WHANGAREI
DISTRICT COUNCIL

Standard Operating Procedure for Environmental Engineering Standards

28 July 2010

Creating the ultimate living environment

Table of Contents

1 Construction Management Plans (CMP)

General

The purpose of these plans is to ensure that safety of developers' staff and the public has been adequately addressed and that work will be undertaken with minimum inconvenience to affected persons and in a practical and economic manner with the least damage to the environment.

Generally these plans are only required for larger or difficult projects, and when required by conditions of contract or resource consent.

References

WDC Environmental Engineering Standards *(EES 2010)*

Whangarei District Plan

WDC Working Within Road Reserves Policy and Specification

WDC Road Opening Notice Application

WDC Application for Vehicle Crossing Permit

WDC Traffic Management Plans

Regional Water and Soil Plan for Northland

How

These notes should be read in conjunction with Clause 1.9 *(Construction Management Plans)* of Council's EES 2010.

Where required by Council, the consent holder shall submit a construction management plan and programme of works prepared by a suitably qualified and experienced person to Council's senior environmental engineering officer for resource consents, or supervising engineer for Council contracts and Council works, and receive written Council approval prior to works commencing on site.

Considerations

The plan should include, where applicable, but not be restricted to the following:

1 Council's resource consent number and property number, or other applicable Council file number.

2 Principal contractor, subcontractors, staff to be used, confirmation of necessary qualifications, and address for correspondence.

3 Names and telephone numbers of supervisory staff including after hours and mobile numbers.

4 Equipment and machinery to be used and available for use.

5 Confirmation of all insurances for all contractors and subcontractors, including Public Liability Insurance to a Council approved value *(see clause 1.4.1.6 of EES 2010),* and the policy expiry date(s), noting that Council will not accept responsibility for works or damage by any contractor prior to final acceptance of the work.

6 Submission of a project plan, and how and when works will be carried out, as applicable.

7 All notifiable works, health and safety procedures, first aid facilities, and safety officers.

8 Starting date, working days, hours of work, and estimated completion date.

9 Temporary Traffic Management Plan *(TTMP),* as necessary.

10 Noise control restrictions, and protection against vibration, where practicable.

11 Contingency and emergency procedures, hazard management and fire prevention.

12 Means of dust and sedimentation control *(restricting excavated areas, water carts, and similar, noting that the Northland Regional Council is responsible for monitoring of these activities)*

13 Use of public and private roads and access ways adjoining and within the project.

14 Staff, visitor, and machinery parking**,** site office location, ablution facilities, water sources, waste disposal, and similar.

15 Wheel washing, control of debris, and removal of debris from roads and access ways, as applicable.

16 Hazard identification, e.g. High and low voltage lines, contaminants, need for protective clothing and equipment, use and storage of explosives and hazardous goods noting that these items require specific consent in terms of statutory requirements.

17 Security fencing, signage and lighting, temporary vehicle entrance crossings, on site maneuvering, and similar.

18 Removal or weakening of support, protection of trees and environmental protection.

19 Fires and vegetation disposal, storage and stockpiling of materials.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

WHANGAREI DISTRICT COUNCIL
Forum North • Private Bag 9023 • Whangarei 0148 • New Zealand
Telephone: (09) 430 4200 • 0800 WDC INFO • 0800 932 463 • Facsimile: (09) 438 7632
Website: http://www.wdc.govt.nz · E-mail: mailroom@wdc.govt.nz

Construction Management Plan - Information Sheet

Client/Consent Holder _____

Postal address _____

_____

Job/Subdivision Name _____

Resource Consent No _____ Property Number _____

Site Address _____

_____

Agent _____

Address for correspondence _____

_____

Principal Contractor

Name _____

Postal address _____

_____

Contact Numbers

Office _____ After Hours _____

Mobile _____ Facsimile _____

Email _____

Qualifications _____

Insurance(s)	**Insurer**	**Amount ($)**	**Expiry Date**
Professional indemnity			
Public liability			

Supervisory staff

Name _____ Position _____

Telephone _____ After hours _____ Mobile _____

Name _____ Position _____

Telephone _____ After hours _____ Mobile _____

Name _____ Position _____

Telephone _____ After hours _____ Mobile _____

Name _____ Position _____

Telephone _____ After hours _____ Mobile _____

Name _____ Position _____

Telephone _____ After hours _____ Mobile _____

Name _____ Position _____

Telephone _____ After hours _____ Mobile _____

Sub Contractors

Name _____

Postal address _____

Contact Numbers

Office _____ After Hours _____

Mobile _____ Facsimile _____

Email _____

Qualifications/Experience _____

Type of work to be undertaken _____

Insurance(s)	**Insurer**	**Amount ($)**	**Expiry Date**
Professional indemnity			
Public liability			

Sub Contractors

Name _____

Postal address _____

Contact Numbers

Office _____ After Hours _____

Mobile _____ Facsimile _____

Email _____

Qualifications/Experience _____

Type of work to be undertaken _____

Insurance(s)	**Insurer**	**Amount ($)**	**Expiry Date**
Professional indemnity			
Public liability			

Sub Contractors

Name _____

Postal address _____

Contact Numbers

Office _____ After Hours _____

Mobile _____ Facsimile _____

Email _____

Qualifications/Experience _____

Type of work to be undertaken _____

Insurance(s)	**Insurer**	**Amount ($)**	**Expiry Date**
Professional indemnity			
Public liability			

Proposed start date _____ Is work to be staged ❒ yes ❒ no *(if yes provide details of staging)*

_____

_____

_____

Hours of work *(specify start/stop times and days to which they apply)*

Monday – Friday _____

Saturday _____

Sunday _____

Public holiday _____

Description of proposed on-site plant and machinery

Description	**Year**	**Emergency replacement**

Project Plan *(how and when work will be carried out)*

_____

_____

_____

Notifiable Work

Health and Safety Procedures

Safety Officer _____ First Aid _____

Noise and Vibration Controls

Dust and Sediment Control *(including preventing transport of debris onto roads) (Note NRC requirements)*

Use of roads, Staff parking, Machinery parking etc

Hazard and Emergency Control

Disposal of Debris and waste

Security, signage and temporary facilities and systems *(including site office ablution facilities etc as necessary)*

General

2 Traffic Management Plans

General

Where a Traffic Management Plan is required by Council, usually as part of a Council contract or conditions of resource consent, it shall define and demonstrate how the contractor intends to manage traffic in the various situations for the duration of the project and maintenance period, so that the site is safe at all times and there is minimal disruption to the normal flow of traffic on any publicly maintained road.

References

Transit New Zealand publication Code of Practice for Temporary Traffic Management in New Zealand *(2nd edition October 2002)*

WDC Working within Road Reserves Policy and Specification

WDC Environmental Engineering Standards

Whangarei District Plan

WDC Road Opening Notice Application

WDC Application for Vehicle Crossing Permit

WDC Construction Management Plans

How

A Traffic Management Plan *(the plan – H&S005)* shall be prepared by a suitably qualified and experienced person and be presented in a format which is consistent with the Transit New Zealand publication ***Code of Practice for Temporary Traffic Management in New Zealand (3rd edition, or latest update),*** and the applicant shall:

1 Submit and obtain written approval of the plan by Council's roading manager *(the engineer)* at least two days before any initial work is commenced. The plan shall include all proposed traffic control and other requirements, but the engineer shall retain the right to make comment or require amendment at any other time. ***Where there is a requirement for public notification,*** the plan must be submitted five days before any advertisement is to be placed.

2 Include detailed descriptions of the methods and procedures proposed for traffic control and safety, including assessment of:

Health and Safety Policies and Responsibilities

Amenities, and Environmental Policy

Emergency Evacuation Procedures/Responses

Injury Management and First Aid Procedures

Fire Prevention and Protection

Performance Standards/Evaluation Audits

Incident Reporting Recording Investigation Follow Up

Smoke Free Workplace

Hazard Management Using 'Site Specific Checklists'

3 Specify the manner in which all vehicles enter and leave the site.

4 Incorporate a contingency plan which shall detail steps to be taken by the contractor to get traffic moving as soon as delays in excess of the time specified in the contract occur

5 The hours of work.

6 The maximum acceptable delay of traffic due to work being performed on the project.

7 Specify the manner in which all vehicles enter and leave the site.

8 Incorporate a contingency plan which shall detail steps to be taken by the contractor to get traffic moving as soon as delays in excess of the time specified in the contract occur.

9 The hours of work.

10 The maximum acceptable delay of traffic due to work being performed on the project

Contractor's Responsibilities

1 Carry out temporary control of traffic through and/or around the work site in accordance with the approved plan which shall specify the equipment to be deployed and state the type of signs, beacons and lights to be displayed.

2 Ensure that no work commences on site until the plan has been approved, and that a copy of the approved plan is kept on site and/or available for inspection when requested by the engineer.

3 Ensure that all personnel under the contractor's control working at or near the work site, including the personnel of subcontractors engaged by the contractor, wear high visibility occupational safety garments ***in accordance with Section B3.***

4 Ensure all signs comply with ***Section E***. Where necessary, they shall have safely weighted bases or similar devices to prevent toppling from strong winds or passing vehicles.

5 Ensure that the sign layout is monitored and if necessary varied to ensure that an effective layout is in place, and that signs, lights, and barriers are removed or covered when they are no longer required.

6 Ensure that the distance for locating advanced warning signs is increased or additional signs be used where necessary, so they may be clearly viewed by approaching traffic.

7 The contractor shall cover conflicting permanent signs and remove the covers as appropriate without causing damage.

8 Ensure at all times that there is minimal disruption to the normal flow of traffic, and that no time delays occur exceeding times specified in the plan. The engineer reserves the right to suspend work if the traffic flow and/or safety of the motoring public is being affected to the extent that delays occur in excess of the time specified.

9 Ensure that traffic shall not be restricted to a single lane operation without the approval of the Engineer.

10 Ensure that in multi-lane areas only one lane in each direction shall be closed at any one time unless approved in advance by the engineer.

11 Ensure that construction traffic entering or leaving the working area drive in the direction of the prevailing traffic flow.

12 Ensure no detours are permitted without the written approval of the engineer.

13 Ensure all construction and work related vehicles entering or leaving a roadwork site operate the indicator type hazard warning flashers.

14 Where temporary traffic control measures are required, the contractor must take responsibility to ensure that they are in accordance with ***Clause 1.0 a.*** at all times.

15 The contractor shall programme work so that project activities affecting traffic flow are not carried out on-site during hours unnecessarily inconvenient to adjoining landowners.

Non-Conforming Traffic Control

If, in the engineer's opinion, traffic control does not conform to the agreed traffic management plan the engineer may instruct the contractor to:

1 Secure the site in a manner safe for the public; and

2 Cease all work until traffic control requirements are met.

If advised by the engineer that traffic control is non-conforming the contractor shall:

1 Immediately comply with the engineer's instructions, and

2 Recommence work only after traffic control requirements are met.

If these conditions are not met the engineer may, without further warning, take the necessary corrective measures and impose the costs involved on the contractor/developer.

Excessive Traffic Delays

The steps outlined in the Traffic Management Plan to deal with excessive traffic delays shall be implemented once the traffic delay exceeds 10 minutes. The contractor is responsible for monitoring of traffic delays.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

Traffic Management Plan Sample Form - H&S005

<table>
<tr><td>Traffic Management</td><td colspan="4">(To be completed by NZTA qualified Site Traffic Management Supervisor - STMS)</td></tr>
<tr><td>Plan Reference</td><td colspan="4">For Office Use Only</td></tr>
<tr><td>Organisation</td><td colspan="2">Contractor
(Name and address)</td><td colspan="2">Client
(Name and address)</td></tr>
<tr><td>Contract Name/Number</td><td colspan="4">(Include Council contract or resource consent number as applicable)</td></tr>
<tr><td rowspan="2">Location</td><td>Road Name(s)
(Specify which)</td><td>Road Level (1, 2, 3)
(Specify which category)</td><td>Speed Limit
(Normal speed limit)</td><td>From RP
(Start distance)</td></tr>
<tr><td colspan="3"></td><td>From RP
(End distance)</td></tr>
<tr><td>Description of Activity</td><td colspan="4">(Specify actual works to be undertaken)</td></tr>
<tr><td>Work Programme</td><td colspan="4">(Start to finish – attach schedule if necessary)</td></tr>
<tr><td>Proposed/Restricted work hours</td><td colspan="4">(Describe what hours on which days. Comment regarding work on Sundays and Public Holidays as necessary)</td></tr>
<tr><td>Traffic Details (Main Route)</td><td colspan="2">AADT
(Known traffic counts)</td><td colspan="2">Peak Hour Flow
(Obtain from Council for arterial roads only)</td></tr>
<tr><td rowspan="3">Proposed Traffic Management method</td><td colspan="4">Active (Outline positive traffic management procedure from associated traffic management drawings)</td></tr>
<tr><td colspan="4">Unattended (Detail proposed signage and safety measures)</td></tr>
<tr><td colspan="4">Night (Detail proposed signage and safety measures)</td></tr>
</table>

Proposed Speed Restrictions	*(To be assessed as per COPTM Manual. Also apply for temporary speed restrictions. See separate form)*	
Positive Traffic Management Measures	*(Specify any additional signage and traffic management measures)*	
Contingency Plans	*(Outline alternative measures for extraordinary circumstances)*	
Public Notification	*(To be advised by the Council. e.g. Newspaper, radio, leaflet drop, variable message sign on site etc.)*	
Personal Safety	*(Advise regarding staff and public safety and how this will be achieved)*	
On-Site Monitoring	*(Who will monitor, how, and what frenquency?)*	
Other Information	*(e.g. Delays, calculations, exceptions to standards etc.)*	
Layout Diagrams	*(Detailed plans in terms of COPTTM Manual. Please note that diagrams copied from the COPTTM manual are NOT acceptable, diagrams have to represent the ACTUAL layout)*	
Traffic Controllers *(Include a Copy of Training Certificate or Warrant)*	*(Name and certificate number)* **Name (STMS)**	*(Office and mobile number)* **Phone (24 hours)**
	(Name and certificate number) **Name (TC)**	*(Office and mobile number)* **Phone**
Prepared By	*(Name and certificate number)* **Contractor**	**Date**
Approved/ Requires Amendment	*(Council to complete)* **Engineer**	*(Council to complete)* **Date**

3 Connection to Council Water Reticulation

General

These notes are to ensure that persons wishing to connect to any of Council's water reticulation systems follow the correct procedure.

Applications generally come in 3 categories:

1 Public utility service connections/disconnections, including water meter only, and connections/ disconnections as part of building consent.

2 Public utility service connections/disconnections as part of land use resource consent conditions.

3 Public utility service connections/disconnections as part of land subdivision resource consent conditions.

References

WDC Environmental Engineering Standards *(EES 2010)*

WDC Public Utility Services Application Form *(See Council website)*

WDC Public Utility Service Application Form – Water Meter Only *(See Council website)*

WDC Water Services Division Specification for Registered and Licensed Contractors for Water Supply

WDC Water Services Specification for the Installation of Service Connections

Whangarei District Plan

WDC Working within Road Reserves Policy and Specification

WDC Road Opening Notice Application

WDC Construction Management Plans

WDC Traffic Management Plans

How

The applicant/resource consent holder shall engage a Council approved Independently Qualified Person (IQP), or Licensed/Registered Contractor for water supply, as applicable, to undertake all necessary investigations and reports, and provide all plans and calculations, and receive Council approval prior to any works commencing on site.

All connections into any existing Council water supply system shall be carried out by a Licensed Contractor. NB. See requirements for Licensed and Registered Contractors *(clause 1.10.4 of Council's EES 2010, or Council's website).*

Plans of proposed service connections shall include details of pipe/size, fittings and materials. These plans shall be signed by both Water Services staff and the Licensed Contractor prior to work being undertaken. The 'Public Utility Services Application Form' contains a list of Licensed Contractors for water supply.

Construction of new water reticulation as part of a development may be carried out by a Registered Contractor for water supply. *(See Council website for a list of approved Registered Contractors)*.

Public utility service connections/disconnections, including water meter only, and connections/reticulation as part of building consent:

1 Application for a water meter only shall be made using Council's 'Application for Public Utility Service Fast Track Water Meter Only' form which can be obtained from the Customers Services Division at Forum North, or via Council's website.

2 Application for any public utility service connection/disconnection shall be made using Council's 'Application for Public Utility Service Connection/Disconnection' form which can be obtained from the Customer Services Division at Forum North, or via Council's website.

Note Website access and forms can be obtained via: Documents – services – water – domestic, then select item required.

All inspections will be undertaken by Council's Water Services Distribution Technician *(WSDT).*

Public utility service connections/disconnections as part of Land Use and/or Subdivision Resource Consent:

3 Connections as part of resource consent do not require use of the 'Application for Public Utility Service Connection/Disconnection' form.

4 Connections/disconnections shall comply with the conditions of resource consent and will require submission of engineering plans certified by a Council approved IQP, where specified, and approved by the senior environmental engineering officer *(SEEO)* in conjunction with the Water Services Manager prior to works commencing on site.

5 Any plans of staged conditions of resource consent shall clearly identify each stage and proposed connection procedure.

