. Supervision required by power authority when working closer than 0.3m vertical above or 0.6m horizontal and if deep excavation. Notification of 48 hours except in genuine cases of emergency.
- (c) 33,000 volt cables to be located by power authority. Supervision required when working closer than 1m vertical above to 2m horizontal. Notification of 48 hours, except in genuine cases of emergency.
- (d) No cables are to be moved by anyone except Electricity Authority staff.

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25. Telecom and network operator high priority cables:

- (a) Machinery is not to be used within 1.5 metres of the position of fibre optic, high capacity copper trunk or coaxial cables as determined by a pipe locator and recorded with pegs at intervals of 4 metres.
- (b) Machinery can be used up to 0.5 metres from the cable when the cable has been located by hand at intervals of less than 2 metres. The machinery is to be operated away from the cable.
- (c) 48 hours notification is required in all cases except in genuine emergencies.

26. Gas Mains

- (a) Mains up to 2000 kPa pressure – when working closer than 0.3m vertical or 0.6m horizontal, mains to be located by hand-digging under supervision of Enerco Gas.
- (b) 48 hours notification is required in all cases except in genuine emergency cases.

27. Traffic Signals

- (a) Where work is to take place within 50m of traffic signals the Trenching Authority shall consult with the Engineer or his representative.
- (b) Special conditions when working near traffic signals may be imposed by the Engineer to protect the detector loops and the operation of the signals.
- (c) A traffic signals communication network is located in Great North Road, New Lynn. Liaise with the Engineer to locate this network.
- (d) In any case where the proposed work is likely to have an effect on traffic signal detector loops associated with a State Highway, or will occur within 50 metres of traffic signals, details of consultation undertaken, or proposed, with the Traffic Management Unit of Transit New Zealand ("TMU");
- (e) Work on traffic signal detector loops may only be undertaken by a contractor approved by TMU, at the cost of the Operator. Detector loops must be fully reinstated within 5 working days of final seal reinstatement.

28. Bus Companies:

- (a) In any case where the proposed works are on a bus route, details of consultation undertaken or proposed with the relevant bus companies;

29. Regional Services:

- (a) Regional sewer lines and bulk water supply pipes are to be given minimum clearances of 1.0m parallel to and 300mm for services crossing. Consultation with the appropriate services at design stage is advisable
- (b) All work within 10m of Regional Services lines (15m if blasting) is to be notified to, and written approval gained from the appropriate service at least 24 hours in advance.

30. High pressure natural gas and petroleum products pipelines:

- (a) Any work within 2 metres of the pipelines requires a permit from the Natural Gas Corporation – Transmission. 72 hours notice must be given and acknowledgement of the proposed works will be given. This is not a permit, the permit will be issued on site on the day of the works by Natural Gas Corporation – Transmission.

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8.0

Responsibility for Repairs and Reinstatement

31. The repair, replacement or reinstatement of any disturbance or damage to the roadway, other underground services, berms, fences, bridges, retaining walls, poles, cables or other structures or property shall be the responsibility of the Operator causing the damage unless specific arrangements to the contrary are made.
32. The cost of repair and reinstatement of any roadway, berm, fence, footpath, waterpipe, sewer and stormwater drain, channelling, foundation, retaining walls, poles, cables or other services or structure or neighbouring property shall be the responsibility of the Operator causing the damage, unless otherwise agreed. Where existing services are damaged as a result of the trenching work, the trencher shall immediately advise the owner of the damaged service to arrange for repairs to be carried out before backfilling.

9.0

Drainage

33. The trencher shall ensure that the surface run-off is not altered so as create further or future ground instability.
34. If dewatering of trenches is carried out, no material, fines, etc. from beyond the line of the trench shall be removed that is unable to be replaced. No waterborne sediment removed by dewatering shall go to any catch pit or manhole. Any sediment that is allowed to enter the stormwater system shall be removed by the trencher on the instruction of the Engineer. All open trenches shall be maintained in a dewatered condition. Waterlogged material shall be removed to the satisfaction of the Engineer.

9.0

Public Relations

35. Prior to the planned excavation commencing, the Operator shall provide details of their Communication Plan to inform business and residents of the proposed works, the likely effects of noise dust or vibration, the effects (if any) on traffic and the steps proposed to address the effects of the proposed works generally. This plan shall also include actions to inform any property owners / occupiers on how they will be affected and who to contact for future information or to convey complaints. Where it is proposed to use open trenching methods which will affect vehicle crossings, the communication plan must specifically identify procedures for informing affected parties about the proposed works. A copy of this advice is to be lodged with the Road Opening Notice.
36. No trench shall be opened which will interfere with vehicular access to any property unless the occupiers/owners are notified at least twenty-four hours in advance.
37. A programme of works is required in high pedestrian (shopping centres) or vehicular traffic areas, to be submitted to the Engineer for approval. Approval will be subject to a maximum length of trench being open (normally 50 metres), a suitable programme of restoration and details of ensuring the safe movement of pedestrians and vehicles.
38. The Trenching Authority shall advise the Traffic Safety branch of the New Zealand Police of all work on main roads and of all major works.
39. Construction noise is to be actively managed and must not exceed the standards specified in NZS6803P : 1984.
40. Construction work is to be managed so that the vibration effects of the work are minimised.
41. In the case of works in the road but outside of the carriageway, or other works in confined areas of public open space or reserves, a minimum protected clearance of 1.2m is to be maintained around the works for pedestrian use.

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10.0

Safety

42. Warning signs, barricading and lighting of trenches and obstructions shall be provided as required by Section 353 of the Local Government Act 1974, the Construction Act 1959 and all amendments thereto and any other relevant legislation. An effective barricade as required by the Construction Act must be erected IMMEDIATELY WORK COMMENCES AND MAINTAINED UNTIL THE SURFACE IS RESTORED.
43. Signs shall conform with those prescribed in the Transit New Zealand publication "Working on the Road – A Handbook for Temporary Traffic Control and Safety at Roadworks Site", Second Edition, published in February 1991, or any amendments thereto.
44. Operators shall follow the procedures set out in the Transit New Zealand handbook for all appropriate aspects of site safety and traffic control associated with their respective trenching works. A safety management programme shall be established to manage and monitor the works to ensure that public safety is protected.
45. The Operator is responsible to provide, set up and maintain warning notices, barricades and flashing lamps sufficient to ensure the safe passage of vehicles and pedestrians AT ALL TIMES. Apparatus used to ensure control and safety of both vehicles and pedestrians shall be stable and visible day and night (i.e. reflectorised) and in all ways suited to the purpose.

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12.0

Traffic and Pedestrians

46. The Operator is required to organise its work in such a manner that:

- a) It avoids carrying out work on the carriageway during times of peak traffic flow. Work may only be carried out on the carriageway of Strategic Arterial Roads, Regional Arterial Roads, District Arterial Roads and Collector Roads during the hours of 9.00am to 3.00pm Monday to Sunday. During the period between 7.00am and 9.00 am, and 4.00pm to 6.00pm the obstruction to normal traffic movement shall be minimised. More restrictive work hours may be imposed by the Engineer depending upon the nature and extent of the proposed work. Specific approval is required for work to be undertaken outside these hours. However in the case of emergency works, these restrictions do not apply.
- b) Where the works are being carried out during daylight hours the carriageway will be fully open to traffic during hours of darkness and no more than half the carriageway will be closed at any one time, except with the express permission in writing of the Engineer;
- c) The length of trench open at any time is kept at a minimum. The maximum length of trench open at any time shall be as per Clause 10.0 unless the Operator obtains the prior approval of the Engineer. When the length of trench open on a footpath is likely to restrict pedestrian access to shops or services, a temporary bridge of suitable materials is to be provided as appropriate for access across the trench;
- d) On carriageways with high traffic volumes (in excess of 3,000 vehicles per day) the Trenching Authority shall give priority to techniques other than open trenching including thrusting or boring;
- e) Council may require work to be undertaken outside normal working hours;
- f) Parking of plant and equipment must comply with ALL bylaws regulations and restrictions. Any offending act will lead to issue of parking infringement notices unless approval has been obtained. No unreasonable inconvenience to either vehicles or pedestrians is permitted. No materials may be stored on the road without the approval of the Engineer.