6 Plans of connections into existing Council water mains *(live system)* shall include details of pipes, fittings, and valves proposed, and be approved by Water Services Manager *(or his delegated representative).*

7 Upon receiving engineering plan approval the licensed contractor shall discuss any connection into the live system with Council's water services distribution technician *(WSDT)* and provide details of when and how the work will be undertaken, who will be affected, which parts of the existing reticulation will require a 'shut down,' distribute any necessary warning leaflets and give 24 hours notice to all affected persons as agreed with the WSDT.

8 The licensed contractor shall arrange for the WSDT to inspect and approve any connection into the live system, including pipeline disinfection, prior to backfilling being undertaken. The WSDT shall advise the SEEO in writing of such inspections and approvals, confirming agreement to backfill***. All other inspections of water pipelines and connections of all sizes not immediately connecting in a live system will be undertaken by the SEEO***.

9 The consent holder shall be responsible for payment of all processing and inspection fees.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

4 Pumping Stations and Ownership

General

Installation of pumping stations for water and sewer reticulation services may be necessary in certain circumstances where gravity systems or inadequate pressure cannot be provided, as applicable. These notes specify Council requirements unless otherwise approved or resolved by Council. ***Applicants should check Northland Regional Council and building consent requirements before proceeding with design and construction works.***

Pumping stations are usually constructed in 4 categories:

1 Private pumping stations that do not require Council approval, or are approved as part of Council's works programme.

2 Private pumping stations approved as part of building consent.

3 Pumping stations *(private & public)* approved as part of land use resource consent conditions.

4 Pumping stations *(private & public)* approved as part of subdivision resource consent conditions.

Note A licensed contractor is required to connect into any Council infrastructure. *(See clause 1.10.4 of Council's EES 2010)*

References

WDC Environmental Engineering Standards *(EES 2010)*

Whangarei District Plan

The Building Act

Regional Water and Soil Plan for Northland

WDC Working Within Road Reserves Policy and Specification

WDC Road Opening Notice Application

WDC Traffic Management Plans

WDC Construction Management Plans

WDC Application for Vehicle Crossing Permit

WDC Connection to Council Water Reticulation

How

Sewer pumping stations as part of resource consent

1 Part 5 of Council's EES 2010 specifies design criteria for sewer pumping stations, of which engineering plans and design details are to be submitted to the senior environmental engineering officer for approval.

2 Resource consent conditions of approval will normally specify necessary pumping station requirements. Any specific agreement and/or cost sharing between the consent holder and Council must be confirmed in writing prior to work commencing on site. *(See clauses 1.4.1.4 and 1.4.1.5 of Council's EES 2010)*

3 Where lots being created will be reliant on an individual private pumping station *(i.e. not publicly owned or maintained)* pumping mains shall be constructed from the property boundary and connect into Council reticulation, or as specified as part of resource consent conditions.

Costs for pumping pipelines will be borne by the developer unless specifically approved otherwise in writing by Council.

4 Generally lots being created that are reliant on a private pumping station will have a consent notice registered on the title(s) specifying 'The owner shall be responsible for the supply, installation, and ongoing maintenance and associated costs for a private sewage pumping station and pumping pipeline connecting into the existing Council sewerage reticulation system', or similar.

5 Common private pumping stations shared by more than one property, unit title, or similar, may be approved by conditions of resource consent, but will need to satisfy the following:

i A binding legal agreement imposed on the affected titles securing permanent location and access to the station for all users. This may necessitate creating a separate lot, easement, or similar.

ii The agreement shall clearly specify each users maintenance/contract responsibilities, upgrading, payments, and similar.

6 Council will not normally accept maintenance responsibility for any pumping station serving less than the equivalent of 6 residential lots.

7 Any Council maintained pumping station must be located on Council owned or controlled land as agreed, or on a separate lot vested with Council and provided with legal access and necessary services easement(s), which if via private access, does not require regular maintenance or contributions by Council.

8 All Council maintained pumping stations shall be constructed in terms of Council's EES 2010.

9 Consent holders are reminded of building consent and Northland Regional Council requirements. See 'Regional Water and Soil Plan for Northland'

10 No work is to commence on any part of any Council infrastructure without prior written approval of Council.

Water pumping stations as part of resource consent

1 Part 6 of Council's EES 2010 specifies design criteria for water pumping stations, reservoirs, and similar, which should be discussed and agreed with Council' water services manager *(WSM)* prior to submission of engineering plans. Actual engineering plans and design details are to be submitted to the senior environmental engineering officer *(SEEO)* who will confer with the WSM for approval.

2 Any Council maintained pumping station must be located on Council owned or controlled land as agreed, or on a separate lot vested with Council and provided with legal access and necessary services easement(s), which if via private access, does not require regular maintenance or contributions by Council.

3 Any agreement and/or cost sharing between the parties shall be confirmed in writing prior to work commencing on site. *(See clauses 1.4.1.4 and 1.4.1.5 of Council's EES 2010)*.

4 All Council maintained pumping stations shall be constructed in terms of Council's EES 2010.

5 Consent holders are reminded of building consent and Northland Regional Council requirements.

6 No work is to commence on any part of any Council infrastructure without prior written approval of Council.

Council acceptance and maintenance responsibility of sewer and water pumping stations

1 The developer, electricity supplier, and an authorised Council officer shall agree in writing on a changeover date for Council to become responsible for any future electricity supply payments.

2 An authorised Council officer shall jointly inspect and test all equipment and facilities with the contractor and confirm in writing that the pumping station is completed and suitable for Council to accept maintenance responsibility on a specific date, subject to any bond provisions.

3 The authorised Council officer shall provide the SEEO with a copy of any final written approval.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

5 Road Opening Notice Application

General

No work shall be undertaken within the legal boundaries of any Council controlled public road, whether formed or not, without approval of a completed 'Road Opening Notice Application' form.

Such work includes resource consents, any Council or private contracts, installation and/or removal of utility services, roads, tracks, vehicle entrance crossings, construction of yards, cattle stops, gates, fencing encroachments, excavations or filling of any type, planting or removal of trees, construction or deviation of drains, installation of pipelines, cables, bridges, culverts, retaining structures, and similar. Also see 'Licence to Occupy' procedure notes.

References

WDC Environmental Engineering Standards *(EES 2010)*

Whangarei District Plan

The Building Act

Regional Water and Soil Plan for Northland

WDC Working Within Road Reserves Policy and Specification

WDC Application for Vehicle Crossing Permit

WDC Construction Management Plans

WDC Traffic Management Plans

How

1 Road opening notice application forms can be obtained free at the Customer Services Division at Forum North, or from Council website.

2 Completed forms are to be submitted to Council with an approved copy being received by the applicant prior to any work commencing on site.

3 Consent holders should note requirements for approved licensed and registered contractors, traffic management plans, construction management plans, and engineering plans.

4 Where specified in the road opening notice conditions of approval, the consent holder shall advise Council's roading manager when works are complete.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

6 Licence to Occupy a Public Road

General

Under certain circumstances Council will allow landowners to occupy a public road or part of a public road. Such approvals shall be confirmed by means of a legal agreement in writing, but Council will not be responsible for any damage, theft, or loss, during the period of occupation.

This type of occupation refers to sections of legal roads without carriageways maintained by Council, and the approved occupier shall not undertake any works on the road that destabilises, erodes, or restricts access by others, such as locked gates, construction of structures or buildings, cattle yards, fencing encroachments, excavations or filling, planting or removal of trees, constructing underground services, and similar, unless specifically approved in the written agreement.

The applicant will be responsible for any costs incurred with processing the application, and reinstating the site.

Occupation of public or general reserve land other than roads is not covered by these notes, and enquiries for such should be referred to Council's Property and Community Services Manager.

References

WDC Environmental Engineering Standards *(EES 2010)*

Whangarei District Plan

Regional Water and Soil Plan for Northland

WDC Working Within Road Reserves Policy and Specification

WDC Road Opening Notice Application

WDC Application for Vehicle Crossing Permit

WDC Construction Management Plans

WDC Traffic Management Plans

How

Persons wishing to enter into an agreement with Council for occupation of any area of road should submit an application in writing to Council's roading manager, which includes the following:

1 A site plan, description, and details of proposed activities.

2 The intended start and finish of the occupation.

3 Details, and/or any written approval of other landowners affected by the occupation.

4 No work or occupation of the road is to proceed until written approval has been received.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

7 Fencing of Covenanted Areas

General requirements

Resource consent approvals, Council resolutions, or other decisions, may require certain areas of land to be fenced to remain free of stock or vehicle access, or similar.

References

Council's Environmental Engineering Standards *(EES 2010)*

The Fencing Act

Whangarei District Plan

How

Unless specified or agreed otherwise, all fencing shall be standard posts, wires, and battens, as detailed in the Second Schedule of the Fencing Act.

Any fence line clearing shall be carried out as practicable to avoid damage to tree roots, and restrict unnecessary earthworks or potential erosion.

Only one gate shall be erected along the fence perimeter, in a location suitable for stock removal from within the covenanted area, and for vehicle access where necessary for pest and weed control, unless specified otherwise in writing. The gate shall be suitably wired or locked closed at each end at all times, other than when removing stock or undertaking any authorised activities.

The landowner/tenant is responsible for ensuring adequate maintenance of covenant fencing, and any stock found grazing within such areas is to be removed immediately, and the entry location secured where known, to avoid damage of area being protected. Disregard of these provisions could lead to prosecution.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

8 Use of Explosives – Procedures Manual

General

From time to time it may be necessary to use explosives when undertaking construction works on Council projects, or other works on road reserves or Council land. No explosives shall be used unless expressly approved in writing by an authorised Council officer familiar with the project under construction.

References

WDC Environmental Engineering Standards *(EES 2010)*

WDC Working Within Road Reserves Policy and Specification

WDC Road Opening Notice Application

Whangarei District Plan

WDC Traffic Management Plans

WDC Construction Management Plans

Considerations

Explosives and detonators shall be stored, handled, and controlled in accordance with statuary requirements, and Council bylaws.

Explosives shall only be used under the control of a fully qualified and competent person under the relevant regulations, and shall only be used in moderate charges.

The authorised Council officer shall approve the time at which shots will be fired, and be notified in writing 24 hours in advance of firing. The contractor must produce evidence at that time confirming compliance with statutes and regulations.

All residents and the general public in the danger area shall be warned of, and kept away from any risk.

Traffic in the danger area shall be stopped or diverted while there is danger from firing or clearing operations.

Every charge, and all ground that might be shattered, shall be adequately covered to prevent fragments flying, and any damage caused by the blasting operations shall be made good at the contractor's expense.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

9 Dewatering

General

Where dewatering is required on Council contracts or resource consents for undertaking deep pipe laying, or similar, the contractor must ensure that local residents and public access and services are not unnecessarily inconvenienced by such operations.

References

WDC Environmental Engineering Standards *(EES 2010)*

WDC Working Within Road Reserves Policy and Specification

Regional Water and Soil Plan for Northland

WDC Road Opening Notice Application

WDC Traffic Management Plans

WDC Construction Management Plans

Considerations

If the contractor fails to take adequate steps to control the water, or if an authorised Council officer considers the methods being adopted by the contractor are endangering the foundations of any services or facilities, or causing unnecessary nuisance, the officer may require other methods be adopted.

Persons operating dewatering pumps for extended periods likely to inconvenience local residents, particularly after normal working hours, and overnight, must provide noise baffle systems to ensure that pump noise is reduced as much as possible. Such measures may include surrounding the pump(s) with hay bales and/or other acceptable systems, noting potential fire hazards and safety concerns.

All pumps, pipelines, and other equipment must be suitably located to cause the least inconvenience for access, safety, and noise, particularly after hours, and have suitable safety signage and lighting.

The contractor shall notify local residents 24 hours in advance of any intention to restrict access to their property, and either install temporary overnight access if required, or provide safe vehicle parking and pedestrian access within a reasonable distance from the affected property, if occupied.

No stormwater or groundwater shall be permitted to enter any sewer system, nor sewage discharged into the stormwater system or on the road surface.

The contractor shall be responsible for making good any lifting and/or relocation of pipes due to flooding of any trench, and cleaning up any damage and silt affecting drainage systems.

The contractor shall not permit flooding of any properties, footpaths or roadways, as the result of their activities, nor leave silt deposits unless agreed with the landowner.

Subsoil water shall be kept below subgrade aggregate level, and no dewatering outside the approved trench area will be permitted where services or facilities may be endangered by land shrinkage.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

10 Electricity Services - Building and Excavations

General

Where building, excavating, or maneuvering of machinery, is being carried out in close proximity to overhead or underground electricity services as part of a Council contract or resource consent, the contractor must liaise with an approved electricity provider before any work commences on site that is likely to affect such services.

References

NZECP 34 *(NZ Electricity Code of Practice)*

AS/NZS 3000

WDC Environmental Engineering Standards *(EES 2010)* Part 8

Whangarei District Plan

WDC Construction Management Plans

Considerations

Northpower generally undertakes work ranging from 230 volts to 33,000 volts.

Transpower generally undertakes work ranging from 50,000 volts to 220,000 volts.

All enquiries should be made to Northpower or Transpower.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

11 Non Complying Shared Access Widths

General

These notes cover rights of way, access lots, and common access areas, on private and public land as part of resource consent or Council contracts, unless approved otherwise in writing by Council.

References

WDC Environmental Engineering Standards *(EES 2010)*

WDC Working Within Road Reserves Policy and Specification

Whangarei District Plan

WDC Road Opening Notice Application

WDC Application for Vehicle Crossing Permit

WDC Traffic Management Plans

Considerations

Applicant's who propose developments or land subdivision via under width legal *(and under width formed)* access ways, should seek written consent from all landowners having access rights over the access, using Council's resource consent application forms.

If written consent is obtained from all landowners having access rights for a development or subdivision via an under width shared access, Council may adopt one of the following, when assessing the application:

1 Leave the access as is, or upgrade to a standard within the existing legal width considered safe and practical by Council for its proposed use. This may include provision of vehicle passing bays, or similar.

2 The applicant to obtain necessary additional legal access width and form such combined width to a complying standard, or as considered adequate by Council.

3 Decline the application.

If written consent cannot be obtained from all landowners having access rights over an under width legal access, the applicant or Council may request that the application be limited or fully publicly notified for objection.

If publicly notified, the application will be determined by an independent commissioner appointed by Council at the applicant's expense.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

12 Vehicle Entrance Crossings

General

These notes cover urban, rural, commercial, and industrial vehicle entrance crossings for all situations.

References

WDC Environmental Engineering Standards *(EES 2010)*

WDC Working Within Road Reserves Policy and Specification

Whangarei District Plan

WDC Road Opening Notice Application

WDC Traffic Management Plans

WDC Construction Management Plans

How

1 ***Vehicle crossings as part of resource consent or Council works contracts do not require use of the 'Application for Vehicle Crossing Permit' form***, and details may be shown on engineering plans in terms of Council's EES 2010 to be approved by the senior environmental engineering officer *(SEEO),* or Council supervising engineer, as applicable.

2 ***All other vehicle crossing applications*** are to be in terms of Council's EES 2010 and require use of the 'Application for Vehicle Crossing Permit' form to be read in conjunction with 'Information to Applicants in Regard to Completing an Application for Vehicle Crossing Permit' and 'Utility Connections and Road Crossings' which can be obtained from the Customer Services Division at Forum North, Whangarei.

Resource consents

1 The applicant/consent holder shall engage a suitably qualified and experienced person *(or an IQP if required by Part 1.5 of EES 2010)* to undertake all necessary investigations for the proposed vehicle crossing(s) and provide all plans and details in terms of Council's EES 2010 and receive written Council approval prior to any works commencing on site, unless otherwise confirmed by resource consent or Council contract conditions of consent.

2 Any plans of staged conditions of resource consent shall clearly identify work to be undertaken in each stage.

3 All work shall be inspected and approved as specified in Part 1 of the EES 2010.

4 The applicant/consent holder shall be responsible for payment of all processing and inspection fees.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

13 Road Naming

General

Council has a specific policy for naming roads and accessways for developments as part of resource consent, and where otherwise required by Council conditions.

References

WDC Environmental Engineering Standards *(EES 2010)*

WDC Road Naming – Advice to Developers

WDC Road Naming Policy

How

1 See clause 3.4.13 *(Road Names & Signs)* of Council's EES 2010.

and

2 Council website http://www.wdc.govt.nz/

Road name advice search road naming.

Road name policy search road naming.

Note Internal Council (TRIM) system can use:

- 09/36362 for road name advice
- 09/53114 for road name policy

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

14 Non Complying Access within Road Reserves

General

Part 3 of Council's EES 2010 specifies minimum requirements for Council maintained roads. It is acknowledged that some existing Council maintained roads do not meet minimum standards specified. However, this should not be seen as a precedent for Council to maintain additional under width roads, or roads with excessive gradients, as the long term intent is to have all Council roads complying with the EES 2010.

Any works carried out on a road reserve with Council approval that do not comply with Council's EES 2010 are unlikely to be maintained by Council, unless specifically confirmed in writing by Council.

References

WDC Environmental Engineering Standards *(EES 2010)*

Whangarei District Plan

WDC Working Within Road Reserves Policy and Specification

WDC Road Opening Notice Application

WDC Traffic Management Plans

Regional Water and Soil Plan for Northland

How *(Refer to Part 3 of EES 2010)*

1 The applicant shall apply to Council in writing inclusive of compelling reasons for approval to undertake the desired non complying works, which may necessitate providing a traffic report prepared by a Council approved IQP.