13.0

Excavation

47. Infrastructure under vehicle crossings shall be thrust bored.
48. When an excavation is required to be made through any concrete, asphalt or chip seal surface, the proposed edges of the excavation or trench shall be cut with a power saw prior to the excavation of the trench. The cut is to extend the full thickness of the surface layer in a clean straight vertical line. Where the trench width varies or the trench changes direction, the change of direction of the saw cut shall not exceed 45° from the longitudinal axis of the trench.
49. As excavation proceeds, all excavated material unsuitable for backfilling and material not required for backfilling shall be removed from the site without delay.
50. Areas adjacent to the excavation shall 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 saw cutting outside of the original line of the excavation and outside the area of damage will be required before reinstatement is permitted.

Details of such works shall be provided as per the Public Relations requirements above.

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14.0

Backfilling

51. The material used for bedding underneath and around the service or service duct shall be as required by the Operator. In no case shall it exceed 100mm above the top of the service, unless specifically required by the Operator.
52. The backfilling of trenches shall be in accordance with WCC Drawing No.10762 R3 "Trench Reinstatement Standard Details", as attached.
53. Trenches shall be reinstated so that no settlement will occur.
54. If under-break or other disturbance of the pavement layers occur, then such areas shall have the surface re-cut, be excavated as necessary and backfilled in compliance with this specification.
55. The following guidelines are recommended to be followed:
 - a) Backfill in carriageways shall be well graded granular 40mm basecourse material free from clay, vegetation and building rubbish
 - b) All material shall be placed and compacted in layers not exceeding 150mm in loose depth.
 - c) Compaction of materials in layers shall be achieved by mechanical compaction equipment appropriate to the size of the trench, the type of backfill material used and the location of the trench in the road.
 - d) Where concrete or other stabilised layers exist in the roadway the trench shall be reinstated with similar material or as otherwise directed by the Engineer.

15.0

Surface Reinstatement

56. The Operator should note that they will be required to reinstate any broken surfaces in their area of works unless they can provide photographic or video evidence of existing damage prior to commencing works.

Refer to WCC Drawing No.10762 R3 "Trench Reinstatement Standard Details" attached.

General

57. Permanent resurfacing is to be carried out as soon as practicable after backfilling has been completed.
58. The permanent resurfacing shall be similar either temporary or permanent resurfacing being placed.
59. The final surface level of the trench shall be to within 0 to 5mm above the original surface level.
60. No permanent surface reinstatement shall be carried out until the Trenching Authority is satisfied that the backfilling procedures have been satisfactorily completed.

Special Paving Areas/Shopping Centres

61. In areas where Council has elected to improve the appearance and value of its pavement asset with higher quality surfaces, surface reinstatement will be required, at the expense of the Trenching Authority, to a condition at least equal to the 'as found' condition of the paving.

Grassed Areas

62. All grassed areas disturbed by trenching work shall be reinstated to a condition at least equal to the 'as found' condition, to the satisfaction of the Engineer.

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Concrete Surfaces

63. All surfaces damaged as a result of the trenching works shall be fully reinstated to a condition at least equivalent to the condition prior to the works commencing.
64. If the edge of the trench is within 1 metre of a crack or the edge of the existing pavement, within this zone shall be replaced as part of the trench reinstatement.
65. In the situation where the reinstatement is to extend to a crack the face of the crack shall be trimmed by saw cutting to create a straight edge.
66. Where the distance between the trench centreline and the nearest construction joint is less than 2 metres the reinstatement shall extend to that construction joint.
67. If these criteria cannot be met, then the reinstatement is to be across the full width of the footpath or carriageway.
68. Concrete carriageways shall be constructed to the same thickness as the original concrete carriageway and the concrete shall have a minimum compressive strength of 17.5 mPa after 28 days.
 69. Concrete vehicle crossings shall be reinstated with a minimum concrete thickness of 150mm for residential crossings and 200mm for commercial/industrial crossings. The concrete shall have a minimum compressive strength of 20 mPa after 28 days. The details shall be to Council's standard vehicle crossing details.
 70. Construction joints shall be formed at 2.5m centres. The line and level of the reconstructed surface shall match the cross fall and level of the adjacent undamaged surface.

Sealed Surface

71. All parts of the surface damaged during or as a result of the work, shall be reinstated to as specified using materials as shown in Drawing No. 10762, R3.
72. If the edge of the trench is within 1 metre of a construction joint, a crack or the edge of existing pavement, then the existing pavement within this zone shall be replaced as part of the trench reinstatement.
73. Construction shall be carried out as follows:
 - (a) All edges are to be saw cut. Trimming allowance is to be a minimum of 150mm on each side. The basecourse layer shall be swept free of all loose material before a tack coat is applied. The tack coat of hot bitumen or emulsion shall be sprayed or painted to the vertical joints of the existing pavement and the surface of the basecourse. The rate of application of the tack coat is to be 0.3 litres per square metre.
 - (b) Asphaltic concrete material shall be laid and compacted so as to meet the density requirements of TNZ:P9:1975 and any amendments.
 - (c) Where the adjacent road surface is chip-sealed, permanent resurfacing using a two-coat chip-seal shall be carried out under the jurisdiction of the Council Streets/Contract Supervisor one month after completion of the hotmix surface. If the adjacent surface is asphaltic concrete then the joints are to be sealed as per item 15 (viii).

Service Covers and Bench Marks

74. Service covers, e.g. water hydrant boxes, tobies, manholes, etc. shall be reinstated to their original condition during trench compaction and their finished level shall match the adjacent ground levels.
75. All frames shall be bedded so as to conform to the plane of the adjoining surface and shall be flush with the adjoining surface on all sides. Such frames shall be able to be adjusted for possible changes in road level, (e.g. carriageway resurfacing).

76. Structural design of apparatus in the pavement; (i.e. manholes, valves, hydrants, survey marks etc.) shall be adequate to withstand the loading to be applied with a reasonable factor of safety, no rocking shall occur.
77. Care shall be taken not to disturb and/or damage Department of Survey and Land Information survey standards.

Resurfacing

78. The aim in resurfacing trenches is to ensure that permanent resurfacing is carried out as soon as practicable after backfilling and that inconvenience to the public is kept to a minimum.
79. In streets with large traffic flows, in shopping areas, or where the Engineer so agrees, the Trenching Authority may arrange for a 10mm thick layer of fine emulsion mix to be applied to the trench immediately backfilling is completed in order to minimise nuisance and inconvenience to the public. The emulsion mix is to be laid to meet existing levels and compacted so as to be stable under traffic. This resurfacing is to be regarded as a temporary seal only and must be removed and replaced by a permanent resurfacing within 30 days.
80. The cost of all temporary resurfacing is to be borne by the Operator.

Joint Sealing of Carriageway Surfaces (Asphaltic concrete surfaces)

81. Within 1 month of permanent resurfacing a band 50mm either side of joints in carriageway shall be sealed with a hot poured rubber bitumen material approved by the Engineer. The material shall be "Samifilla" or other approved material complying with BS2499:1973 or U.S. Federal Specification ss-s-s1614(1):1970. All joints shall be water blasted to remove loose dirt and other foreign matter, dried and then filled to the approval of the Engineer.

16.0

Kerb and Channel

82. Where trenching crosses the kerb and channel any section damaged shall be replaced to the original line and level and to conform to Council's standard details.