2 Road construction for developments will normally be by means of Council contracts, resource consent conditions of approval, specific Council resolutions, Council permits, or written approval of the roading manager.

3 Conditions of consent will probably require the applicant to provide and receive written Council approval of engineering plans prepared by an IQP or other suitably qualified and experienced person.

4 The developer should check for any Northland Regional Council requirements. *(See Regional Water and Soil Plan for Northland).*

5 The approved contractor/developer shall obtain 'Road Opening Notice' approval, and will most likely be required to obtain approval of a 'Traffic Management Plan' and any other consent as required by Council, which may include submission and approval of a 'Construction Management Plan depending on the size and type of project.'

Note Any variation of road upgrading consent conditions, other than confirmed by Council resolution or resource consent conditions, shall be at the discretion of the roading manager, and must be confirmed in writing before any construction work commences within the road reserve.

6 All work carried out within a Council maintained section of a road reserve must be approved and be inspected by an authorised Council officer when completed. All Council costs shall be borne by the applicant.

7 Council will supply and position all 'Council maintenance ends here' signs unless specifically confirmed otherwise in writing.

8 Any road upgrading on a Council controlled public road will require submission of RAMM data *(Road Asset Maintenance Management)* prepared by a Council approved RAMM data engineer/technician.

Note Enquiries regarding current approved RAMM engineers/technicians should be referred to Council's traffic projects engineer.

9 The contractor must provide evidence of suitable insurance cover to the approval of Council. *(See Part 1 Insurance of EES 2010)*

10 Any work within, or occupation of a non Council maintained section of a road reserve, other than state highways, requires written Council approval. *(See Procedures Manual for 'Licence to Occupy a Public Road)*

11 Any work on a State Highway must obtain consent from NZ Transport Agency.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

15 Service Lanes

General

Whangarei District Plan rules for subdivision and development specify necessary access construction requirements for commercial and industrial developments.

Service Lanes shall be created and constructed for all commercial and industrial accessways not constructed to full road standard, and may remain privately owned and maintained or vested with Council, unless otherwise specifically approved by Council *(See EES 2010 Table 3.1 and notes).*

References

WDC Environmental Engineering Standards *(EES 2010)*

Whangarei District Plan

WDC Working Within Road Reserves Policy and Specification

WDC Road Opening Notice Application

WDC Traffic Management Plans

How

1 Any application or agreement for creating and constructing a service lane shall be subject to written conditions of consent as imposed by Council. Engineering plans prepared by a Council approved IQP will need to be submitted and be approved by Council prior to any works commencing on site.

2 All service lanes providing access to commercial/industrial subdivisions and developments shall be constructed as per Table 3.1 and sheet 9 of Council's EES 2010, and have construction work approved and inspected by an authorised Council officer.

3 All costs for constructing and vesting a service lane with Council shall be borne by the developer unless otherwise agreed beforehand in writing by Council.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

16 RAMM Data and Road Safety Audits

General

Council contracts, and Whangarei District Plan and Council's EES 2010 rules for subdivision and development, may specify necessary road construction works to be undertaken.

All work undertaken on a Council controlled public road or access must be supported by RAMM data where requested, which will usually be specified as conditions of Council consent

Where there is concern regarding traffic safety, Council may require a Road Safety Audit.

References

Transit New Zealand publication Code of Practice for Temporary Traffic Management in New Zealand *(2nd edition October 2002)*

WDC Working within Road Reserves Policy and Specification

WDC Environmental Engineering Standards

Whangarei District Plan

WDC Road Opening Notice Application

WDC Construction Management Plans

WDC Traffic Management Plans

How

RAMM Data *(Road Asset Maintenance Management)*

1 All work on a Council controlled public road or access must be supported by RAMM data prepared by a Council approved RAMM engineer/technician and submitted to, and approved by Council's roading manager.

Note Enquiries regarding current approved RAMM engineers/technicians should be referred to Council's traffic projects engineer.

2 The cost of obtaining, processing, and approving RAMM data shall be borne by the developer, unless specifically approved otherwise in writing by Council.

3 The consent holder's surveyor/engineer shall be responsible for recording and providing Council's traffic projects engineer with all known information:

e.g. Soil testing results, Clegg and/or benkelmen results, as-built plans including levels, culvert sizes and drainage details, all signage and markings, typical road cross-sections, aggregate types and depths, source of aggregate and dockets, sealing dockets, concrete dockets, footpaths, streetlighting details, vehicle crossings, details of features and structures. *(See clause 1.11.1.4 and 1.11.1.4b of Council's EES 2010)*

Road Safety Audit

1 Where there is concern regarding traffic safety, ***Council may require a Road Safety Audit*** to be undertaken by a Council approved IQP or traffic engineer, or other suitably qualified and experienced person approved in writing by Council's roading manager.

2 The Road Safety Audit shall be undertaken in terms of the Transfund New Zealand 'Road Safety Audit Procedures for Projects' Guideline Manual No. TFM9 dated November 2004, or subsequent amendments, and receive written approval of Council's roading manager unless specified otherwise in writing by the roading manager, or conditions of resource consent, or Council contract, or Council resolution.

3 The cost of obtaining, processing, and approving a Road Safety Audit shall be borne by the developer, unless specifically approved otherwise in writing by an authorised Council officer.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

17 Health and Safety Policies and Procedures

General

Council's Health and Safety Policies and Procedures can be viewed on Council's website

References

Council's Environmental Engineering Standards *(EES 2010)*

Council's Health and Safety Policies and Procedures

http://www.wdc.govt.nz/ - search health and safety policy.

Note Council is currently reviewing health and safety forms and procedures, particularly those used in contract documents

Insurance

Developers/contractors shall be responsible for public and staff safety and insurance as per Council's EES 2010.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

18 Easements and Public Drains

General

Various utility services, and similar, require easements over private and publicly owned land for access and to protect the location of such services, plus allow for maintenance, replacement, and additional services to be installed.

References

Council's Environmental Engineering Standards *(EES 2010)*

The Local Government Act 1974 and Amendments

The Resource Management Act 1991 and Amendments

The Reserves Act

The Electricity Act 1992 and Amendments

Land Transfer Act 1952 and Amendments

ARC TP 10 and ARC TP 108 *(Auckland Regional Council)*

How

Easements

1 Easements may be voluntary, imposed by conditions of resource consent, Council resolution, or required by statute.

2 Easements must be of adequate width for the purpose of which they are being created, including having suitable practical access and stability for installation of services, maintenance, and upgrading.

3 Easements shall be located giving consideration to the location of existing buildings and facilities, and probable future development and servicing of the land affected.

4 Easements must be accessible at all times to parties having right of access, maintenance, and upgrading.

5 Persons having easement rights must comply with the easement conditions, and have a responsibility to contact and give adequate notice to the owner *(servient tenement)* of their *(dominant tenement)* purpose and intention to enter the property at a convenient time.

6 Any person undertaking work within an easement on another property has a responsibility to ensure that all work and any damage to the property is reinstated and completed as soon as possible.

7 Any landowners in dispute regarding easement access or conditions should seek legal advice.

8 Council will not normally require an easement over a utility service connection for water, sewer, or stormwater, to the boundary of the property being served by a Council maintained system. However, it does reserve the right to require an easement in favour of the users where a new connection is being provided off an existing service as part of a private development when the service does not strictly comply with Council's EES 2010, or when it is a service that Council does not wish to maintain for economic or practical reasons.

9 ***Specific Council approval is necessary for any easement created in favour of Council***, and no easement should be shown on a survey plan without being brought to the attention of the processing officer beforehand. It should not be assumed that Council will automatically accept

responsibility for a service such as a pumping station or stormwater drain/ overland flowpath etc because it serves several properties on private land.

10 The cost of creating any easement whether in favour of Council, or not, shall be borne by the developer, unless otherwise agreed in writing by Council.

Public Drains

1 Council will normally accept maintenance responsibility for an authorised and correctly constructed drainage system on Council controlled public land.

2 Any drainage system on private land, or a combination of private and public land where the public land is controlled by Council, should be confirmed by legal agreement or Council resolution before being acknowledged as a public drain to be maintained by Council.

3 Any public land not controlled by Council should have an easement other legal agreement confirmed in favour of Council prior to any drainage system on that land being maintained by Council. This will require consent of the controlling authority of the public land.

4 The cost of legalising any public drain as part of a private development shall be borne by the developer, unless otherwise agreed in writing by Council.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

19 Stormwater Detention Ponds, Maintenance and Ownership

General

The Regional Water and Soil Plan for Northland includes requirements to provide stormwater attenuation as part of land subdivision and developments.

References

ARC TP 10 and ARC TP 108 *(Auckland Regional Council)*

The Local Government Act 1974 and Amendments

The Resource Management Act 1991 and Amendments

The Regional Water and Soil Plan for Northland

WDC Environmental Engineering Standards *(EES 2010)*

Whangarei District Plan

How

1 Council's EES 2010 requires stormwater attenuation for subdivisions to satisfy the following:

a At the time of building consent, stormwater attenuation will be required for all impervious surfaces to ensure that the total peak runoff from each lot shall not exceed 80% of the peak runoff from the site pre-subdivision for both the 5 year and 100 year average recurrence interval *(ARI)* plus 20%, assessed using the methods laid out in the EES 2010, to the satisfaction of the senior environmental engineering officer *(refer Chapter 4 EES 2010).*

2 Stormwater detention ponds shall be constructed to satisfy ARC TP 10 and Council's EES 2010. The boundary of the land vested with Council shall be fenced and provided with a gate as agreed with Council, and fencing shall comply with the Second Schedule of the Fencing Act. *(See clauses 4.10 – 4.12 of Council's EES 2010 for pond requirements)*

3 The developer/surveyor shall be responsible for ensuring that any privately owned attenuation pond complies with the conditions of consent, the Regional Water and Soil Plan, and that ownership/easements and maintenance responsibilities are covered by a suitable legal agreement registered on the titles of affected properties.

4 The developer/surveyor shall be responsible for ensuring that any proposed Council owned detention pond complies with the conditions of consent, the Regional Water and Soil Plan, that ownership is transferred to Council, and that the ponds are inspected and approved by an authorised Council officer who shall confirm in writing that Council will accept maintenance responsibility from a specified date.

5 The Council officer in (4) above shall also advise Council's Waste and Drainage Manager in writing of his/her responsibility for maintenance of the pond(s) when confirming Council acceptance for ownership and maintenance to the developer/surveyor.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

20 Ownership of Infrastructure and Land

General

Council may agree to accept ownership and/or control of various areas of land and facilities required to provide public services.

These notes only relate to services as part of Council's Environmental Engineering Standards *(EES 2010)*.

References

The Local Government Act 1974 and Amendments

The Resource Management Act 1991 and Amendments

WDC Environmental Engineering Standards (EES 2010)

Whangarei District Plan

How

1 See other comments and conditions detailed in Council's Procedures Manual relating to construction and ownership of services and facilities.

2 Any land, services, and/or facilities, to be owned and/or controlled by Council must be formally approved in writing by Council and comply with any conditions as imposed by Council.

3 Land vested with Council must have practical and formed legal access and be free of legal encumbrances, noxious plants, and animals, unless otherwise agreed and approved in writing by Council.

4 Any facilities and/or services to be maintained by Council must be in good working order, be free of encumbrances, and have been constructed lawfully without adversely affecting any other land, unless otherwise agreed and approved in writing by Council.

5 Where developers are seeking Council contributions or other assistance towards undertaking specific works and services, such contributions shall be agreed in writing by Council prior to any purchase of materials or commencement of construction of these activities *(see clause 1.4.1.5 Cost of the Work and Council Contributions specified in Council's EES 2010).*

6 Any land lease agreement shall be approved by specific conditions of consent and in terms of acknowledged Council policy *(refer to Council's property and community services manager)*

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

21 Catchment Management Plans

General

Council has Catchment Management Plans of various areas, but they do not cover the complete District.

References

The Local Government Act 1974 and Amendments

The Resource Management Act 1991 and Amendments

WDC Environmental Engineering Standards *(EES 2010)*

Whangarei District Plan

The Regional Water and Soil Plan for Northland

How

1 Go to Whangarei District Council's website www.wdc.govt.nz - search 'catchment management plans'.

2 Go to Northland Regional Council's website www.nrc.govt.nz - search Regional Water and Soil Plan for Northland.

3 For detailed explanation contact WDC stormwater asset engineer on 09 430 4230 ext 8968.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

22 Bridges, Culverts, Underpasses, Retaining Walls and Other Structures

General

Applicants and consent holders should be aware that building consent is required for structures with a surcharge, including bridges and retaining walls, and they should seek advice from Council approved Independently Qualified Person *(IQP)* prior to undertaking any on site works.

References

www.wdc.govt.nz - search IQP, scroll to 3. *(Council's document management system TRIM 09/20069)*

WDC Environmental Engineering Standards *(EES 2010)*

The Building Act

Whangarei District Plan

The Regional Water and Soil Plan for Northland

How

See clause 3.4.16 Bridges Culverts and Retaining Walls in Council's EES 2010.

1 All Council and privately maintained bridges constructed as part of resource consent must comply with the 'Transit NZ Manual' *(NZ Transport Agency).*

2 Works on public roads must comply with Northland Regional Council *(NRC)* and Building Act requirements.

Note Check for NRC requirements for the location of structures spanning waterways, and approval of waterway areas. Building consent is required for structures, plus retaining walls with a surcharge. See both documents for additional requirements.

3 Any type of structure or work undertaken on a public road requires a 'road opening notice' and written Council consent prior to work commencing on site.

4 Stock underpasses may be constructed within Council controlled public roads in accordance with Council's 'Stock Underpasses Policy 2010'.

5 Obtain 'Road Opening Notice'. See Council website www.wdc.govt.nz - search 'working within road reserves'.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

23 Vesting and Closing Roads

General

Vesting and closing public roads is required from time to time as part of resource consent, or Council resolution.

References

The Local Government Act 1974 and Amendments

The Resource Management Act 1991 and Amendments

WDC Environmental Engineering Standards (EES 2010)

Whangarei District Plan

How

1 Any proposal to close an existing Council controlled public road, part of an existing Council controlled public road, or vest land as public road, should be submitted and/or recommended by a licensed cadastral surveyor or registered professional surveyor to ensure that correct procedure is followed, and that no existing properties are disadvantaged for complying practical and legal access.

2 Council approval may be obtained by resource consent, or Council resolution, and should be supported by a recommendation for approval from Council's roading manager.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

24 Working within Road Reserves Policy and Specification

General

Any work undertaken within a Council controlled public road shall comply with Council's 'Working within Road Reserves Policy and Specification.'

References

WDC Environmental Engineering Standards *(EES 2010)*

The Building Act

Whangarei District Plan

The Regional Water and Soil Plan for Northland

WDC Road Opening Notice Application

WDC Application for Vehicle Crossing Permit

WDC Traffic Management Plans

How

See Council website www.wdc.govt.nz - search 'working within road reserves'.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

25 Registered and Licensed Contractors

General

Specialist work on utility services to be transferred to Council is often restricted to approved Licensed and Registered contractors who have demonstrated that they have the resources and competency to undertake such works, particularly for health and safety purposes. i.e. connections to live water and sewer reticulation.

References

WDC Working within Road Reserves Policy and Specification

WDC Environmental Engineering Standards *(EES 2010)*

Whangarei District Plan

WDC Road Opening Notice Application

WDC Construction Management Plans

WDC Traffic Management Plans

How

1 See Section 1.10.4 of Council's EES 2010.

2 Contractors must be able to provide evidence of adequate insurances for undertaking the work requested. See Section 1.4.1.6 of Council's EES 2010.

3 See Council's website www.wdc.govt.nz.

4 Council's Internal (TRIM) system can use 09/52765 dated 4/3/2010 for 'Specification for Registered and Licensed Contractors for Water Supply'.

5 Use TRIM 09/87955 dated Jan 2010 for 'Application for Public Utility Service Connection/ Disconnection' *(for all connections other than resource consents)* which includes a list of licensed water supply and waste and drainage contractors.

6 Licensed contractors in 5 above are required to connect all water and sewer connections into 'live' systems. See Council Practice Manual note No. 3 'Connection to Council Water Reticulation' for water connection procedure.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

26 Council Road Maintenance Termination

General

Part 3 of Council's EES 2010 specifies minimum requirements for Council maintained roads. It is acknowledged that some existing Council maintained roads do not meet minimum standards specified. However, this should not be seen as a precedent for Council to maintain additional under width roads, or roads with excessive gradients or unsuitable alignment, as the long term intent is to have all Council roads complying with the EES 2010.

References

WDC Environmental Engineering Standards *(EES 2010)*

Whangarei District Plan

WDC Working Within Road Reserves Policy and Specification

WDC Road Opening Notice Application

WDC Traffic Management Plans

How

1 All Council maintained roads have specific measured distances recorded by the roading manager, who shall also determine what sections of which roads shall be maintained by Council, unless otherwise confirmed by Council resolution.