17.0

Clean Up and Make Good

83. As work proceeds the trencher shall progressively carry out all restoration and tidying up work. If regular tidying up and restoration is not being done the Engineer will require and instruct the trencher concerned to carry out this work immediately. On completion of the work, the trencher shall remove all plant, materials and other things that may have been brought upon the site in aid of the works and clear away all rubbish and leave the site in a similar condition to that which existed before the work was commenced.
84. Street trees shall not be cut or removed without the written permission of the Engineer. Any trees or branches cut down or tree stumps uprooted during the work shall be removed. Branches that require removal should be cut by saw and not broken by machinery. The trencher shall clean out all sumps and repair or reinstate all road surfaces, fencing, walls, floors, lawns, gardens, paths, inclusive of transplanting trees, shrubs, etc. and make good all damage which may have been caused through his operations in connection with the work.

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18.0

Maintenance

85. The Trenching Authority will be held responsible for any street maintenance work required as a result of the trenching operations for a period of 12 months after application of the final surfacing material. Any such maintenance work required by Council shall be undertaken by the Trenching Authority at their cost within the time specified by the Engineer.
86. A Contractor Notification of Completion of Works form (see Appendix 2) is to be lodged with the Engineer immediately any trenching work is completed.
87. Should this not be complied with, Council reserves the right to arrange or undertake such maintenance work and this work will be at the cost of the trenching authority.
88. If maintenance work is required, a further 12 months maintenance for the rework will commence from the date that repair work is completed.

19.0

Undertaking Works – ICT Requirements

The following are standard conditions, which specifically relate to the installation of ICT infrastructure:

89. Where the RON relates to ICT infrastructure to be laid under a road and an open trenching method of installation is required:
90. Crossings are to be on line within 15° of right angles to the road centre line;
91. In town centres, crossings are to be limited to two crossings for every street block. Any additional crossings shall only be permitted with the express approval of Council, and in most cases, shall be thrust bored.
92. Outside of town centres, crossings should be spaced at a minimum distance of 75m unless otherwise permitted by Council.
93. Connections from the network to neighbouring buildings must be laid in a duct with a minimum internal diameter of 100mm, or a combination of ducts amounting to a total duct capacity of 100mm. All work in relation to building connections shall be commenced completed and fully reinstated within 48 hours.
94. The dimension of any top or floor plate area of any turning or pulling pit must not exceed 600 millimetres wide by 1200 millimetres long. The specific location of the turning or pulling pit must be approved prior to installation. Where a turning or pulling pit cover is located in a carriageway the pit cover must conform to the carriageway surface or be constructed of chevronned aluminium.
95. The dimension of the top of any chamber installed must not exceed 1200 millimetres wide by 1200 millimetres long. The specific location of the chamber must be approved prior to installation. Where a chamber lid cover is located in a carriageway the lid cover must conform to the carriageway surface or be constructed of chevronned aluminium.
96. The dimension of the top or floor plate area of any building entry pit must not exceed 300 millimetres wide by 100 millimetres long. The specific location of the building entry pit must be approved prior to installation. Where an entry pit cover is located in a carriageway the cover must conform to the carriageway surface or be constructed of chevronned aluminium.
97. All ICT underground infrastructure must be encased in a duct, or ducts, which comply with the standards set out in the Code, and located at a minimum depth of 900mm below ground in carriageways and 600mm below ground level in respect of other land in the road or public open space or reserve. The maximum depth of installation must not exceed 1.5m, unless otherwise specified by the Council.

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98. A spare duct (as defined in Chapter 8: ICT in this Code) must be laid at the time of open trenching, where this method is required for the installation of ICT infrastructure. The purpose of the spare duct will be to allow for copper and/or fibre optic cabling to be subsequently pulled or blown through this duct at a later date, without causing the undue disruption and inconvenience that result from further open trenching on road surfaces. Where the programme of works for a single Operator includes the installation of a large number of ducts, Council shall require the installation of an additional spare duct for every four ducts that are installed by that Operator, and one further duct for every four ducts or part thereof thereafter.
99. Any spare duct installed in accordance with Condition 97 above shall be the property of the Council.

Greenfield Development Provision

100. ICT infrastructure is to be installed in a communications corridor shared with other operators, having regard to technical requirements and physical constraints. The communications corridor shall be located as per **SD 3.02** located in the Transportation Section of this Code. Where physical constraints and congestion may dictate an alternative location, this will be agreed by the Council with the Operator at the time of approval of the RON.

Retrofitted Development Provision

101. ICT infrastructure is to be installed in a communications corridor shared with other operators, having regard to technical requirements and physical constraints. As a first preference the communications corridor will be located in the berm, as a second preference in an alignment which follows the carparking bays on the side of the carriageway. Where physical constraints and congestion may dictate an alternative location, this will be agreed by the Council with the Operator at the time of approval of the RON.

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APPENDIX A-1

ROAD OPENING NOTICE GENERAL INFORMATION

1. GENERAL

A Road Opening Notice is required for all excavations within the road reserve and on Council land. These may include:-

1. Service Authority trenching or repair works.
2. Waitakere City Council trenching or repair works.
3. Electrical contractors providing connections to power supply.
4. Telecommunications contractors providing connections to telecommunications.
5. Connections or repairs for private drainage systems.

2. DESCRIPTION OF WORKS

- | | | |
|-------------|---|---|
| Major Works | - | Any crossing of carriageway by open trench. |
| | - | Any hole in the carriageway greater than 1m ² . |
| | - | Any trench along berm footpath or carriageway. |
| | | |
| Minor Works | - | Any work covering less than 1m ² where minimal traffic disruption. |
| | - | Services to domestic dwelling where trench runs across berm or across footpath. |

3. CONTRACTORS OBLIGATIONS

On receipt of an approved Road Opening Notice the Operator shall ensure the following:

- (a) For Major Works that he notifies Council of actual start date.
- (b) When all works are completed and reinstated in terms of the specification and conditions the Operator shall notify Council in writing that works are complete on the standard form supplied. The twelve months maintenance period shall commence from the date this form is received unless council notifies the applicant that the reinstatement is not adequate. In this case the maintenance period shall commence when works are completed to Council's satisfaction. If Council receives no notification that works are complete then the maintenance period will not commence.
- (c) The Operator is to ensure all contractors are fully informed of their obligations under the Health and Safety in Employment Act 1992, the standards required by Councils specification and any conditions imposed on his notice of approval.
- (d) The Operator shall carry out works as quickly as possible and no reinstatement shall remain uncompleted for greater than 7 days after completion of the works. All conditions imposed on the Operator to manage to nature of the works shall be strictly adhered to. All conditions are listed in full in the Specification for Excavation and Reinstatement of Trenches (Code of Practice for City Infrastructure & Land Development: Section 3 – Appendix A), available from Council on request.

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APPENDIX A-2

TO: Manager: Field Services
Waitakere City Council
Private Bag 93 109
Henderson
WAITAKERE CITY 1231

ROAD OPENING NOTICE

CONTRACTOR NOTIFICATION OF COMPLETION OF WORKS

I hereby advise the Manager: Field Services, Waitakere City Council, that all works related to R.O. No..... are complete. We have met all requirements of the "SPECIFICATION FOR THE EXCAVATION AND REINSTATEMENT OF TRENCHES" and other conditions imposed. I fully understand that a twelve month maintenance period applies from the date Council receives this notification unless the reinstatement works are rejected by Council. In this case the maintenance period will commence upon satisfactory completion of the works.

Signed: Date:.....

Designation:

Company:

Street No(s) and Name.....

.....

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APPENDIX A-1

WAITAKERE CITY COUNCIL

.....
R.O. Number to be quoted
on all correspondence

ROAD OPENING NOTICE

TO: MANAGER: FIELD SERVICES DATE:/...../.....

I intend to carry out the work described in the plans and specifications attached and as described below:

(circle)	POWER NZ	ENERCO GAS	TELECOMMUNICATIONS	WAITAKERE CITY	OTHER (name)
----------	----------	------------	--------------------	----------------	-----------------

COMPANY NAME: _____

CONTACT PERSON: _____ PHONE (day): _____ PHONE(a/h) _____

MAILING ADDRESS: _____

WORK CONSIDERED TO BE: MAJOR MINOR (less 1m²) EMERGENCY (tick box)

DESCRIPTION OF WORK: _____

STREET NO(s) AND NAME AFFECTED: _____

LOCATION: (circle) BERM FOOTPATH CARRIAGEWAY

ESTIMATED START DATE: _____ ESTIMATED DURATION: _____

NOTE:
FOR MAJOR WORKS ACTUAL START DATE TO BE NOTIFIED TO : BALVANT DULLABH, Ph: 836 8000 Extn. 8909

I agree to undertake the works in accordance with Waitakere City "SPECIFICATION FOR THE EXCAVATION AND REINSTATEMENT OF TRENCHES" and any other conditions as required by the Engineer, or his representative.

Signature: _____

CONDITIONS OF APPROVAL:

The following standard conditions of approval shall be met by the Operator notifying Council of their intent to undertake works:

NOTICE SIGHTED BY: _____ Date: _____
[On behalf of Manager: Field Services]

Designation: _____

This notification refers to ALL excavation works within the legal road reserve and on Council land.

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**CODE OF PRACTICE FOR CITY SERVICES
& LAND DEVELOPMENT**

ENGINEERING STANDARDS MANUAL

SECTION 8

**INFORMATION COMMUNICATIONS
TECHNOLOGY INFRASTRUCTURE**

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SECTION 8.0 INFORMATION COMMUNICATIONS TECHNOLOGY INFRASTRUCTURE

8.1 SCOPE

This Section of the Engineering Standards Manual covers the engineering requirements for the installation of above and below ground Information Communications Technology (ICT) Infrastructure.

8.2 INTRODUCTION

The purpose of this document is to provide engineering standards and design specifications for installation of infrastructure associated with ICT. These standards have been initiated in recognition of rapid advancements in this technology and the need to establish uniform standards. This document recognises the importance of Council's land and assets as a resource, and establishes practices for the sustainable management of this limited resource. The standards apply to above and below ground infrastructure in Council owned roads, parks and public spaces.

Council's goals are as follows:

- To secure the co-operation of all *Network Utility Operators* concerned in co-ordination the use of space to install infrastructure associated with ICT;
- To achieve maximum safety and minimum inconvenience to the public;
- To reduce the frequency and cost of opening and reinstating Roads by a co-ordinated effort in the field;
- To ensure that the integrity of Council's assets are not compromised by other parties; and
- To ensure that above ground structures and equipment do not interfere with private property ownership rights nor clutter or restrict vehicular and pedestrian traffic, or adversely affect the amenity of public environments.

The following standards and specifications are referred to in these standards or in the Council procedures for implementing these standards:

- The Code of Practice for City Infrastructure and Land Development, Section 3, Appendix A, specification for the Excavation and Reinstatement of Trenches;
- The Telecommunications Act 2001, which allows Council to impose "reasonable conditions" on the works of Network Utility Operators in order to protect Council's assets.;
- The Waitakere City Council District Plan, formed under the statutory requirements of the Resource Management Act 1991;
- The Waitakere City Council Parks Strategy; and
- The Waitakere City Council Reserve Management Plans, formed under the statutory requirements of the Reserves Act 1977.

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8.3 DEFINITIONS AND INTERPRETATION

<i>Antenna Transmitting / Receiving Dishes</i>	Means antenna and dishes that are used or designed to transmit and receive telecommunications information.
<i>Arterial Roads</i>	Means those roads defined in the Waitakere City District Plan as Major Roads, Strategic Arterial roads, Regional Arterial Roads, and District Arterial Roads.
<i>Building Connection</i>	Means the telecommunications connection (conduit & / or fibre and copper) that is located under the footpath, which links the connections located under the carriageway or berm, with the adjacent private property boundary, typically connecting to a building on this adjacent site.
<i>Carriageway</i>	Means any portion of a road used by motor vehicles
<i>Carriageway Lateral Crossing</i>	Means a telecommunications cable which runs from the Communications Corridor (or alternately a single connection running parallel to the berm) and crosses a vehicle carriageway to the opposite kerb or loop connection point.
<i>Council Chambers</i>	Means Waitakere City Council Means the large entry pits located in a position where the major trunkline telecommunications connections (conduit & / fibre and copper) are channelled through a common access area. These chambers are used by Network Utility Operators to access, install & maintain ICT infrastructure.
<i>Code</i>	Means the Waitakere City Council Code of Practice for City Infrastructure & Land Development.
<i>Communications Corridor</i>	Means the trench or that part of a road within which ICT infrastructure is located or which has been set aside for that purpose. The centreline of this corridor shall be 1800mm off the adjacent road boundary, as shown on SD 3.02.
<i>Contractor</i>	Means any person, carrying out trenching or ancillary works, for or on behalf of a Network Utility Operator.
<i>Contract Supervisors</i>	Means any person detailed by the Engineer to carry out the administration of the duties detailed in this document.
<i>Engineer</i>	Means the Service Manager: Transport Assets or his representative.
<i>Entry pits</i>	Means the medium sized pits located in a position where the telecommunications connections (conduit & / fibre and copper) are channelled through a common access area. These pits are used by Network Utility Operators to access, install & maintain ICT infrastructure.
<i>ICT Cabinet</i>	Means an above ground structure, other than a <i>Metrolight Poles</i> , designed to accommodate equipment associated with ICT.

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<i>ICT Infrastructure</i>	Means infrastructure associated with the delivery of telecommunications technology, one or a combination of the following: <ul style="list-style-type: none"> • Connections over fibre optic lines; • Connections over copper wire; • Structures providing wireless or satellite connections to signalled information; • Conduits, masts, & pre-cast pits to accommodate all of the above.
<i>Loop Connection</i>	Means a telecommunications cable connecting 2 Carriageway Lateral Crossing points.
<i>Metrolight Pole (also known as fat poles & antenna poles)</i>	Means a pole with ICT equipment location inside it.
<i>Network Extension Programme</i>	Means the twelve month programme, submitted at six monthly intervals, detailing the extension of any Network Utility operation.
<i>Network Operator</i>	<i>Utility</i> Means definition set out in s166 of the Resource Management Act 1991
<i>Redundant Infrastructure</i>	<i>ICT</i> Means ICT infrastructure that is either: <ul style="list-style-type: none"> - Non-functioning (cannot or will not be used); or - Redundant, but capable; and - Abandoned.
<i>Road or Street</i>	Have the same meaning as in Section 315 of the Local Government Act 1974 and includes the area from boundary to boundary, customarily referred to as <i>Road Reserve</i> .
<i>Spare Duct</i>	Means an unused duct which: <ul style="list-style-type: none"> • Is uPVC type SN 6 solid wall pipe; • Has a minimum internal diameter of 100mm; • Is laid a minimum of 600mm below ground level and shall not obstruct the function of other infrastructure already underground; • Is laid at a maximum 2m below ground level unless otherwise specified by Council; and • Is of a colour approved by Council.
<i>Street Block</i>	Means the length of road reserve between two street intersections.
<i>Road Opening Notice</i>	Means a notice in the form of Appendix 1 Section 3, of (Transportation), Appendix 1 of this Code.
<i>Telecommunications</i>	Means as defined in the Waitakere City Council District Plan.
<i>Town Centres</i>	Means the areas defined in the Waitakere City Council District Plan as <i>Major Town Centres</i> and <i>Town Centres</i> .
<i>Trench</i>	Means any excavation within a road for the purpose of maintaining, locating or installing services
<i>Turning / Pulling Pits</i>	Means a small pit specifically associated with ICT infrastructure, which is located under the carriageway, footpath or berm, and is used to access & monitor ICT infrastructure.