2 Road reserves constructed in terms of Table 3.1 and Table 3.2 of Part 3 of EES 2010 would normally be maintained by Council, unless there is a non complying length of road between the existing Council maintained road and the length of road suggested for Council maintenance responsibility. *(See 1 above).*

Note Lack of sufficient test results/ measurements/ inspections etc would also normally result in Council refusing to accept the road as public asset.

3 Council will supply and position all 'Council maintenance ends here' signs unless specifically confirmed otherwise in writing.

4 Any road upgrading on a Council controlled public road will require submission of RAMM data *(Road Asset Maintenance Management)* prepared by a Council approved RAMM data technician.

Note RAMM data forms can be found using TRIM 06/337644.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

27 Building over Public Sewers Policy

General

The Council may approve building over public sewers when compelling evidence is provided confirming that other practical and economic options have been exhausted. *(Refer WDC EES 2010, and, in particular, Section 5.9.1).*

Note Similar conditions will relate to building over stormwater reticulation systems, noting that provision must be made for overland flow paths with an extent suitable of containing the flows from a 1%AEP storm event, *(plus 20%).* These overland flowpaths will normally be required to be protected by an easement in gross to WDC.

References

WDC Environmental Engineering Standards 2010 *(EES 2010)*

Whangarei District Plan

How

WDC Environmental Engineering Standards 2010 *(EES 2010),* Section 4.8.1.1.1

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

28 Typical Stormwater Soakholes and Attenuation Systems

General

The Council may approve on site stormwater soakholes and attenuation systems where soil types and conditions allow or require such, particularly in urban, commercial, and industrial areas, where disposal systems have limited capacity.

Soakage rate must be determined using the methods outlined in E1 of the New Zealand Building Code.

All such systems are to be designed to be serviceable. (Examples can be found on following page)

References

www.wdc.govt.nz - search IQP, scroll to 3

Council TRIM system - search 09/20069

WDC Environmental Engineering Standards *(EES 2010)*

The Building Act

Whangarei District Plan

The Regional Water and Soil Plan for Northland

How

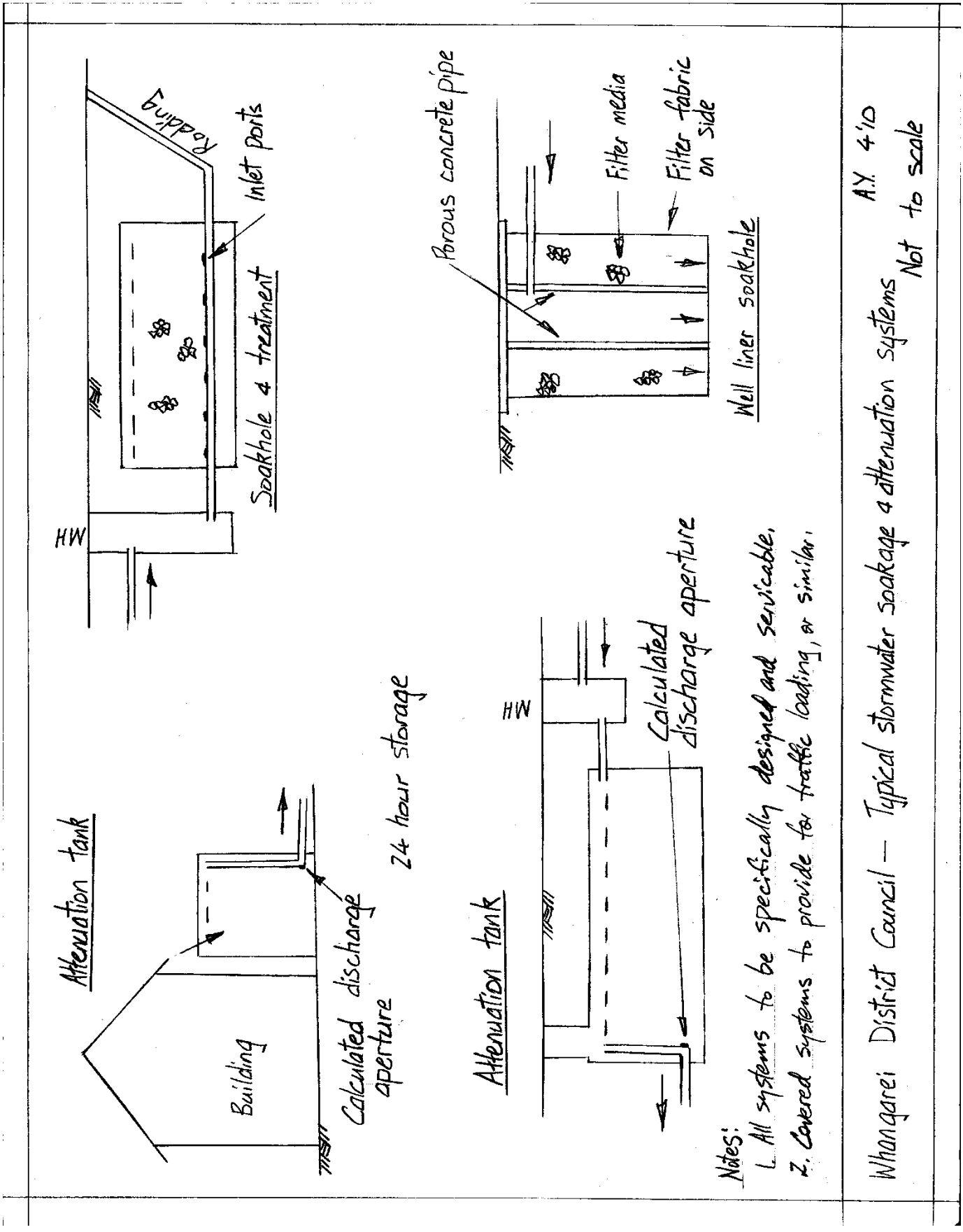
Specific design is required by a Council approved independently qualified person.

Typical types of systems are shown on the attached plan labelled 'Typical stormwater soakage and attenuation systems.

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*


Roading
Inlet ports
Soakhole & treatment
HW
Porous concrete pipe
Filter media
Filter fabric on side
Well liner soakhole
Attenuation tank
Building
Calculated discharge aperture
24 hour storage
Attenuation tank
HW
Calculated discharge aperture
Notes:
1. All systems to be specifically designed and serviceable,
2. Covered systems to provide for traffic loading, or similar.
Whangarei District Council — Typical stormwater soakage & attenuation systems
A.Y. 4'10
Not to scale

29 As-Built Plans

General

As-built plans are required for all underground services and for all Council controlled infrastructure. The attached as-built plans A11938 (4 sheets) show a typical layout of suitable as-built details.

References

WDC Environmental Engineering Standards *(EES 2010)*

How

1 Part 1.7 to 1.11 of Council's EES 2010 generally specifies Council requirements.

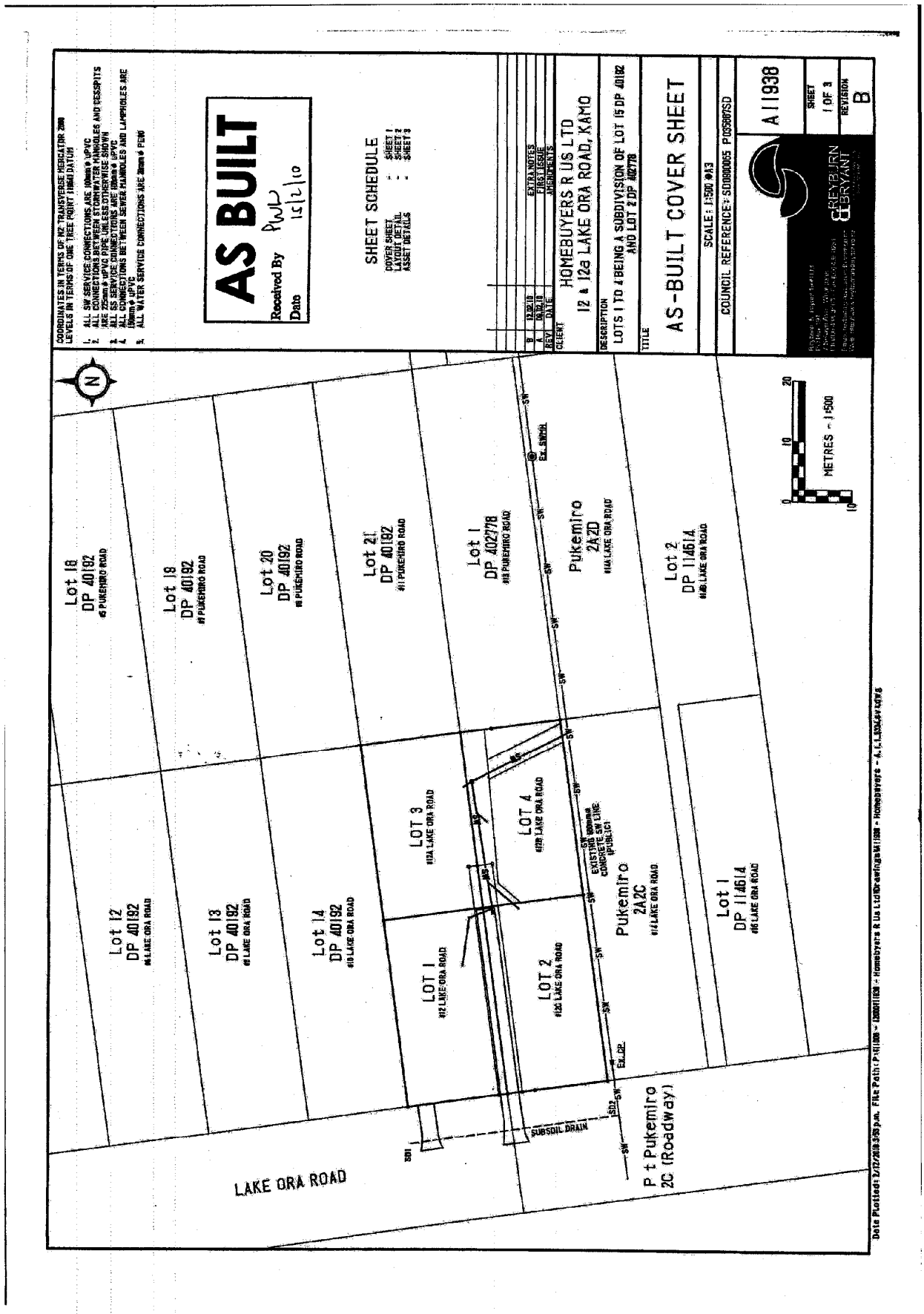
2 Developers are also reminded of RAMM data requirements specified in Part 1.11.1.4 of Council's EES 2010 to be prepared and submitted by a Council approved RAMM data technician. .

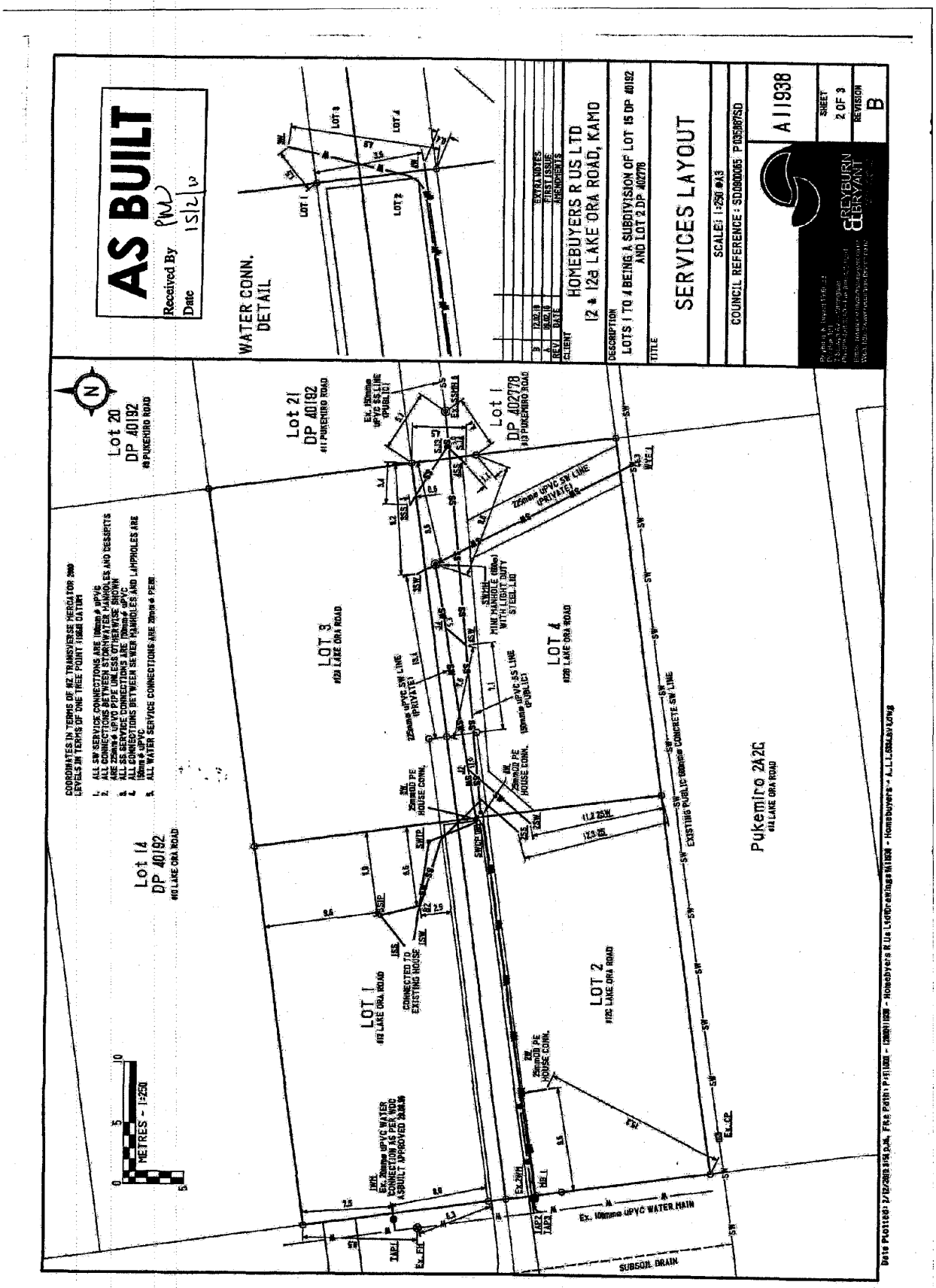
Note RAMM data forms can be found using TRIM 06/337644.

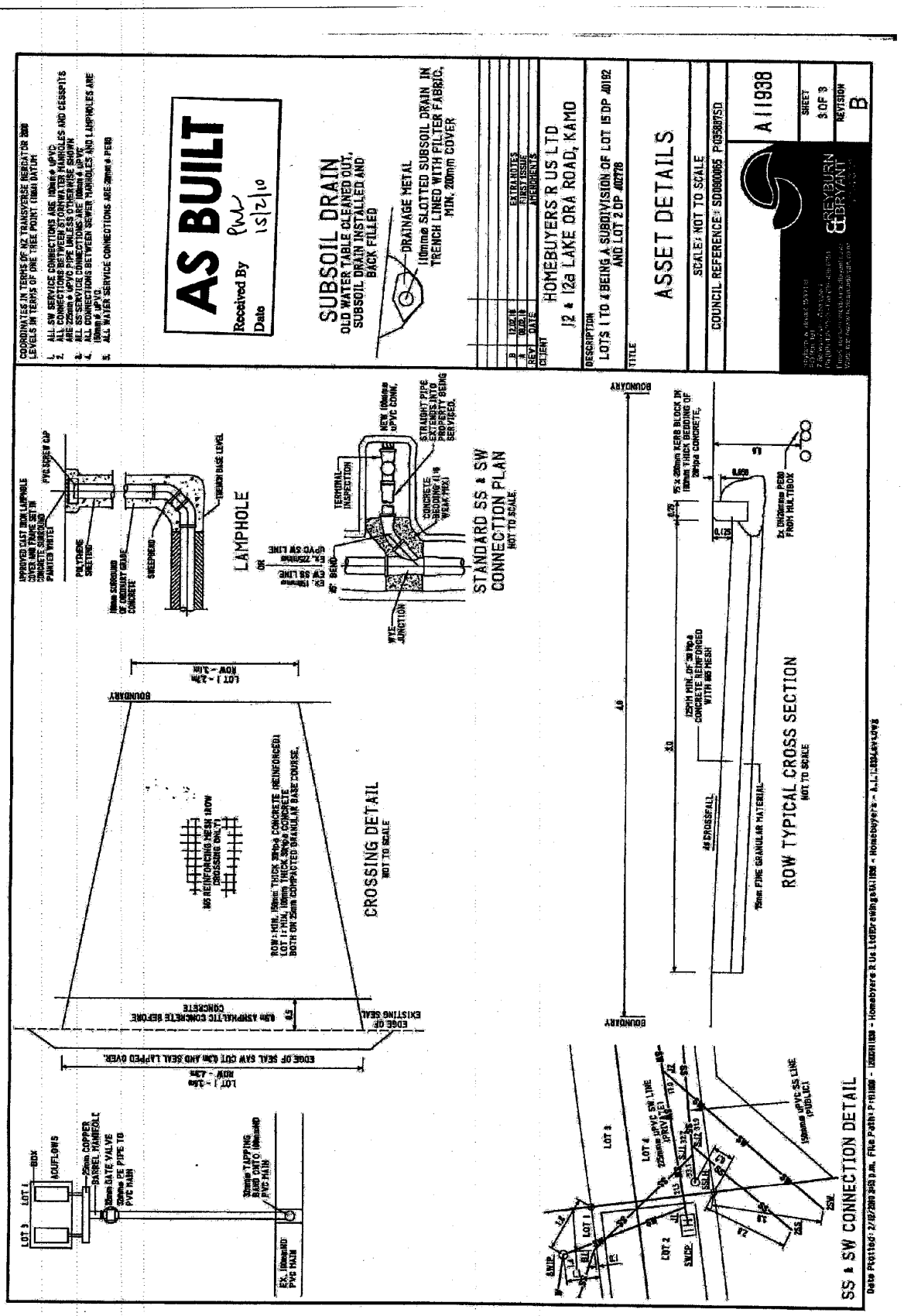
Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*


AS BUILT
Received By
Date
SHEET SCHEDULE
COVER SHEET : SHEET 1
LAYOUT DETAIL : SHEET 2
ASSET DETAILS : SHEET 3
HOMEBUYERS R US LTD
12 & 12a LAKE ORA ROAD, KAMO
LOTS 1 TO 4 BEING A SUBDIVISION OF LOT 15 DP 40192 AND LOT 2 DP 402778
AS-BUILT COVER SHEET
SCALE: 1:500 @A3
COUNCIL REFERENCE: SD0800065 P10598/SD
A11938
SHEET 1 OF 3
REVISION B
GREYBURN BRYANT
METRES ~ 1:500
LAKE ORA ROAD
Lot 18 DP 40192 #5 PUKEMIRO ROAD
Lot 19 DP 40192 #7 PUKEMIRO ROAD
Lot 20 DP 40192 #9 PUKEMIRO ROAD
Lot 21 DP 40192 #11 PUKEMIRO ROAD
Lot 1 DP 402778 #13 PUKEMIRO ROAD
Pukemiro 2A2D #14A LAKE ORA ROAD
Lot 2 DP 114614 #16 LAKE ORA ROAD
Lot 12 DP 40192 #8 LAKE ORA ROAD
Lot 13 DP 40192 #6 LAKE ORA ROAD
Lot 14 DP 40192 #10 LAKE ORA ROAD
LOT 3 #12A LAKE ORA ROAD
LOT 4 #12B LAKE ORA ROAD
LOT 1 #12 LAKE ORA ROAD
LOT 2 #12C LAKE ORA ROAD
Pukemiro 2A2C #14A LAKE ORA ROAD
Lot 1 DP 114614 #16 LAKE ORA ROAD
P t Pukemiro 2C (Roadway)
SUBSOIL DRAIN
EXISTING 600mm CONCRETE SW LINE (PUBLIC)


AS BUILT
Received By
Date
WATER CONN. DETAIL
HOMEBUYERS R US LTD
12 & 12a LAKE ORA ROAD, KAMO
LOTS 1 TO 4 BEING A SUBDIVISION OF LOT 15 DP 40192 AND LOT 2 DP 402778
SERVICES LAYOUT
SCALE: 1:250 @A3
COUNCIL REFERENCE: SD080005
A11938
SHEET 2 OF 3
REVISION B
REYBURN & BRYANT
Lot 20 DP 40192 #9 PUKEMIRO ROAD
Lot 21 DP 40192 #11 PUKEMIRO ROAD
Lot 1 DP 402778 #13 PUKEMIRO ROAD
Lot 14 DP 40192 #10 LAKE ORA ROAD
LOT 3 #2A LAKE ORA ROAD
LOT 4 #2B LAKE ORA ROAD
LOT 1 #1E LAKE ORA ROAD
LOT 2 #2C LAKE ORA ROAD
Pukemiro 2A2C #11 LAKE ORA ROAD
METRES - 1:250
SUBSOIL DRAIN


AS BUILT
Received By
Date
SUBSOIL DRAIN
OLD WATER TABLE CLEANED OUT, SUBSOIL DRAIN INSTALLED AND BACK FILLED
DRAINAGE METAL
100mmø SLOTTED SUBSOIL DRAIN IN TRENCH LINED WITH FILTER FABRIC, MIN. 200mm COVER
HOMEBUYERS R US LTD
12 & 12a LAKE DRA ROAD, KAMO
LOTS 1 TO 4 BEING A SUBDIVISION OF LOT 15 DP 80192 AND LOT 2 DP 80798
ASSET DETAILS
SCALE: NOT TO SCALE
COUNCIL REFERENCE: SD080065 P0580750
A11938
SHEET 3 OF 3
REVISION B
GREYBURN BRYANT
LAMPHOLE
STANDARD SS & SW CONNECTION PLAN
NOT TO SCALE
CROSSING DETAIL
NOT TO SCALE
ROW TYPICAL CROSS SECTION
NOT TO SCALE
SS & SW CONNECTION DETAIL
BOUNDARY
EXISTING SEAL
EDGE OF SEAL SAW CUT 63m AND SEAL LAPPED OVER.
63m ASPHALTIC CONCRETE BEFORE COMPACTION
ROW - 20m
LOT 1 - 20m
ROW - 4.2m
LOT 1 - 4.2m
ROW : MIN. 150mm THICK 30Mpa CONCRETE REINFORCED WITH N8 REINFORCING MESH (CROSSING ONLY).
LOT 1 : MIN. 100mm THICK 30Mpa CONCRETE BOTH ON 25mm COMPACTED GRANULAR BASE COURSE.
N8 REINFORCING MESH (ROW CROSSING ONLY).
125MM MIN. OF 30 Mpa CONCRETE REINFORCED WITH N8 MESH
75mm FINE GRANULAR MATERIAL
AS REQUIRED
15 x 200mm KERB BLOCK IN 100mm THICK BEDDING OF 20Mpa CONCRETE.
2x DN/Amm PE80 PRUM MULTIBOX
APPROVED CAST IRON LAMPHOLE WITH 150mm DIA. SEATING CONCRETE SURROUND PAINTED WHITE
PVC RUBBER GAP
POLYTHENE SHEETING
150mm SURROUND OF ORDINARY HOUSE CONCRETE
SWEEPHEAD
FINISHED KERB LEVEL
TERMINAL INSPECTION
NEW 100mm uPVC CONN.
STRAIGHT PIPE LAID INTO PROPERTY BEING SERVICED.
CONCRETE BEDDING (1:8 WEAK MIX)
45° BEND
WYE JUNCTION
EX. 225mm uPVC SW LINE OR EX. 225mm SS LINE
NEW 100mm uPVC SW LINE
NEW 150mm uPVC SS LINE
EX. 100mmØ PVC MAIN
100mm TAPPING BAND ONTO 100mmØ PVC MAIN
25mm COPPER BARREL MANIFOLD
25mm GATE VALVE
25mm PE PIPE TO PVC MAIN
BOX
HOUSEFLOWS
LOT 1
LOT 3
LOT 4
LOT 2
LOT 5
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APPENDIX B

SD0900065 R035687.SD

11938 HOMBUYERS 'R' US

COMPCODE	Xref	UnitType	Description	InstDate	ExpLife	Xcoord	Ycoord	Zpoord	USINVERT	DSINVERT	Material	Size	Quantity	SerialNo	Surface	MFctr
						WATER										
WMTR	1WM	DOMEST	Lot 1 meter box	Existing	15	171 6024.42	604 9542.82	203.19		250mm	PVC-U	480x260	1		EARTH	
WND	TAP 1	JUNC-T	Lot 1 tapping band	Existing	50	171 6023.81	604 9542.39				STD	100x20	1		EARTH	
HY	Ex. FH	TALL	Ex. Fire Hydrant	Existing	50	171 6023.74	604 9540.54	203.22		250mm	STD	STD	1		EARTH	
WMTR	EX2WM	DOMEST	Lot 2 meter box	Jan-10	15	171 6026.25	604 9591.03	203.05		250mm	PVC-U	220x270	1		EARTH	
WMTR	MB 1	DOMEST	Lots 3 & 4 Multibox	Jan-10	15	171 6028.24	604 9530.76	203.04		250mm	PVC-U	270x220	1		EARTH	
WV	GV	GATE-S	Gate valve	Jan-10	50	171 6025.77	604 9530.89	203.04		250mm	STD	150	1		EARTH	EDMI
WND	2W	ENDPT	End point of lot 2 conn.	Jan-10	50	171 6035.24	604 9529.93				PE80	20	1		EARTH	
WND	3W	ENDPT	End point of lot 3 conn.	Jan-10	50	171 6068.30	604 9539.89				PE80	20	1		EARTH	
WND	4W	ENDPT	End point of lot 4 conn.	Jan-10	50	171 6067.78	604 9536.39				PE80	20	1		EARTH	
WND	TAP 2	JUNC-T	Lot 2 tapping band	Jan-10	50	171 6025.08	604 9530.87				STD	100x20	1		EARTH	
WND	TAP 3	JUNC-T	Multibox tapping band	Jan-10	50	171 6025.15	604 9530.24				STD	100x20	1		EARTH	
						SEWER										
SMH	Ex. SSMH 6	STD		Existing	50	171 6090.87	604 9538.76	199.76	198.74	197.54	CC	1050	1		EARTH	
SMN		SEWER	Ex. SSMH 6 - SSLH	Dec-09	80				199.53	198.74	PVC-U	150	33.07		EARTH	
SND	SJ3	JUNC-Y	Lot 3 conn. To main	Dec-09	50	171 6088.18	604 9538.52				STD	100/150	1		EARTH	
SMN		SEWER	SJ3 - 3SS	Dec-09	80				199.42	198.79	PVC-U	100	4.35		EARTH	
END	3SS	ENDPT	Lot 3 conn. End	Dec-09	50	171 6084.60	604 9540.98	200.02			PVC-U	100	1		EARTH	
SND	SJ4	JUNC-Y	Lot 4 conn. To main	Dec-09	50	171 6087.88	604 9538.49				STD	100/150	1		EARTH	
SMN		SEWER	SJ4 - 4SS	Dec-09	80				199.18	198.80	PVC-U	100	1.83		EARTH	
END	4SS	ENDPT	Lot 4 conn. End	Dec-09	50	171 6088.56	604 9537.08	199.98			PVC-U	100	1		EARTH	
SND	SJ2	JUNC-Y	Lot 2 conn. To main	Dec-09	50	171 6059.12	604 9535.70				STD	100/150	1		EARTH	
SMN		SEWER	SJ2 - 2SS	Dec-09	80				201.16	199.48	PVC-U	100	4.20		EARTH	
END	2SS	ENDPT	Lot 2 conn. End	Dec-09	50	171 6056.43	604 9532.47	202.12			PVC-U	100	1		EARTH	
SND	SSLH	LAMP	Lamphole @ end of drive	Dec-09	50	171 6057.05	604 9535.59	201.04			STD	150	1		EARTH	
SND	SJ1	JUNC-Y	Lot 1 conn. To main	Dec-09	50	171 6058.82	604 9535.87				STD	100/150	1		EARTH	
SMN		SEWER	SJ1 - B1 (private)	Dec-09	80				199.80	199.50	PVC-U	100	4.46		CC	
SND	B1	BEND	152° bend in pipe	Dec-09	50	171 6055.70	604 9538.85	202.33			PVC-U	100	1		EARTH	
SMN		SEWER	B1 - B2 (private)	Dec-09	80				199.80	199.80	PVC-U	100	5.75		EARTH	
SND	B2	BEND	121° bend in pipe	Dec-09	50	171 6050.20	604 9540.64	200.7			PVC-U	100	1		EARTH	
SMN		SEWER	B2 - SSIP (private)	Dec-09	80						PVC-U	100	3.37		EARTH	
SND	SSIP	INSP	Inspection point	Dec-09	50	171 6049.99	604 9543.92				PVC-U	100	1		EARTH	
SMN		SEWER	SSIP - 1SS (private)	Dec-09	80						PVC-U	100	3.20		EARTH	
SND	1SS	ENDPT	Lot 1 conn. End	Dec-09	50	171 6046.88	604 9541.82				PVC-U	100	1		EARTH	
						STORMWATER										
STMN	SUBSOIL DRAIN	STORM	Slotted pipe	Dec-09					203.42	203.33	PVC	65	43.16		EARTH	
STND	SD1	ENDPT	110 Subsoil Drain	Dec-09	50	171 6017.68	604 9540.54				PVC	110	1		EARTH	
STND	SD2	ENDPT	110 Subsoil Drain	Dec-09	50	171 6022.80	604 9515.56				PVC	110	1		EARTH	
STIN	Ex. CP	FSUMP	Ex. 450x675	Existing		171 6031.55	604 9515.59	202.76	203.33	201.87	CC	450x675	1		EARTH	
STMN		STORM	Ex.CP-Ex.SWMH	Existing					201.86	198.94	CC	600	102.15		EARTH	
STMH	Ex. SWMH	STD		Existing	50	171 6132.73	604 9529.64	198.36	198.00	197.39	CC	1050	1		EARTH	
STND	WYE 1	JUNC-Y	225 into 600 Main	Dec-09	50	171 6086.89	604 9523.25				STD	225/600	1		EARTH	
STMN		STORM	Main to 600mm MH	Dec-09	80				200.36	199.86	PVC-U	100	18.00		EARTH	
STMH	SWMH	SPEC	600mm w/ light duty lid	Dec-09		171 6078.28	604 9539.50	200.48	199.86	199.86	CC	600	1		EARTH	
STMN		STORM	MH to 3SW	Dec-09	80				199.80	199.87	PVC-U	100	1.70		EARTH	
STND	3SW	ENDPT	Lot 3 SW Conn.	Dec-09	80	171 6077.37	604 9540.97				PVC-U	100	1		EARTH	
STND	J4	JUNC-Y	4SW into 225	Dec-09	50	171 6073.08	604 9538.62				STD	225/100	1		EARTH	
STMN		STORM	J4 to 4SW	Dec-09	80				200.24	199.92	PVC-U	100	2.26		EARTH	
STND	4SW	ENDPT	Lot 4 SW Conn.	Dec-09	80	171 6071.62	604 9536.90				PVC-U	100	1		EARTH	
STMN		STORM	SWMH to CP	Dec-09	80				200.65	200.52	PVC-U	225	22.06		EARTH	
STND	J2	JUNC-Y	2SW into 225	Dec-09	50	171 6061.50	604 9536.66				STD	225/100	1		EARTH	
STMN		STORM	J2 to 2SW	Dec-09	80				201.04	200.03	PVC-U	100	6.8		EARTH	
STND	2SW	ENDPT	Lot 2 SW Conn.	Dec-09	80	171 6057.12	604 9531.46				PVC-U	100	1		EARTH	
STN	SWCP	DSUMP		Dec-09	50	171 6056.53	604 9538.81	201.43		200.52	CC	450x675	1		CC	
STND	J1	JUNC-Y	SWIP into 225	Dec-09	50	171 6057.12	604 9535.91				STD	225/100	1		EARTH	
STMN		STORM	SWCP to SWIP	Dec-09	80				200.65	200.50	PVC-U	100	4.16		CC	
STND	SWIP	INSP		Dec-09	50	171 6056.55	604 9539.84	201.55			PVC-U	100	1		EARTH	
STMN		STORM	SWIP to 1SW	Dec-09	80				202.53	201.55	PVC-U	100	8.16		EARTH	
STND	1SW	ENDPT	Lot 1 SW Conn.	Dec-09	80	171 6047.46	604 9540.99				PVC-U	100	1		EARTH	

AS BUILT

Received By PWL

Date 15/2/10.

30 Parks and Reserves

General

Council's Environmental Engineering Standards detail necessary Parks and Reserves requirements as part of resource consent and other Council approvals. As these items are comprehensive, it is suggested that interested parties view both systems, which include means of undertaking such activities..

References *(Chapter 7 refers to Section 7 of Council's EES 2010)*

Procedure notes for Parks and Reserves have been prepared as follows, not necessarily in any particular order:

1 Designing and Testing Substrates for Rain gardens that Infiltrate, Store, and Treat Stormwater.

2 Business Environments – Amenity Streetscape Planting Design Guidelines. *(Includes Design Options – Layout considerations, Planters, Specimen Trees, Shrubs and Groundcovers).*

Business Environments - Amenity Streetscape Planting Design Guidelines. *(Includes photographic examples of mobile and in-ground or on-ground planters and/or tree pits, plus concrete, timber, and stone structures, plus specimen trees)*

3 Chapter 7 Open Space, Green Infrastructure, Landscapes, Parks and Reserves. *(Includes Pre-Application Considerations, Quality Assurance Requirements, Guideline Documents, and Green Infrastructure, Landscape and Design, Parks and Reserves to Vest)*

Quality Assurance Requirements and Records. *(Includes the designer, design records, and drawings).*

Schedule of Landscape Works Quality Control Schedules. *(Includes Quality Control, Workmanship, Certificate of Compliance, Quality Control Forms)*

QC.F1 Plant Materials Report Form - WDC.