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8.4 DESIGN REQUIREMENTS

8.4.1 ROAD OPENING NOTICE PRINCIPLES & PROCEDURES

General Principles

- A significant proportion of ICT infrastructure will be installed underground and within Roads.
- It is Council's preference that thrust boring methods be used to install underground infrastructure.
- Where open trenching is used Council requires that a single trench be used to maximise the number of services to minimise surface and services reinstatement.
- Council may require the installation of a spare telecommunications duct to meet future demand, and to minimise excavation required to undertake short-term maintenance and upgrading.
- Council requires best practices to be undertaken when installing all infrastructure.

General Procedures

- Any open trenching of Council land must comply with Council's Road Opening Notice Procedures, contained within the Transportation section of the Code.
- Works shall be in accordance with any 'reasonable' conditions imposed on approval of the notice, as specified in the Road Opening Notice Procedures.

ICT Pre-Application Procedures

- Operators working in Waitakere City must attend Council co-ordinated meetings at 6 monthly interval, whereby utility operators are required to submit a programme of works proposed in relation to the Operator's network over the next 6 month period. These forums shall be in accordance the NZUAG partnering approach and their purpose shall be to assist the co-ordination of the Operator's requirements with the Council's own capital works programme, and the programme of other Operators. In addition each Operator must consult with the Council and other Operators in respect of specific projects not less than 20 working days prior to lodging a RON application and commencing work. The Operator acknowledges that the Council may require the deferment of work to enable the alignment of work programmes.
- Applications for Road Opening Notices shall be in accordance with the Network Extension Programme, unless otherwise approved by Council.

8.4.2 LAY OF SERVICES & REINSTATEMENT PROCEDURES

8.4.2(i) PROVISIONS FOR INFRASTRUCTURE IN EXISTING ROADS

1. Where works are being undertaken in existing roads, Council will require that new ducting being installed is located in a single Communications Corridor, shared with other Network Utility Operators, having due regard to the technical requirements and physical constraints.

2. In the case of areas that are to be retrofitted the corridor shall, as a first preference, be located in the berm and, as a second preference, in a line that follows the car parking bays on the side of the carriageway. However, physical constraints and congestion may dictate an alternative location and this may be agreed by the Council prior to or at the time of installation.
3. Copper and/or fibre optic cabling and associated ducting must be laid at a minimum depth as follows:
 - 900 millimetres below ground level in respect of carriageways;
 - 600 millimetres below ground level in respect of berms; and
 - In all other cases 600 millimetres below ground level.

Services shall be laid at a maximum depth of 1.5m below ground level, unless otherwise specified by Council, to accommodate existing services and conditions.

Where services are installed in the berm, they should be installed as close as possible to the location specified in SD 3.02, Section 3.0 Transportation, of this Code.

4. No continuous length of open trenching shall exceed 150 metres. This allows for:
 - 50 metres to be in the process of being dug up;
 - 50 metres having cabling and associated equipment laid; and
 - 50 metres being backfilled and reinstated.
5. All backfill and reinstatement of works that involve open trenching must comply with Appendix A to Section 3.0 of this Code.
6. Where ducting / cabling crosses Council's waste or stormwater pipelines, the applicant shall carry out a CCTV inspection of pipes to ensure that no damage has occurred after construction.
7. As built plans are to be provided to Council within two weeks of the completion of the installation of the ICT Infrastructure. As built data shall be provided in accordance with the standards specified in the Quality & Release Chapter of this code.

8.4.2(II) PROVISIONS FOR INFRASTRUCTURE IN NEW ROADS

1. Council shall require that new ducting being installed is located in a single Communications Corridor, shared with other Network Utility Operators, having due regard to the technical requirements and physical constraints.
2. The Communications Corridor will, in the case of Greenfield Development, be located as per SD 3.02. However, physical constraints and congestion may dictate an alternative location and this may be agreed by the Council prior to or at the time of installation.
3. When granting a resource consent to undertake a subdivision that involves the construction of new Council roads, the following condition shall be imposed on the consent:

Prior to the issue of the Section 224(c) Certificate, the consent holder shall provide ducting for the provision of fibre optic cabling. The ducting shall be

established to the satisfaction of the Group Manager – Asset Management Group and shall:

- Be of uPVC SN 6 solid wall pipe that shall be approved by Council;
- Have a minimum internal diameter of 100mm;
- Be laid a minimum of 600mm below ground level and shall not obstruct the function of other infrastructure already underground;
- Be laid at a maximum 1.5m below ground level unless otherwise specified by Council;
- Be of a colour approved by Council;
- Be laid underground along the full length of each side of each new road, in an appropriate position that does not compromise or obstruct other infrastructure in the road, unless the consent holder provides a detailed plan demonstrating that all new residential and commercial lots are to be able to be serviced by this infrastructure.

An *Entry Pit* shall be provided at intersections of multiple ducts, directional changes, and at intervals of 200m on straight runs.

In accordance with the above, plans showing the design and location of the subdivision and As-Built plans showing the location, design, and construction of the ducting in accordance with the approved engineering plans shall also be provided for Council's asset records. All costs of providing the ducting shall be funded entirely by the consent holder and access to the ducting shall be available at all times to any Network Utility Operator responsible for fibre-optic cabling, free of charge.

The ducting will be accepted as a Council asset once the Council has confirmed that it has been installed and established in accordance with the approved engineering plans.

4. Council's discretion on the colour of conduits and the maximum depth of installation shall be in accordance with the processes set out in the Waitakere City Council procedures for the installation of ICT infrastructure. The conduits shall be installed as per SD3.02.

8.4.2(III) CARRIAGEWAY LATERAL CROSSING PROVISIONS

1. Where open trenching is used to install a Carriageway Lateral Crossing, the Network Utility Operator shall install one Spare Duct. This is to provide for future capacity and to minimise disturbance to the Road. This spare duct shall traverse the length of the installation in the Carriageway Lateral Crossing.
2. The *Spare Duct* shall be owned and administered by Council.
3. When installing infrastructure by open trenching in *Town Centres*, all new *Carriageway Lateral Crossings* shall be spaced so that there is no more than two *Carriageway Lateral Crossings* for every *Street Block*. Any additional crossings shall only be permitted with the express approval of Council, and in most cases, shall be thrust bored.
4. Outside of *Town Centres*, crossings should be spaced at a minimum distance of 75m unless otherwise permitted by Council.
5. Carriageway crossings are to be aligned within 15 degrees of right angles to the road centreline, unless Transport Assets specifically approve an angle exceeding this limit. Refer to the diagram below:

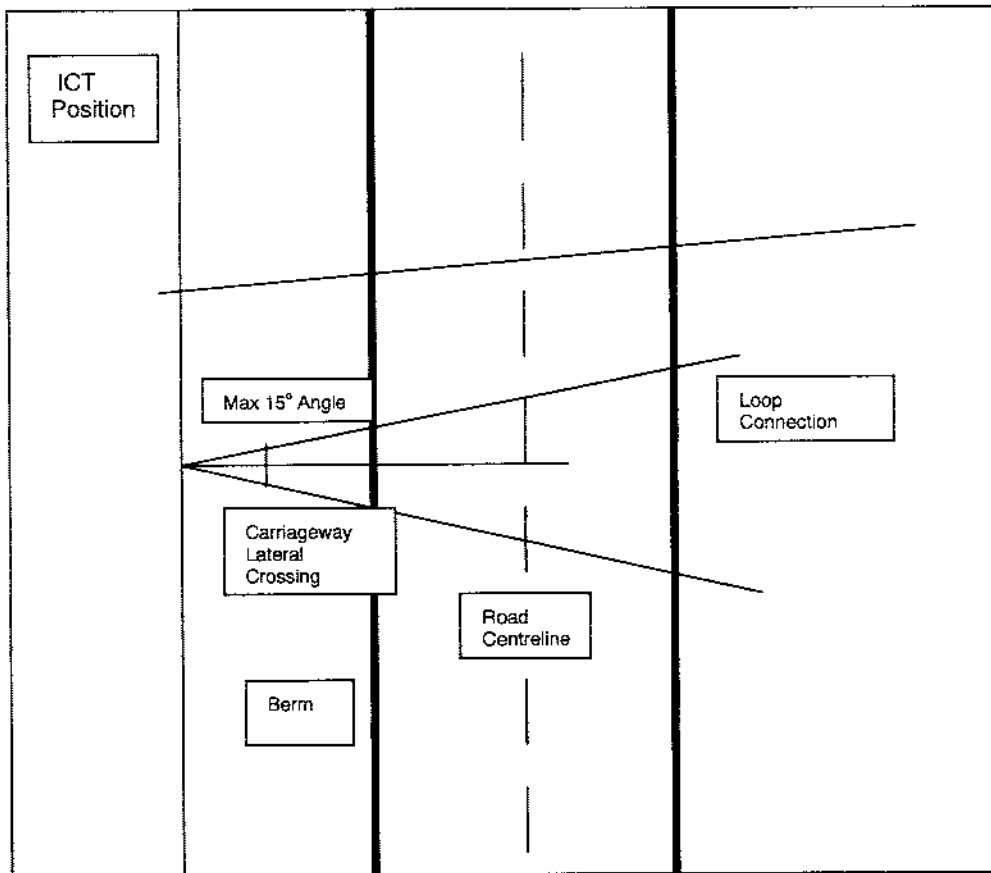


Diagram 8.4.1: Plan of Carriageway Lateral Crossings & Loop Connections

8.4.2(IV) LOOP CONNECTION PROVISIONS

1. In the event that open trenching is used to install a Loop Connection, the Network Operator shall install one *Spare Duct* for additional loop connections. This is to provide for future capacity and to minimise disturbance in the road reserve.
2. The *Spare Duct* shall be owned and administered by Council.

8.4.2(V) BUILDING CONNECTION PROVISIONS

1. *Building Connections* will be laid inside a duct with a minimum internal diameter of 100mm.
2. Council shall require that all *Building Connections* work be completed within two working days and reinstatement of the site shall be completed no later than the end of two working days. In the interim the trench shall be adequately covered and secured, in accordance with the reinstatement requirements in the Code.

8.4.2(VI) TURNING OR PULLING PIT PROVISIONS

1. The dimension of any top or floor plate area of any turning or pulling pit must not exceed the notional dimensions of 600mm wide by 600mm long by 600mm deep, unless otherwise agreed by Council.
2. Council reserves the right to approve the specific location of any turning or pulling pit on a case-by-case basis prior to installation.
3. Where a turning or pulling pit cover is located in a carriageway the pit cover must be constructed of standard materials approved by Council approved by Council on a case by case basis.

8.4.2(VII) CHAMBER PROVISIONS

1. The dimension of the top of any chamber must not exceed 1200mm wide by 1200mm long by 600 deep, unless otherwise agreed by Council.
2. Council reserves the right to approve the specific location of chambers on a case-by-case basis prior to installation.
3. Where a chamber lid cover is located in a carriageway the lid must be constructed of standard materials approved by Council approved by Council on a case by case basis.
4. The centreline of the chamber shall be 1800mm off the road boundary, unless otherwise agreed to by Council.

8.4.2(VIII) BUILDING ENTRY PIT PROVISIONS

1. The dimension of the top or floor plate area of any building entry pit must not exceed 300mm wide by 100mm long by 200 deep, unless otherwise agreed by Council.
2. Council will approve the specific location of any building entry pit on a case-by-case basis prior to installation.
3. Where an entry pit cover is located in a carriageway the cover must be constructed of standard materials approved by Council on a case by case basis.

8.4.3 INSTALLATION OF ABOVE GROUND SERVICES & REINSTATEMENT PROCEDURES**8.4.3.(I) ICT CABINET PROVISIONS**

1. The Network Utility Operator must consult with Council and any other affected property owners prior to placement of any ICT cabinets and other above ground structures and equipment.
2. ICT cabinets must, in general, be as small as possible in accordance with latest technological advances, with a maximum height not exceeding 1.5m and occupying a ground footprint of no more than two square metres (2.0 m²), unless otherwise agreed to by Council.

3. A sign no more than 200mm wide by 200mm high is to be securely fixed to every ICT Cabinet to indicate who owns the infrastructure and relevant contact details.
4. ICT cabinets and other above ground structures and equipment will, in order of preference, be sited off the carriageway, underground or on the edge of the Road. ICT cabinets may not be located any closer than 2m from the front of the kerb of a Road, nor shall be placed under the drip line of tress located in the Road unless otherwise directed by the Council.
5. ICT cabinets and other above ground structures and equipment are to be painted in recessive green or grey colours (as per the Federal Standard) unless otherwise approved by Council. Council may also require planting to further mitigate visual effects (refer to conditions contained within the WCC Procedures for the Installation of ICT Infrastructure).

8.4.3(II) METROLIGHT POLES AND PURPOSE BUILT ANTENNA POLES

1. *Metrolight Poles* may not have an external diameter no greater than 450 millimetres up to a maximum height of 1.5 metres. Above this height all *Metrolight Poles* are required to be designed in conformity with conventional telegraph pole design.
2. *Metrolight Poles* are to be painted in recessive green or grey colours (as per the Federal Standard) unless otherwise approved by Council. Council may also require the network utility operator planting to further mitigate the visual effects (refer to conditions contained within the WCC Procedures for the Installation of ICT Infrastructure).

8.4.3(III) ANTENNA / TRANSMITTING / RECEIVING DISHES

1. All dishes must comply with the New Zealand Standard for Radio Frequency Emissions (NZS 2772.1:1999) or any subsequent amendments thereof.
2. Dishes are to be co-located to minimise the proliferation of sites, unless Council agree that it would be impractical to do so.
3. The diameter of any dish must not exceed 750 millimetres. The profile of any dish (being the maximum area viewed from any angle) must not exceed 0.2m².
4. The total height of any dish, including the mounting system must not exceed the point of attachment by no more than:
 - 0.5m in respect of customer antennas and dishes, unless otherwise approved by Council; and
 - 1m in respect of network base station antennas and dishes, unless otherwise approved by Council.
5. Antenna mounts (posts) must not be more than 50 millimetres in width and 1.5 metres in height.
6. Dishes and their attached poles or mounting systems and related equipment are to be painted in recessive green or grey colours (as per the Federal Standard) unless otherwise approved by Council, and located in a position that is as discreet as practicable.

8.4.3 (IV) CELLPHONE TRANSMISSION STATIONS / TOWERS

1. All cellphone transmission stations / towers must comply with the New Zealand Standard for Radio Frequency Emissions (NZS 2772.1:1999) or any subsequent amendments thereof.
2. All cellphone transmission stations / towers must comply with the requirements specified in the Waitakere City Council bylaw 25.
3. The total height of any cellphone transmission station / tower and associated mounting system must not exceed the point of attachment by more than the following, unless otherwise specifically approved by Council:
 - 1.6m above the profile of an existing building, provided the total height does not exceed 12m above ground level.
 - Freestanding antennas that are no higher than 12m.
4. Cellphone transmission stations / towers are to be painted in recessive green or grey colours (as per the Federal Standard) unless otherwise approved by Council. Council may also require planting to mitigate visual effects (refer to conditions contained within the WCC Procedures for the Installation of ICT Infrastructure).

8.5 REDUNDANT ICT INFRASTRUCTURE

1. Unless otherwise agreed to by Council, a Network Utility Operator must remove redundant ICT infrastructure at the following times:
 - If the ICT infrastructure has been decommissioned, removal must occur within 12 months; or
 - At the time of installing new ICT infrastructure; or
 - If another Network Utility Operator opens up the area around the redundant ICT infrastructure which would enable removal to occur; or
 - When maintenance is undertaken in the area around the Redundant ICT Infrastructure; or
 - When Council undertakes road upgrades.
2. The Council may require that the relevant Network Utility Operator who installed or owns the Redundant ICT infrastructure to remove some or all of that infrastructure if the Council reasonably requires removal because it is inhibiting the provision of new ICT services or other infrastructure services.
3. Should a Network Operator cease the business of providing ICT services or goes into bankruptcy, the Council may, at its option, seek to vest any Redundant ICT Infrastructure owned by that Network Operator.

ID	Portfolio	Programme	Project	Start	Finish	Potential Partnerships with WorkRat to Deliver Outcomes
1	E - Government	National Initiatives	Draft Digital Strategy & Other Government Initiatives Broadband Liaison Group Support for E-Regions Waikare City Council IM Strategy and Web Management Goals Waikare City Council Web Strategy	1/06/04	1/06/04	Advice & Support
2		Regional Initiatives		1/06/04	Ongoing	
3		Local Initiatives		Ongoing		
4		Content		Ongoing		
5		Local, Electronic Participation		Ongoing		
6	E-Democracy	Local, Electronic Participation	Needs Analysis of Online Participation. Promotion of E-Democracy Potential	1/01/05	Ongoing	Specialist Advice
7		Local, Electronic Participation		1/01/05	Ongoing	
8	ICT Infrastructure	Private Investment	Consultation with Telco's, Align Work Programmes Formalise Partnerships with Key Stakeholders Develop Strategy Mapping of ICT Infrastructure Survey of Access to Broadband Services Prioritise ICT Investment Project Planning for Asset Management Asset Management, & Development of Asset Management Plan PROBE	1/01/03	Ongoing	
9		Public Investment		1/01/03	Ongoing	
10		Private Investment		1/09/04	1/06/05	
11		Private Investment		1/03/05		
12		Private Investment		1/01/05		
13		Private Investment		1/01/05		
14		Private Investment		1/01/05		
15		Private Investment		1/03/05		
16		Private Investment		1/06/02	Ongoing	
17		Private Investment				
18		Regulation & Statutory Mechanisms	Code of Practice and Road Opening Notices Requirements to Reflect ICT Waikare City Council Strategy for ICT Investment Foilcotes for ICT Investment District Plan Changes for ICT Infrastructure Refraction of ICT Investment Goals in LTCCP	1/06/03	1/02/05	
19		Regulation & Statutory Mechanisms		1/06/04	1/04/05	
20		Regulation & Statutory Mechanisms		1/06/04	1/04/05	
21		Regulation & Statutory Mechanisms		1/11/05	Unknown	
22		Regulation & Statutory Mechanisms		1/02/05		
23	Access & Training	ICT Access Centres	Needs Analysis Learning Centres Strategy & Operational Procedures Develop Learning Centres in New & Existing Libraries Develop Partnerships with External Providers to Provide Learning Suites, e.g. Summerland Primary Summerland Primary Learning Suite Investigate Role of Telework Facilities within Access Centres Reflection of Access Investment Goals in LTCCP Implementation of ICT Skills Programmes within Learning Centres	1/12/04	Ongoing	
24		ICT Access Centres		1/08/04	1/04/05	
25		ICT Access Centres		1/01/02	Ongoing	
26		ICT Access Centres		1/01/03	Ongoing	
27		ICT Access Centres		1/01/03	Ongoing	
28		ICT Access Centres		1/01/05	Ongoing	
29		ICT Access Centres		1/12/04	1/07/06	
30		Up-skilling ICT Literacy		1/01/02	Ongoing	
31	Community Partnerships	Partnerships	Partnerships with External Learning Providers to Support Additional Training Programmes. Waikare Online Portal Project Community Consultation / Information Forum / Public Review of WIA Strategy.	1/01/04	Ongoing	Potential Partner Key Partner
32		Content (Govt. + Public) Available Online		1/02/06	1/07/06	
33		Consultation / Needs Analysis				
34	Overview of Programme	Wider Strategy	Completion of the Waikare Information Access Strategy. Project Management, Setting and Review of Programme Objectives, ID of Risks	1/01/02	1/07/05	(Community) peer review of strategy
35		Project Management		1/01/02	Ongoing	

AGB

**MINUTES OF A MEETING OF THE PROJECTS SPECIAL COMMITTEE HELD IN THE
CIVIC CENTRE, 6 WAIPAREIRA AVENUE, LINCOLN, WAITAKERE CITY, ON
WEDNESDAY, 1 DECEMBER 2004, COMMENCING AT 9.30 AM.**

PRESENT:

Councillors RP Dallow, QPM, JP (Chairperson)
 PJ Booth, OBE (Deputy Chairperson)
 DQ Battersby, JP
 JM Clews, QSO, JP
 LA Cooper
 AK Corban, OBE, JP
 PA Hulse

Deputy Mayor CA Stone (ex officio)

IN ATTENDANCE

Director: City Services
Director: Corporate and Civic Services
Group Manager: Project Services
Special Projects Manager
Service Manager: Parks Planning
Reserve Management Planner
Leisure Planner: Leisure Services
Public Affairs: Arts Assistant
Committee Secretary: Audrey Chan

ALSO IN ATTENDANCE:

D Pearson, Architect
N Smith, Designer
D Upton, Landscape Architect

1 APOLOGIES

There were no Apologies.

2 URGENT BUSINESS

There was no Urgent Business.

3 YOUTH FACILITY DEVELOPMENT

2174/2004

MOVED by Cr Cooper, seconded Cr Corban:

That the Youth Facility Development report be received.

CARRIED

2175/2004

MOVED by Cr Clews, seconded Cr Stone:

That the membership of the Project Advisory Group, as established by the Projects Special Committee in August 2004, be confirmed as follows:

- Council Representative: Cr Penny Hulse as Chairperson of the Project Advisory Group;
- Chairperson of Projects Special Committee: Cr Ross Dallow;
- Director: City Services;
- Group Manager: Planning & Community Services;
- Representative of Youth Advocacy and Advisory Group (to be appointed by the Youth Advocacy and Advisory Group);
- Other members with particular expertise to be co-opted as required.

CARRIED

2176/2004

MOVED by Cr Hulse, seconded Cr Clews:

1. That the membership of the Youth Advocacy and Advisory Group, as established by the Projects Special Committee in August 2004, be confirmed as follows:
 - Council Representatives: Councillors who have been appointed as Advocates for Children and Youth (Chair and Deputy Chair);
 - 1 Representative from Henderson Community Board;
 - 1 Representative from Waitakere Community Board;
 - 1 Representative from Massey Community Board;
 - 1 Representative from New Lynn Community Board;
 - 2 Representatives from Waitakere Secondary Schools Youth Council;
 - 2 Representatives from Te Roopu Puawai O Waitakere;
 - 2 Student representatives from Unitec Waitakere;
 - Other members with particular expertise to be co-opted as required.
2. That the Projects Special Committee determines Councillor Cooper and Councillor Gilmour (both being Council-appointed Advocates for Children and Youth) to be respectively the Chairperson and Deputy Chairperson of the Youth Advocacy and Advisory Group.

CARRIED

11.04 am Cr Cooper left the meeting.

11.07 am Cr Cooper returned to the meeting.

PRECEDENCE OF BUSINESS

2177/2004

MOVED by Cr Clews, seconded Cr Hulse:

That Item 5: Tui Glen Heritage Jetty on Henderson Creek and Item 6: Waitakere Sports Complex Jetty be accorded precedence at this time.

CARRIED

DECLARATION OF INTEREST

9.50 am Cr Stone declared an interest and withdrew from the table, taking no part in the debate or decision on Item 5: Tui Glen Heritage Jetty on Henderson Creek.