QC.F3 Certificate of Compliance – Contractor No _____

4 Parks and Reserves – Variations to Part 8 NZS4404:2004. *(Includes Performance Criteria. Referenced Documents - Acts, Policies and Strategies. Referenced Document Standards).*

WDC Parks & Reserves Asset Development Standards -Technical Specifications. Revision Updates. *(Includes Permitted Standards, Clause 8.3.6 Pedestrian Accessways, Discretionary Standards).*

Design Styles, Finishes and Minimum Development Standards. (*Includes Reserve Design. Park and Reserve Access. Reserve Facilities, Structures and Furniture, Associated Documents future).*

5 EES 2010 Chp 7 Reference Documents. *(Includes Design Guides for further information and Best Practice, and additional Design and Environmental Management Guides).*

6 Green Infrastructure. (Includes Urban Forest (*Street trees, heritage trees, shade trees, coastal trees). Street Gardens. Reserves. Riparian, Revegetation and Stormwater Management areas).*

Urban Forest - Street trees, Heritage trees, Shade trees, Coastal trees. *(Includes Permitted – minimum requirements and additions).*

Design Styles, Finishes and Minimum Development Standards. *(Includes Turf, Riparian planting, Discretionary.*

7 Landscape and Design *(Includes Permitted Standards and Discretionary Items)*

8 Levels of Service and Scope of Design – Parks and Reserves. *(Includes Reserve Category, Levels of Service, Reserves and Open Space, Design Life, Service Requirements, Future Capacity, Policy Directions, Level of Council Design Input, Reserve Design - General, Reserve Design – Requirements for different types of Reserves).*

9 Pre – Application. *(Includes Reserve Planning, and Pre Application - Reserve Planning Agreement).*

10 Green Infrastructure, Landscape Areas and Parks and Reserves – Maintenance Standards on Assets to Vest. *(Includes Practical Completion, Maintenance Requirements – General, Contract and Consent Auditing, Maintenance of Turf, Maintenance of Soft Landscape, Maintenance of Hard Landscape).*

Adoption

These procedure notes have been approved for adoption by the Group Manager Environment

Signature *Date*

31 Samples of Internal Checklists used by Environmental Engineering Staff to Assess Applications, Plans etc for Completeness

Please note that these checklists are not exhaustive. They are also under continuous development so may change from time to time. You are urged to refer to the website to obtain the latest checklist.

Council intends developing checklists for professionals to assist in the provision of complete and sufficient applications.

It is expected that all applications will contain the relevant information listed in these checklists *(as a minimum).*

New applications/plans etc that do not comply with the S88 checklist requirements will normally be returned as incomplete. It is up to the professional/agent etc to ensure that all this information forms part of the original application. Clients should be advised by their professional of the requirements up front so that they fully understand the commitment required from them to progress the application. If there is doubt as to the required level of engineering related information required, the professional/agent should contact the SEEO for clarification before submission of the application.

S88 Engineering Information Check List (Internal)

Form SEEO/S88

Job/Subdivision Name _____

Property ID / DP number _____

Agent _____ Date _____

Site Address _____

Please ✓ the section(s) that apply to this application

☐	1	Site	☑	8	Stormwater - Public
☐	2	Geotechnical	☑	9	Parking and Manoeuvring
☐	3	Hazards	☐	10	Right of way/Accessways
☐	4	Reticulated Sewer	☐	11	Vehicle Entrance/Crossing
☐	5	On Site Sewer	☐	12	Roading
☐	6	Water (reticulated & non-reticulated)	☐	13	Landscaping and Planting
☐	7	Stormwater - Private			

Reasons for Rejection

Applicant is to provide the following information for assessment:

_____ _____

Team Leader Environmental Engineering Date

Requirement	Yes	No	N/A	IQP reqd	Comments
1 Site (Back to top)					
The following minimum level of information has been supplied in a report.					
All areas excluding Commercial/Industrial					
• Each lot has an identified house site.	☐	☐	☐		
• Assessment of work required to form a building platform/access (IE are cuts/fills contained within site?)	☐	☐			
• Each lot has an identified effluent disposal site.	☐	☐	☐		
• Each lot has an identified access route from the entrance to the house site.	☐	☐			
• Contour plan for areas proposed for development. (building site, effluent site, access to building site etc)	☐	☐			
• Each lot demonstrates complying parking and manoeuvring.	☐	☐			
• Existing private utility services have been located and shown to be contained within the lot they serve.	☐	☐	☐		
• Staged consent clearly details staging and that each stage is a stand-alone.	☐	☐	☐		
Commercial/Industrial					
• Each lot has an identified building platform/s.	☐	☐			
• Assessment of work required to form a building platform/access (ie are cuts/fills contained within site?)	☐	☐			
• Details of existing council/other services.	☐	☐	☐		
• Staged consent clearly details staging and that each stage is a stand-alone.	☐	☐	☐		
• Contour plan for areas proposed for development. (building site, effluent site, access to building site etc)	☐	☐			

Item	Requirement	Yes	No	IQP reqd	Comments
2	**Geotechnical – Site suitability for development**				
2.1	**Site is in a LOW hazard instability zone.** (Back to top)	☐			
	The following minimum level of information has been supplied in a report by an IQP:				
	• Walk-over inspection of the site and surrounding land. If there are any signs of potential issues, then:	☐	☐		
	• An opinion stated by a geotechnical specialist as to the stability/suitability of the land for development. This opinion should include the effects from excavation, filling, removal of vegetation, disposal of stormwater and effluent etc.	☐	☐	Yes	
2.2	**Site is in a MEDIUM hazard instability zone.** (Back to top)	☐		Yes	
	The following minimum level of information has been supplied in a report by an IQP (Geotech):				
	• Walk-over inspection of the site and surrounding land.	☐	☐		
	• Topographic survey or site profiles.	☐	☐		
	• Description of the geology and geomorphology of the area	☐	☐		
	• Definition of the nature and continuity of the strata over the whole area of land which is proposed to be developed (i.e. buildings, access and services), and to a depth below which slippage is most unlikely, by means of a test pit and/or drilling and/or augering, unless existing exposures are adequate.	☐	☐		
	• Assessment of the relative strength and sensitivity of the soil in each stratum in which, or interface on which sliding is possible.	☐	☐		
	• Assessment of likely groundwater levels and piezometric pressures in the strata during extreme infiltration conditions.	☐	☐		
	• An opinion stated by a geotechnical specialist as to the stability/suitability of the land for development. This opinion should include the effects from excavation, filling, removal of vegetation, disposal of stormwater and effluent etc.	☐	☐		
2.3	**Site is in a HIGH hazard instability zone.** (Back to top)	☐		Yes	
	The following minimum level of information has been supplied in a report by an IQP (Geotech):				
	• Walk-over inspection of the site and surrounding land.	☐	☐		
	• Topographic survey or site profiles.	☐	☐		
	• Description of the geology and geomorphology of the area.	☐	☐		
	• Definition of the nature and continuity of the strata over the whole area of land which is proposed to be developed (i.e. buildings, access and services), and to a depth below which slippage is most unlikely, by	☐	☐		

Item	Requirement	Yes	No	IQP reqd	Comments
	means of a test pit and/or continuous recovery core drilling, unless existing exposures are adequate.				
	• Determination of the peak and residual shear strength parameters (either from laboratory test or back analysis of relevant slope failures), and sensitivity of the soil in each stratum in which, or interface on which sliding is possible.	☐	☐		
	• Assessment of groundwater levels and piezometric pressures in the strata during extreme infiltration conditions.	☐	☐		
	• Analysis of possible failure mechanisms, relevant to specific geology and geomorphology of the site using effective stresses.	☐	☐		
	• An opinion stated by a geotechnical specialist as to the stability/suitability of the land for development. This opinion should include the effects from excavation, filling, removal of vegetation, disposal of stormwater and effluent etc.	☐	☐		
2.4	**Site falls OUTSIDE the hazard mapping areas.** (Back to top)	☐		Yes	
	The following minimum level of information has been supplied in a report by an IQP (Geotech):				
	• Walk-over inspection of the site and surrounding land.	☐	☐		
	• Topographic survey or site profiles.	☐	☐		
	• Description of the geology and geomorphology of the area.	☐	☐		
	• Definition of the nature and continuity of the strata over the whole area of land which is proposed to be developed (i.e. buildings, access and services), and to a depth below which slippage is most unlikely, by means of a test pit and/or drilling and/or augering, unless existing exposures are adequate.	☐	☐		
	• An opinion stated by a geotechnical specialist as to the stability/suitability of the land for development. This opinion should include the effects from excavation, filling, removal of vegetation, disposal of stormwater and effluent etc.	☐	☐		
	Depending on the outcome of investigation above, a determination as to whether the ground is low, medium or high instability, and further information supplied if it is considered medium or high instability, in terms of requirements above.	☐	☐		

Item	Requirement	Yes	No	N/A	IQP reqd	Comments
3 Hazards (Back to top)						
3.1	**Flooding hazard exists.**	☐			Yes	
	The following minimum level of information has been supplied in a report by an IQP.					
	• Determination of flood extent and level in 1%AEP event (+20%).	☐	☐			
	• What effect it will have on the development,.	☐	☐			
	• If flooding does affect the development, mitigating measures taken to minimise/eliminate effects	☐	☐	☐		
	• What effect the development will have on the flooding (displacement/redirection of flooding etc)	☐	☐			
3.2	**Development is within the Coastal hazard 1, 2 zones**	☐			Yes	
	*The following minimum level of information has been supplied in a report by a **CPEng specialising in coastal marine engineering:***					
	• An assessment of the effects of storm surge, wave run-up etc.	☐	☐			
3.3	**Development is within a Mine Hazard Zone**	☐				
3.3.1	**Mine Zone 1 (HIGH risk)**	☐			Yes	
	*The following minimum level of information has been supplied in a report by a **Geo-Specialist ONLY.***					
	• Walk-over inspection of the site and surrounding land/infrastructure/buildings, reporting any visible evidence of subsidence.	☐	☐			
	• A comprehensive Geotechnical report covering the subject and adjoining sites and will require extensive surface/subsurface investigations.	☐	☐			
	• An opinion stated as to the stability/suitability of the land for development.	☐	☐			
3.3.2	**Mine Zone 2 (MEDIUM risk)**	☐			Yes	
	*The following minimum level of information has been supplied in a report by a **Geo-Specialist ONLY.***					
	• Walk-over inspection of the site and surrounding land/infrastructure/buildings, reporting any visible evidence of subsidence.	☐	☐			
	• A comprehensive Geotechnical report covering the subject and adjoining sites and will require surface/subsurface investigation.	☐	☐			
	• An opinion stated as to the stability/suitability of the land for development.	☐	☐			
3.3.3	**Mine Zone 3 (LOW risk)**	☐			Yes	
	*The following minimum level of information has been supplied in a report by a **Geo-Specialist ONLY.***					

Item	Requirement	Yes	No	N/A	IQP reqd	Comments
	• Walk-over inspection of the site and surrounding land/infrastructure/buildings, reporting any visible evidence of subsidence.	☐	☐			
	• An opinion stated as to the stability/suitability of the land for development.	☐	☐			

Requirement	Yes	No	N/A	IQP reqd	Comments
4 Reticulated Sewer (Back to top)					
The following minimum level of information has been supplied in a report.					
• Evidence that the existing public reticulation can service the proposed development.	☐	☐		Yes	
• Evidence (calculations etc) that the proposed public reticulation can service the proposed development, and any undeveloped land beyond.	☐	☐	☐	Yes	
• Evidence that all lots can be serviced effectively with gravity connections.	☐	☐			
• Proposed sharing of existing connection- CCTV to prove condition is suitable.	☐	☐	☐	Yes	
• Building consent required for any modification to existing on-site reticulated sewer.	☐	☐	☐		

Requirement	Yes	No	N/A	IQP reqd	Comments
5 On-Site Sewer (Back to top)					
The following minimum level of information has been supplied in a report.					
• Detailed on-site investigation carried out in terms of NZS1547 (on WDC form EES-SEW1- to come).	☐	☐		Yes	
• Lot size larger than 2000m3.	☐	☐			
• Shared private system, requires RC from NRC.	☐	☐	☐	Yes	
• Shared private system, requires management plan, signed agreement between all parties and annual ongoing maintenance contract.	☐	☐	☐	Yes	
• Existing on-site to be shown contained within boundaries and functioning in accordance with NRC rules.	☐	☐	☐		
• Any modification of existing on-site system requires building consent.	☐	☐	☐		
• Shared system to become public, agreement from Waste Manager needed.	☐	☐	☐		

Requirement	Yes	No	N/A	IQP	Comments

				reqd	
6 Reticulated Water (Back to top)					
The following minimum level of information has been supplied in a report.					
• Evidence that the existing reticulation can service the proposed development. (pressures, flows etc)	☐	☐			
• Evidence (calculations, existing pressures/supply etc) that the proposed reticulation can service the proposed development, and any undeveloped land beyond.	☐	☐	☐	Yes	
• Details showing complying distances to fire hydrants in terms of SNZ PAS 4509:2008. (along accessible route, NOT radius!)	☐	☐			
• Fire risk classifications & calculations to confirm complying fire fighting capability in terms of SNZ PAS 4509:2008	☐	☐	☐	Yes	

Requirement	Yes	No	N/A	IQP reqd	Comments
6 Non-Reticulated Water (Back to top)					
The following minimum level of information has been supplied in a report.					
• Fire fighting supply. (complying with SNZ PAS 4509:2008)	☐	☐	☐		

Requirement	Yes	No	N/A	IQP reqd	Comments
7 Stormwater – On-Site (Back to top)					
The following minimum level of information has been supplied in a report.					
• Assessment takes into account the whole catchment (details sub-catchments) and the effects from and mitigation for the development proposed. Calculations, modelling etc required.	☐	☐		Yes	
• Plan showing existing and proposed contours, overland flowpaths, drains etc in the affected development areas (i.e. house site, effluent disposal area and access to house site).	☐	☐		Yes	
• Extent of overland flowpaths/flooding for 1% AEP event.	☐	☐	☐	Yes	
• Attenuation meets EES requirements. Calculations/model to support attenuation design.	☐	☐	☐	Yes	
• Soakage tests in terms of E1 of the building code for any proposed soakage.	☐	☐	☐	Yes	
• Details of treatment.	☐	☐	☐	Yes	
• Assessment of any wetlands included/proposed on the subject property.	☐	☐	☐	Yes	

Requirement	Yes	No	N/A	IQP reqd	Comments
8 Stormwater – Public (Back to top)					
The following minimum level of information has been supplied in a report.					
• Assessment takes into account the whole catchment (details sub-catchments) and the effects from and mitigation for the development proposed. Calculations, modelling etc required.	☐	☐		Yes	
• Evidence that the existing public reticulation can service the proposed development.	☐	☐		Yes	
• Evidence (calculations etc) that the proposed public reticulation can service the proposed development, and any undeveloped land beyond.	☐	☐	☐	Yes	
• Attenuation meets EES requirements. Calculations/model to support attenuation design.	☐	☐	☐	Yes	
• Details of treatment.	☐	☐		Yes	
• Assessment of any wetlands included/proposed.	☐	☐	☐	Yes	

Requirement	Yes	No	N/A	IQP reqd	Comments
9 Parking and Manoeuvring (Back to top)					
The following minimum level of information has been supplied in a report.					
• Turning curves demonstrate manoeuvrability.	☐	☐			
• Emergency vehicles can park/manoeuvre in terms of SNZ PAS4509:2008	☐	☐			
• Number of parking bays, including disabled, complies with requirements. (Building Act/District Plan)	☐	☐	☐		

Requirement	Yes	No	N/A	IQP reqd	Comments
10 Rights of Way/Accessways (Back to top)					
The following minimum level of information has been supplied in a report.					
• Assessment of stability of ground affecting the proposed ROW/access to house/development site/s.	☐	☐		Yes	
• Width complies with EES including entrance width.	☐	☐			
• Maximum gradient of 4.5% not exceeded.	☐	☐	☐		
• Entrance can achieve specified grades and break over angles.	☐	☐			
• Emergency vehicles have access in terms of SNZ PAS 4509:2008 including over bridges.	☐	☐			
• Passing bays have inter-visibility.	☐	☐	☐		
• Private bridges require specific design and building consent.	☐	☐	☐	Yes	
• Existing bridges need certification by CPEng and proof of Building Consent/COA.	☐	☐	☐	Yes	
• Retaining structures (including rock revetments) require specific design and building consent.	☐	☐	☐	Yes	
• Construction of access will not affect overland flowpaths (Up to and including 1%AEP event).	☐	☐		Yes	
• Consideration has been given to possible future subdivision (corridor width etc) and possibility of becoming public road.	☐	☐	☐		

Requirement	Yes	No	N/A	IQP reqd	Comments
11 Vehicle Entrance/Crossing (Back to top)					
The following minimum level of information has been supplied in a report.					
• Crossing complies with minimum distances from intersections, taking into account speed limit/ speed environment.	☐	☐	☐		
• Crossing design can achieve break-over angles and grades.	☐	☐	☐		
• Sight distances comply, taking into account speed limit and speed environment.	☐	☐	☐		
• Entrances onto NZTA roads require approval from NZTA.	☐	☐	☐		