5 TUI GLEN HERITAGE JETTY ON HENDERSON CREEK

2178/2004

MOVED by Cr Battersby, seconded Cr Cooper:

1. That the Tui Glen Heritage Jetty on Henderson Creek report be received.
2. That the Projects Special Committee approves the concept and design for the Tui Glen Heritage Jetty to be constructed on the site of the original jetty in Tui Glen Reserve on Henderson Creek, taking note of the corrections made to the report being that the annual maintenance cost for the Tui Glen Heritage Jetty on Henderson Creek is \$17,000.
3. That the Henderson and Massey Community Boards be supplied with a copy of this report and be advised of the Projects Special Committee's decisions.
4. That it be recommended to the Long Term Council Community Plan and Annual Plan Special Committee to consider funding the cleaning of obstructions in the Henderson Creek to facilitate utilisation of the jetties to be constructed in the area.

CARRIED

6 WAITAKERE SPORTS COMPLEX JETTY

10.40 am Cr Battersby left the meeting.

10.46 am Cr Stone returned to the table.

10.49 am Cr Battersby returned to the meeting.

2179/2004

MOVED by Cr Clews, seconded Cr Cooper:

1. That the Waitakere Sports Complex Jetty report be received.
2. That the Projects Special Committee approves the concept for the Waitakere Sports Complex Jetty, taking note of the corrections made to the report being that the annual maintenance cost for the Waitakere Sports Complex Jetty is \$15,150.
3. That the Henderson and Massey Community Boards be supplied with a copy of this report and be advised of the Projects Special Committee's above decision.

CARRIED

2180/2004

MOVED by Cr Clews, seconded Cr Cooper:

That it be recommended to Council that consideration be given to a jetty being named Chris Tim Jetty in recognition of his contribution to the City and as a tribute to his achievements in the sport of yachting.

CARRIED

The Order of Business resumed at Item 4: Combined Significant Projects Update.

4 COMBINED SIGNIFICANT PROJECTS UPDATE

11.15 am Cr Hulse left the meeting.

2181/2004

MOVED by Cr Battersby, seconded Cr Clews:

That with regard to the Waitakere Central: Civic Centre project, due to time pressures on the construction contract and in line with the secondary vibration isolation measures reported to Council on 6 October 2004, the Projects Special Committee confirms that the following secondary vibration isolation measures be implemented from funding earmarked for this purpose by Council at their meetings on 6 October 2004:

- that polystyrene lining to the piles nearest the rail track as specified in the contract documents be replaced with Bentonite to increase the vibration isolation qualities, as recommended by the structural engineer;
- that portions of the on-grade ground-level floor slab be structurally suspended from the piled structure as recommended by the structural engineer.

CARRIED

2182/2004

MOVED by Cr Battersby, seconded Cr Booth:

1. That the Combined Significant Projects Update report be received.
2. That the individual projects in progress be reported back to the Projects Special Committee whenever there are any significant contract variations, alterations for buildings under construction, and any issues arising which require Council inputs.
3. That a report on the strategic issues on the subject of Housing for Older Adults be presented to the next meeting of the City Development Committee scheduled to be held on Thursday, 3 February 2005.

CARRIED

5 TUI GLEN HERITAGE JETTY ON HENDERSON CREEK

This item was considered following Item 3: Youth Facility Agreement.

A102

6 WAITAKERE SPORTS COMPLEX JETTY

This item was considered following Item 5: Tui Glen Heritage Jetty on Henderson Creek.

12.05 pm

The Chairperson thanked members for their attendance and attention to business and declared the meeting closed.

**CONFIRMED AT A MEETING OF THE PROJECTS
SPECIAL COMMITTEE HELD ON**

DATE:.....

CHAIRPERSON:.....

**MINUTES OF A MEETING OF THE ARTS AND EVENTS SPECIAL COMMITTEE HELD IN
THE CIVIC CENTRE, 6 WAIPAREIRA AVENUE, LINCOLN, WAITAKERE CITY,
ON WEDNESDAY, 8 DECEMBER 2004, COMMENCING AT 9.30 AM.**

PRESENT: Councillors DE Gilmour (Deputy Chairperson) (Presiding)
MFP Chan, JP
RI Clow
AK Corban, OBE, JP
VS Neeson, JP

IN ATTENDANCE: Director: Public Affairs
Manager: Democracy and Support Services
Manager: Arts
Manager: Public Affairs
Project Manager Democracy
Maori Community Arts Coordinator
Community Assistance Administrator: J Brown
Democracy Support & Sister City Liaison Officer: S Simiona

1 APOLOGIES

2257/2004

MOVED by Cr Neeson, seconded Cr Corban:

That apologies from Crs Cooper and Lawley for absence be received and sustained.

CARRIED

2 URGENT BUSINESS

There was no Urgent Business.

3 CONFIRMATION OF MINUTES

2258/2004

MOVED by Cr Corban, seconded Cr Neeson:

That the minutes of the Meeting of the Arts and Events Special Committee held on Thursday, 18 November 2004, as circulated, be taken as read and now be confirmed.

CARRIED

4 SISTER CITIES

2259/2004

MOVED by Cr Neeson, seconded Cr Clow:

That the Sister Cities report be received.

CARRIED

2260/2004

MOVED by Cr Clow, seconded Cr Neeson:

That the Council establish priorities for the development of its International Relationships through the Sister City Programme.

CARRIED

MOVED by Cr Corban, seconded Cr Neeson:

That the Chairperson of the Arts and Events Special Committee and Crs Booth and Chan be designated as Cultural Ambassadors for Waitakere City.

2261/2004

MOVED by Cr Clow, seconded Cr Neeson:

That the motion be put.

CARRIED

The Chairperson put the motion:

2262/2004

That the Chairperson of the Arts and Events Special Committee and Crs Booth and Chan be designated as Cultural Ambassadors for Waitakere City.

CARRIED

5 MATARIKI FESTIVAL UPDATE

2263/2004

MOVED by Cr Clow, seconded Cr Neeson:

That the Matariki Festival Update report be received.

CARRIED

6 GOING WEST BOOKS AND WRITERS FESTIVAL

2264/2004

MOVED by Cr Corban, seconded Cr Chan:

That the Going West Books and Writers Festival report be received.

CARRIED

7 EVENTS PROGRAMME

2265/2004

MOVED by Cr Neeson, seconded Cr Chan:

1. That the Events Programme report be received.
2. That \$2,000 of the Whopper Chopper funding be reallocated to the Titirangi Music Festival in 2004/2005 and that future support be budgeted by the Manager, Arts for consideration through the Annual plan and Long Term Council Community Plan process.
3. That \$1,000 be reallocated to the trolley Derby 2005.
4. That a contingency of \$2,000 be allocated to support for Christmas Parades in this calendar year.
5. That a contingency of \$1,500 be allocated to support Christmas in the Park in this calendar year.
6. That \$1,500 be allocated to support the Head to Head Multi-Sport Event.

CARRIED

8 COMMUNITY SPORT FUND ALLOCATION SUBCOMMITTEE REPLACEMENT REPRESENTATIVE

2266/2004

MOVED by Cr Neeson, seconded Cr Corban:

1. That the Community Sport Fund Allocation Subcommittee Replacement Representative report be received.
2. That Lynette Adams nomination is accepted as the Sport Waitakere representative for the Community Sport Fund Allocation Subcommittee effective immediately.

CARRIED

9 CREATIVE COMMUNITIES SCHEME ALLOCATION SUBCOMMITTEE

2267/2004

MOVED by Cr Neeson, seconded Cr Clow:

That the Meeting report of the Creative Communities Scheme Allocation Subcommittee held on Monday, 22 November 2004 and Reconvened on Tuesday, 23 November 2004 be received.

CARRIED

10 **COMMUNITY SPORT FUND ALLOCATION SUBCOMMITTEE**

2268/2004

MOVED by Cr Neeson, seconded Cr Clow;

That the Meeting report of the Community Sport Fund Allocation Subcommittee held on Thursday, 25 November 2004 be received.

CARRIED

10.55 am

The Chairperson thanked members for their attendance and attention to business and declared the meeting closed.

CONFIRMED AT A MEETING OF THE ARTS AND
EVENTS SPECIAL COMMITTEE HELD ON

DATE:.....

CHAIRPERSON:.....