Requirement	Yes	No	N/A	IQP reqd	Comments
12 Roading (Back to top)					
The following minimum level of information has been supplied in a report.					
• Traffic report provided which substantiates road geometric design, intersection design, projected volumes and loadings, safe sight distances at intersections, entranceways etc.	☐	☐		Yes	
• Geotechnical report on stability of ground provided if road is designed in medium/high instability zone.	☐	☐		Yes	
• Road corridor width sufficient for all services including treatment of stormwater.	☐	☐		Yes	
• Peer/technical reviews and safety audits.	☐	☐	☐	Yes	
• Design complies with Table 3.1/3.2	☐	☐			
• Vehicle crossings with sight distances.	☐	☐			
• Culverts, other underground services shown.	☐	☐			
• Long/cross-sections to demonstrate compliance and containment within road corridor.	☐	☐	☐		
• All retaining structures/bridges etc shown.	☐	☐	☐	Yes	
• proposed planting of berms/ non-standard street furniture (requires permission from Roading)	☐	☐	☐		

Requirement	Yes	No	N/A	IQP reqd	Comments
13 Landscaping (Back to top)					
The following minimum level of information has been supplied in a report.					
• Proposed planting – future effects	☐	☐	☐		
• Retaining structures	☐	☐	☐	Yes	
• Heritage trees – protection requirements	☐	☐	☐		

Note *This form is provided as a courtesy to external parties. The items listed are those most commonly checked , but is by no means exclusive. Certain consents may require more specific items be provided as part of the application.*

Whangarei District Council
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Website http//www.WDC.govt.nz · E-mail mailroom@WDC.govt.nz

Engineering Plan/Design Check List (Internal)

Pre-consent approvals

Job/Subdivision Name _____

Resource Consent No _____

Agent _____ Date _____

Site Address _____

This check list outlines the minimum requirements for engineering plans. Additional descriptions & details may be required. Please enclose colour photos of the site

Please ✓ the section(s)s that apply

- ☐ 1 General
- ☐ 2 Site
- ☐ 3 Geotechnical
- ☐ 4 Hazards
- ☐ 5 Reticulated Sewer
- ☐ 6 On site sewer
- ☐ 7 Water
- ☐ 8 Stormwater (private)
- ☐ 9 Stormwater (public)
- ☐ 10 Parking and Manoeuvring
- ☐ 11 Right of Way/Accessways
- ☐ 12 Vehicle Entrance/Crossings
- ☐ 13 Roading
- ☐ 14 Landscaping and Planting
- ☐ 15 Insurance

Engineering Officer | Date

Note *This form is provided as a courtesy to external parties. The items listed are those most commonly checked, but is by no means exclusive. Certain consents may require more specific items be provided as part of the application.*

Item	Requirement	Yes	No	N/A	IQP?	Comments
1	**General Items** (Back to top)					
1.1	Locality plan including street names, legal descriptions of surrounding lots, lot numbers of development.	☐	☐	☐		
1.2	Borders, title blocks & job name. Plan revision numbers.	☐	☐	☐		
1.3	North points	☐	☐	☐		
1.4	Scales and vertical and horizontal scale bar	☐	☐	☐		
1.5	Space for an approval stamp 80mm x 60mm	☐	☐	☐		
1.6	Standard symbols for drawings in terms of WDC EES	☐	☐	☐		
1.7	Standard line types in accordance with WDC EES	☐	☐	☐		
1.8	Legend clearly identifying symbols & line types outside of sheet 1 & abbreviations	☐	☐	☐		
1.9	Text size in accordance with NZS 1100	☐	☐	☐		
1.10	Plan size and scales of various details in accordance with EES.	☐	☐	☐		
1.11	Colour permitted for services ONLY (red-sewer, blue-water, green s/water) Linetypes still apply.	☐	☐	☐		
1.12	Designs requiring IQP/CPEng are signed by CPEng/IQP on plans.	☐	☐	☐	YES	
1.13	Staged development plans are clearly marked as to which stage they apply to.	☐	☐	☐		
1.14	Staged development- each stage is a stand-alone.	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP?	Comments
2	**Site** (Back to top)					
2.1	Contour plan of the development – to determine pre and post filling & stormwater overland flow paths. (Required in areas affected by the development or that might have effect on the development).	☐	☐	☐		
2.2	Site plan shows a building site, access to building site, effluent disposal area (where applicable)	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP?	Comments
2.3	Plan clearly details proposed & existing services & anything to be abandoned or removed	☐	☐	☐		
2.4	Overland flowpaths detailed to 1%AEP extent.	☐	☐	☐	YES	
2.5	Any hazard areas (flooding, instability, mine etc) marked on the site plan.	☐	☐	☐		
2.6	All existing and proposed easements shown.	☐	☐	☐		

Item	Requirement	Yes	No	IQP	Comments
3	**Geotechnical – Site suitability for development** ***(The following information is required if not already supplied with application)***				
3.1	**Site is in a low hazard instability zone.** (Back to top) The following minimum level of information has been supplied in a report by an IQP: • Walk-over inspection of the site and surrounding land. If there are any signs of potential issues, then: • An opinion stated by a geotechnical specialist as to the stability/suitability of the land for development. This opinion should include the effects from excavation, filling, removal of vegetation, disposal of stormwater and effluent etc.	☐ ☐ ☐	 ☐ ☐	Yes Yes Yes	See below By IQP with Geotech experience Geo-Specialist ONLY!
3.2	**Site is in a medium hazard instability zone.** (Back to top) The following minimum level of information has been supplied in a report by an IQP (Geotech): • Walk-over inspection of the site and surrounding land. • Topographic survey or site profiles. • Description of the geology and geomorphology of the area • Definition of the nature and continuity of the strata over the whole area of land which is proposed to be developed (i.e. buildings, access and services), and to a depth below which slippage is most unlikely, by means of a test pit and/or drilling and/or auguring, unless existing exposures are adequate. • Assessment of the relative strength and sensitivity of the soil in each stratum in which, or interface on which sliding is possible. • Assessment of likely groundwater levels and piezometric pressures in the strata during extreme infiltration conditions. • An opinion stated by a geotechnical specialist as to the stability/suitability of the land for development. This opinion should include the effects from excavation, filling, removal of vegetation, disposal of stormwater and effluent etc.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	 ☐ ☐ ☐ ☐ ☐ ☐ ☐	Yes	Geo-Specialist ONLY
3.3	**Site is in a High hazard instability zone.** (Back to top)	☐		Yes	Geo-Specialist ONLY

Item	Requirement	Yes	No	IQP	Comments
	The following minimum level of information has been supplied in a report by an IQP (Geotech): • Walk-over inspection of the site and surrounding land. • Topographic survey or site profiles. • Description of the geology and geomorphology of the area. • Definition of the nature and continuity of the strata over the whole area of land which is proposed to be developed (i.e. buildings, access and services), and to a depth below which slippage is most unlikely, by means of a test pit and/or continuous recovery core drilling, unless existing exposures are adequate. • Determination of the peak and residual shear strength parameters (either from laboratory test or back analysis of relevant slope failures), and sensitivity of the soil in each stratum in which, or interface on which sliding is possible. • Assessment of groundwater levels and piezometric pressures in the strata during extreme infiltration conditions. • Analysis of possible failure mechanisms, relevant to specific geology and geomorphology of the site using effective stresses. • An opinion stated by a geotechnical specialist as to the stability/suitability of the land for development. This opinion should include the effects from excavation, filling, removal of vegetation, disposal of stormwater and effluent etc.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐		
3.4	**Site falls outside the hazard mapping areas.** (Back to top) The following minimum level of information has been supplied in a report by an IQP (Geotech): • Walk-over inspection of the site and surrounding land. • Topographic survey or site profiles. • Description of the geology and geomorphology of the area. • Definition of the nature and continuity of the strata over the whole area of land which is proposed to be developed (i.e. buildings, access and services), and to a depth below which slippage is most unlikely, by means of a test pit and/or drilling and/or auguring, unless existing exposures are adequate. • An opinion stated by a geotechnical specialist as to the stability/suitability of the land for development. This opinion should include the effects from excavation, filling, removal of vegetation, disposal of stormwater and effluent etc. *Depending on the outcome of investigation above, a determination as to whether the ground is low, medium or high instability, and further information supplied if it is considered medium or high instability, in terms of requirements above.*	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Yes	Geo-Specialist ONLY

Item	Requirement	Yes	No	N/A	IQP	Comments

Item	Requirement	Yes	No	N/A	IQP	Comments
4 Hazards (Back to top)						
4.1	**Flooding hazard exists.**	☐			Yes	
	The following minimum level of information has been supplied in a report by an IQP.					
	• Determination of flood extent and level in 1%AEP event (+20%).	☐	☐			
	• What effect it will have on the development	☐	☐			
	• If flooding does affect the development, mitigating measures taken to minimise/eliminate effects	☐	☐	☐		
	• What effect the development will have on the flooding (displacement/redirection of flooding etc)	☐	☐			
4.2	**Development is within the Coastal hazard 1, 2 zones**	☐			Yes	
	*The following minimum level of information has been supplied in a report by a **CPEng specialising in coastal marine engineering:***					
	• An assessment of the effects of storm surge, wave run-up etc.	☐	☐			
4.3	**Development is within a Mine Hazard Zone**	☐				
4.3.1	**Mine Zone 1 (high risk)**	☐			Yes	
	*The following minimum level of information has been supplied in a report by a **Geo-Professional ONLY.***					
	• Walk-over inspection of the site and surrounding land/infrastructure/buildings, reporting any visible evidence of subsidence.	☐	☐			
	• A comprehensive Geotechnical report covering the subject and adjoining sites and will require extensive surface/subsurface investigations.	☐	☐			
	• An opinion stated as to the stability/suitability of the land for development.	☐	☐			
4.3.2	**Mine Zone 2 (medium risk)**	☐			Yes	
	*The following minimum level of information has been supplied in a report by a **Geo-Professional ONLY.***					
	• Walk-over inspection of the site and surrounding land/infrastructure/buildings, reporting any visible evidence of subsidence.	☐	☐			
	• A comprehensive Geotechnical report covering the subject and adjoining sites and will require surface/subsurface investigation.	☐	☐			
	• An opinion stated as to the stability/suitability of the land for development.	☐	☐			
4.3.3	**Mine Zone 3 (low risk)**	☐			Yes	
	*The following minimum level of information has been supplied in a report by a **Geo-Professional ONLY.***					
	• Walk-over inspection of the site and surrounding land/infrastructure/buildings, reporting any visible evidence of subsidence.	☐	☐			
	• An opinion stated as to the stability/suitability of the land for development.	☐	☐			

Item	Requirement	Yes	No	N/A	IQP?	Comments
5	**Reticulated Water** (Back to top)					
5.1	Evidence that the existing reticulation can service the proposed development	☐	☐			
5.2	Evidence (calculations, existing pressures/supply etc) that the proposed reticulation can service the proposed development, and any undeveloped land beyond.	☐	☐	☐	YES	
5.3	Required pressures and flows can be met from all hydrants and service connections.	☐	☐		YES	
5.4	Details of proposed pipe sizes, materials, and layout (both horizontal and vertical). (Water services require the use of PE80 for all mains, unless otherwise approved).	☐	☐	☐		
5.5	Details of existing reticulation layout.	☐	☐			
5.6	Fire risk classifications & calculations to confirm complying fire fighting capability in terms of SNZ PAS 4509:2008 (generally commercial only)	☐	☐	☐	YES	
5.7	Details showing complying distances to fire hydrants in terms of SNZ PAS 4509:2008.	☐	☐			
5.8	Details of pump stations/ booster pumps	☐	☐	☐	YES	
5.9	Details of any above ground reticulation, pipe bridges etc. (this requires specific design and needs Water Services approval in writing).	☐	☐	☐	YES	
5.10	River crossings requiring Resource Consent from NRC	☐	☐	☐	YES	
5.11	Location of all services practical & clear of potential problems & close to boundaries	☐	☐			

Item	Requirement	Yes	No	N/A	IQP?	Comments
6	**Reticulated Sewer** (Back to top)					
6.1	Evidence that the existing public reticulation can service the proposed development.	☐	☐		Poss	
6.2	Evidence that the proposed public reticulation can service the proposed development, and any undeveloped land beyond.	☐	☐	☐	Poss	
6.3	Plans and long sections of proposed reticulation. (shared retic, not for individual lots)	☐	☐	☐	Poss	

Item	Requirement	Yes	No	N/A	IQP?	Comments
6.4	Evidence that individual connections can service the buildable area of each lot.	☐	☐			
6.5	Details of proposed pump stations.	☐	☐	☐	YES	
6.6	Location of sewers practical & clear of potential problems & close to boundaries	☐	☐			
6.7	Building over sewers requires Waste manager's approval in writing.	☐	☐	☐	YES	
6.8	Details of any above ground reticulation, pipe bridges etc. (this requires specific design and needs Waste Services approval in writing).	☐	☐	☐	YES	
6.9	River crossings requiring Resource Consent from NRC	☐	☐	☐	YES	
6.10	Certification of lines within influence of foundations of buildings.	☐	☐	☐	YES	

Item	Requirement	Yes	No	N/A	IQP?	Comments
7	**On-Site Sewer** (Back to top)					
7.1	WDC form EES-SEW1 completed/ assessment in terms of NZS1547:2000	☐	☐		YES	
7.2	Effluent fields clear of flooding/overland flows	☐	☐	☐	YES	
7.3	Shared systems need NRC consent	☐	☐	☐	YES	
7.4	Stormwater cut-off drains above fields.	☐	☐	☐		
7.5	All water bores on/adjacent to property are shown on plan.	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP?	Comments
8	**Stormwater - Private** (Back to top)					
8.1	Assessment takes into account the whole catchment (details sub-catchments) and the effects from and mitigation for the development proposed. Calculations, modelling etc required.	☐	☐	☐	YES	
8.2	Evidence that the existing public reticulation can service the proposed development.	☐	☐	☐	YES	

Item	Requirement	Yes	No	N/A	IQP?	Comments
8.3	Evidence that the proposed public reticulation can service the proposed development, and any undeveloped land beyond.	☐	☐	☐	YES	
8.4	Attenuation meets EES requirements. Calculations/model to support attenuation design.	☐	☐	☐	YES	
8.5	Details of treatment proposed.	☐	☐	☐	YES	
8.6	Assessment of any wetlands included/proposed.	☐	☐	☐	YES	
8.7	Any proposed soakage requires soakage test in accordance with E2 of the Building Code. *No soakage permitted in medium/high instability areas without Geo-specialist design.*	☐	☐	☐	YES	
8.8	Location clear of potential problems & boundaries	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP?	Comments
9	**Stormwater - Public** (Back to top)					
9.1	Assessment takes into account the whole catchment (details sub-catchments) and the effects from and mitigation for the development proposed. Calculations, modelling etc required.	☐	☐	☐	YES	
9.2	Evidence that the existing public reticulation can service the proposed development.	☐	☐	☐	YES	
9.3	Evidence that the proposed public reticulation can service the proposed development, and any undeveloped land beyond.	☐	☐	☐	YES	
9.4	Attenuation meets EES requirements. Calculations/model to support attenuation design.	☐	☐	☐	YES	
9.5	Details of treatment proposed.	☐	☐	☐	YES	
9.6	Assessment of any wetlands included/proposed.	☐	☐	☐	YES	
9.7	Any proposed soakage requires soakage test in accordance with E2 of the Building Code. *No soakage permitted in medium/high instability areas without Geo-specialist design.*	☐	☐	☐	YES	
9.8	Location clear of potential problems & boundaries	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP?	Comments

Item	Requirement	Yes	No	N/A	IQP?	Comments
10	**Parking and Manoeuvring** (Back to top)					
10.1	Turning curves demonstrate manoeuvrability.	☐	☐			
10.2	Number of parking spaces provided complies.	☐	☐			
10.3	Disability parks comply with District plan/EES/Building code. (check that building code requirements met)	☐	☐	☐		
10.4	Surfacing proposed complies with district plan/EES	☐	☐			
10.5	Signage entry / exit	☐	☐	☐		
10.6	Marking compliance with district plan	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP?	Comments
11	**Rights of Way/Accessways** (Back to top)					
11.1	Assessment of stability of ground affecting the proposed ROW/access to house site/s.	☐	☐		YES	
11.2	Width complies with EES including entrance width beyond vehicle crossing.	☐	☐	☐		
11.3	Maximum gradient of 4.5% not exceeded.	☐	☐	☐		
11.4	Cross-sections demonstrate batters are contained within boundaries.	☐	☐	☐		
11.5	Construction of ROW/access will not affect overland flowpaths (Up to and including 1%AEP event).	☐	☐		YES	
11.6	Intervisibility between passing bays demonstrated.	☐	☐			
11.7	Emergency vehicles have access in terms of SNZ PAS 4509:2008 including over bridges.	☐	☐	☐		
11.8	Private bridges require specific design and building consent.	☐	☐	☐	YES	
11.9	Existing bridges need certification by CPEng and proof of Building Consent/COA.	☐	☐	☐	YES	
11.10	Retaining structures (including rock revetments) require specific design and building consent.	☐	☐	☐	YES	
11.11	Consideration has been given to possible future subdivision (corridor width etc) and possibility of becoming public road.	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP?	Comments
12	**Vehicle Entrance Crossing** (Back to top)					
12.1	Crossing complies with minimum distances from intersections, taking into account speed limit.	☐	☐			
12.2	Crossing design can achieve break-over angles and grades.	☐	☐			
12.3	Sight distances comply, taking into account speed limit and operational speed.	☐	☐			
12.4	Entrances onto NZTA roads require approval from NZTA.	☐	☐	☐	YES	
12.5	Turning bays in public road required	☐	☐	☐	YES	

Item	Requirement	Yes	No	N/A	IQP?	Comments
13	**Roading** (Back to top)					
13.1	Traffic report provided which substantiates road geometric design, intersection design, projected volumes and loadings, safe sight distances at intersections, separation distances from other roads etc.	☐	☐		YES	
13.2	Geotechnical report on stability of ground provided if road is designed in medium/high instability zone.	☐	☐	☐	YES	
13.3	CPEng report for steep batters.	☐	☐	☐	YES	
13.4	Pavement design if in medium/high instability zone.	☐	☐	☐	YES	
13.5	Road corridor width sufficient for all services including treatment of stormwater.	☐	☐			
13.6	Peer/technical reviews of design provided.	☐	☐	☐	YES	
13.7	Safety audits provided.	☐	☐	☐	YES	
13.8	Vehicle crossings with sight distances. (specific points for vehicle crossings required?)	☐	☐	☐		
13.9	Culverts, other underground services shown.	☐	☐			
13.10	Long/cross-sections to demonstrate compliance i.e. maximum gradients not exceeded .and containment within road corridor. (0.5m clearance from top/toe of batters)	☐	☐			

Item	Requirement	Yes	No	N/A	IQP?	Comments
13.11	All retaining structures/bridges etc shown.	☐	☐	☐		
13.12	Proposed planting of berms/ non-standard street furniture (requires permission from Roading & Parks)	☐	☐	☐		
13.13	Stormwater reticulation proposed showing attenuation, treatment etc.	☐	☐		YES	
13.14	Staged developments- roading for each stage is self-contained. (provide turning heads etc)	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP?	Comments
14	**Landscaping** (Back to top)					
14.1	Heritage trees and other trees – protection requirements around services and roading etc.	☐	☐	☐		
14.2	Any retaining structures require building consent.	☐	☐	☐	YES	

Item	Requirement	Yes	No	N/A	IQP?	Comments
15	**Insurance** (Back to top)					
15.1	Professional has provided evidence of professional indemnity insurance that is adequate for the work proposed	☐	☐			
15.2	Professional has provided evidence of public liability insurance that is adequate for the work proposed	☐	☐			

Note *This form is provided as a courtesy to external parties. The items listed are those most commonly checked , but is by no means exclusive. Certain consents may require more specific items be provided as part of the application.*

Whangarei District Council
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Engineering Plan Check List (Internal)

Plan approval for construction purposes

Job/Subdivision Name _____

Resource Consent No _____

Agent _____ Date _____

Site Engineer or IQP _____

Site Address _____

Please ✓ the section that applies

- ☐ 1 General
- ☐ 2 Site
- ☐ 3 Geotechnical
- ☐ 4 Hazards
- ☐ 5 Reticulated Sewer
- ☐ 6 On site sewer
- ☐ 7 Water
- ☐ 8 Stormwater (private)
- ☐ 9 Stormwater (public)
- ☐ 10 Parking and Manoeuvring
- ☐ 11 Right of Way/Accessways
- ☐ 12 Vehicle Entrance/Crossings
- ☐ 13a Roading - Design
- ☐ 13b Roading - Plan View
- ☐ 13c Roading - Long Section
- ☐ 13d Roading - Cross-Section
- ☐ 13e Roading - Typical Cross-Sections
- ☐ 13f Roading - Other Details
- ☐ 14 Landscaping and Planting

_____ _____
Engineering Officer Date

Note *This form is provided as a courtesy to external parties. The items listed are those most commonly checked, but is by no means exclusive. Certain consents may require more specific items be provided as part of the application*

Item	Requirement	Yes	No	N/A	IQP?	Comments
1 General Items (Back to index page)						
1.1	Locality plan including street names, legal descriptions of surrounding lots, lot numbers of development.	☐	☐	☐		
1.2	Borders, title blocks & job name. Plan revision numbers.	☐	☐	☐		
1.3	North points	☐	☐	☐		
1.4	Scales and vertical and horizontal scale bar	☐	☐	☐		
1.5	Space for an approval stamp 80mm x 60mm	☐	☐	☐		
1.6	Standard symbols for drawings in terms of WDC EES	☐	☐	☐		
1.7	Standard line types in accordance with WDC EES	☐	☐	☐		
1.8	Legend clearly identifying symbols & line types outside of sheet 1 & abbreviations	☐	☐	☐		
1.9	Text size in accordance with NZS 1100	☐	☐	☐		
1.10	Plan size and scales of various details in accordance with EES.	☐	☐	☐		
1.11	Resource consent, property numbers & agent ref on all sheets	☐	☐	☐		
1.12	Colour permitted for services ONLY (red-sewer, blue-water, green s/water) Linetypes still apply. (not on	☐	☐	☐		
1.13	Designs requiring IQP/CPEng are signed by CPEng/IQP on plans.	☐	☐	☐	YES	
1.14	Staged development plans are clearly marked as to which stage they apply to.	☐	☐	☐		
1.15	Staged development- each stage is a stand-alone.	☐	☐	☐		
1.16	Title page for major project. Including index drawings of full extent i.e. all stages of development	☐	☐	☐		
1.17	Any plans with references to EES Sheets shall show the sheet on the plans with non-relevant information deleted.	☐	☐	☐		
1.18	Standard notes – WDC inspections required in accordance with EES clause 1.13.8 road opening notice requirements, only WDC approved contractors to work on WDC reticulation (or that to vest), reinstatement, written approval prior to undertaking works within private property, works are to comply with EES, contractor is responsible for locating services prior to excavation, as-built requirements etc	☐	☐	☐		
1.19	Details of services with a clear identification of new or proposed & existing services & anything to be capped, removed or abandoned – gas, phone, power reticulation	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP?	Comments
Item	Requirement	Yes	No	N/A	IQP?	Comments
2	**Site** (Back to top)					
2.1	Contour plan of the development – to determine pre and post filling & stormwater overland flow paths. (Required in areas affected by the development or that might have effect on the development).	☐	☐	☐		
2.2	Site plan shows a building site, access to building site, effluent disposal area (where applicable).	☐	☐	☐		
2.3	Plan clearly details proposed & existing services & anything to be abandoned or removed.	☐	☐	☐		
2.4	Overland flowpaths detailed to 1%AEP extent.	☐	☐	☐	YES	
2.5	Any hazard areas (flooding, instability, mine etc) marked on the site plan.	☐	☐	☐		
2.6	All existing and proposed easements shown.	☐	☐	☐		
2.7	Fencing details including mowing strips.	☐	☐	☐		

Item	Requirement	Yes	No	IQP ?	Comments
3	**Geotechnical – Site suitability for development** (Back to top) ***(The following information is required if not already supplied pre-approval)***				
3.1	**Site is in a low hazard instability zone.**	☐		Yes	See below
	The following minimum level of information has been supplied in a report by an IQP:				
	• Walk-over inspection of the site and surrounding land. If there are any signs of potential issues, then:	☐	☐	Yes	By IQP with Geotech experience
	• An opinion stated by a geotechnical specialist as to the stability/suitability of the land for development. This opinion should include the effects from excavation, filling, removal of vegetation, disposal of stormwater and effluent etc.	☐	☐	Yes	Geo-Specialist ONLY!
3.2	**Site is in a medium hazard instability zone.**	☐		Yes	Geo-Specialist ONLY
	The following minimum level of information has been supplied in a report by an IQP (Geotech):				
	• Walk-over inspection of the site and surrounding land.	☐	☐		

Item	Requirement	Yes	No	IQP ?	Comments
	• Topographic survey or site profiles.	☐	☐		
	• Description of the geology and geomorphology of the area	☐	☐		
	• Definition of the nature and continuity of the strata over the whole area of land which is proposed to be developed (i.e. buildings, access and services), and to a depth below which slippage is most unlikely, by means of a test pit and/or drilling and/or auguring, unless existing exposures are adequate.	☐	☐		
	• Assessment of the relative strength and sensitivity of the soil in each stratum in which, or interface on which sliding is possible.	☐	☐		
	• Assessment of likely groundwater levels and piezometric pressures in the strata during extreme infiltration conditions.	☐	☐		
	• An opinion stated by a geotechnical specialist as to the stability/suitability of the land for development. This opinion should include the effects from excavation, filling, removal of vegetation, disposal of stormwater and effluent etc.	☐	☐		
3.3	**Site is in a High hazard instability zone.** The following minimum level of information has been supplied in a report by an IQP (Geotech):	☐		Yes	Geo-Specialist ONLY
	• Walk-over inspection of the site and surrounding land.	☐	☐		
	• Topographic survey or site profiles.	☐	☐		
	• Description of the geology and geomorphology of the area.	☐	☐		
	• Definition of the nature and continuity of the strata over the whole area of land which is proposed to be developed (i.e. buildings, access and services), and to a depth below which slippage is most unlikely, by means of a test pit and/or continuous recovery core drilling, unless existing exposures are adequate.	☐	☐		
	• Determination of the peak and residual shear strength parameters (either from laboratory test or back analysis of relevant slope failures), and sensitivity of the soil in each stratum in which, or interface on which sliding is possible.	☐	☐		
	• Assessment of groundwater levels and piezometric pressures in the strata during extreme infiltration conditions.	☐	☐		
	• Analysis of possible failure mechanisms, relevant to specific geology and geomorphology of the site using effective stresses.	☐	☐		
	• An opinion stated by a geotechnical specialist as to the stability/suitability of the land for development. This opinion should include the effects from excavation, filling, removal of vegetation, disposal of stormwater and effluent etc.	☐	☐		

Item	Requirement	Yes	No	IQP ?	Comments
3.4	**Site falls outside the hazard mapping areas.** The following minimum level of information has been supplied in a report by an IQP (Geotech):	☐		Yes	Geo-Specialist ONLY
	• Walk-over inspection of the site and surrounding land.	☐	☐		
	• Topographic survey or site profiles.	☐	☐		
	• Description of the geology and geomorphology of the area.	☐	☐		
	• Definition of the nature and continuity of the strata over the whole area of land which is proposed to be developed (i.e. buildings, access and services), and to a depth below which slippage is most unlikely, by means of a test pit and/or drilling and/or auguring, unless existing exposures are adequate.	☐	☐		
	• An opinion stated by a geotechnical specialist as to the stability/suitability of the land for development. This opinion should include the effects from excavation, filling, removal of vegetation, disposal of stormwater and effluent etc.	☐	☐		
	Depending on the outcome of investigation above, a determination as to whether the ground is low, medium or high instability, and further information supplied if it is considered medium or high instability, in terms of requirements above.	☐	☐		

Item	Requirement	Yes	No	N/A	IQP?	Comments
4	**Hazards** (Back to top) ***(The following information is required if not already supplied pre-approval)***					
4.1	**Flooding hazard exists.** *The following minimum level of information has been supplied in a report by an IQP.*	☐			Yes	
	• Determination of flood extent and level in 1%AEP event (+20%).	☐	☐			
	• What effect it will have on the development	☐	☐			
	• If flooding does affect the development, mitigating measures taken to minimise/eliminate effects	☐	☐	☐		
	• What effect the development will have on the flooding (displacement/redirection of flooding etc)	☐	☐			
4.2	**Development is within the Coastal hazard 1, 2 zones** *The following minimum level of information has been supplied in a report by a **CPEng specialising in coastal marine engineering:***	☐			Yes	

Item	Requirement	Yes	No	N/A	IQP?	Comments
	• An assessment of the effects of storm surge, wave run-up etc.	☐	☐			
4.3	**Development is within a Mine Hazard Zone**	☐				
4.3.1	**Mine Zone 1 (high risk)**	☐			Yes	
	*The following minimum level of information has been supplied in a report by a **Geo-Specialist ONLY.***					
	• Walk-over inspection of the site and surrounding land/infrastructure/buildings, reporting any visible evidence of subsidence.	☐	☐			
	• A comprehensive Geotechnical report covering the subject and adjoining sites and will require extensive surface/subsurface investigations.	☐	☐			
	• An opinion stated as to the stability/suitability of the land for development.	☐	☐			
4.3.2	**Mine Zone 2 (medium risk)**	☐			Yes	
	*The following minimum level of information has been supplied in a report by a **Geo-Specialist ONLY.***					
	• Walk-over inspection of the site and surrounding land/infrastructure/buildings, reporting any visible evidence of subsidence.	☐	☐			
	• A comprehensive Geotechnical report covering the subject and adjoining sites and will require surface/subsurface investigation.	☐	☐			
	• An opinion stated as to the stability/suitability of the land for development.	☐	☐			
4.3.3	**Mine Zone 3 (low risk)**	☐			Yes	
	*The following minimum level of information has been supplied in a report by a **Geo-Specialist ONLY.***					
	• Walk-over inspection of the site and surrounding land/infrastructure/buildings, reporting any visible evidence of subsidence.	☐	☐			
	• An opinion stated as to the stability/suitability of the land for development.	☐	☐			

Item	Requirement	Yes	No	N/A	IQP?	Comments
5	**Reticulated Sewer** (Back to top)					
5.1	Evidence that the existing reticulation can service the proposed development. (checked pre-RC approval?)	☐	☐	☐	Yes	
5.2	Evidence (calculations etc) that the proposed reticulation can service the proposed	☐	☐	☐	Yes	

Item	Requirement	Yes	No	N/A	IQP?	Comments
	development, and any undeveloped land beyond. IQP					
5.3	Hydraulic design including capacity and self-cleaning velocities. IQP	☐	☐	☐	Yes	
5.4	Design of the proposed reticulation including pipe sizes, types, long and cross sections etc.	☐	☐	☐		
5.5	Details of service connections and evidence the service connection can serve the whole of the subject lot/specific buildable area.	☐	☐	☐		
5.6	Design of public pumpstations and rising mains. Require producer statement design and construction. IQP	☐	☐	☐	Yes	
5.7	Design of private pumpstations and rising mains. Require producer statement design and construction. IQP	☐	☐	☐	Yes	
5.8	Design details of anchor and thrust blocks (including calculations). To be specifically designed by IQP.	☐	☐	☐	Yes	
5.9	Separation distances between services comply both horizontally and vertically.	☐	☐	☐		
5.10	Positioning of reticulation complies with EES, eg parallel to boundaries, offset close to boundaries, public system in road etc.	☐	☐	☐		
5.11	Design details of pipe bridges. To be specifically designed by IQP. Needs pre-approval of Waste manager.	☐	☐	☐	Yes	
5.12	Existing service lines/connections have been CCTV inspected.	☐	☐	☐		
5.13	Specific design by IQP required for reticulation larger than 150mm, serving more than 250 lots, pump stations, rising mains, above ground works, minimum cover not achieved, siphons etc.	☐	☐	☐	Yes	
5.14	Specific design and assessment for commercial flows. IQP	☐	☐	☐	Yes	
5.15	Specific design for curved pipelines. IQP	☐	☐	☐	Yes	
5.16	Manholes located clear of flood plains, detention areas, overland flowpaths, inter tidal regions.	☐	☐	☐		
5.17	**Pipe cover** • min 600mm in non-trafficked areas. • Min 1200mm in trafficked areas unless protected. • Use of SN40/PN16 if less than 1200mm under carriageways and no protection	☐	☐	☐	Yes	IQP design required if min cover is not maintained
5.18	Steep grades >7% to be graded out.	☐	☐	☐	Yes	
5.19	Cleansing velocities achieved. Maximum velocity of 3ms-1 or specific design by IQP.	☐	☐	☐	Yes	

Item	Requirement	Yes	No	N/A	IQP?	Comments

6	**On-Site Sewer** (Back to top)					
6.1	Detailed on-site investigation carried out in terms of NZS1547 or WDC form EES-SEW1.	☐	☐	☐	Yes	
6.2	Lot size larger than 2000m3	☐	☐	☐		
6.3	Assessment includes peak seasonal loading.	☐	☐	☐		
6.4	Shared private system, requires RC from NRC	☐	☐	☐	Yes	
6.5	Shared private system, requires signed agreement between all parties and maintenance contract	☐	☐	☐	Yes	
6.6	Shared system to become public, agreement from Waste Manager needed.	☐	☐	☐	Yes	

Item	Requirement	Yes	No	N/A	IQP ?	Comments
7	**Reticulated Water** (Back to top)					
7.1	Evidence that the existing reticulation can service the proposed development	☐	☐	☐		
7.2	Evidence (calculations, existing pressures/supply etc) that the proposed reticulation can service the proposed development, and any undeveloped land beyond.	☐	☐	☐	Yes	
7.3	Evidence that water hammer effects have been considered and appropriate measures included.	☐	☐	☐	Yes	
7.4	Required pressures and flows can be met from all hydrants and service connections.	☐	☐	☐	Yes	
7.5	Details of proposed pipe sizes, materials, and layout (both horizontal and vertical). (water services requires the use of PE80 for all mains, unless otherwise approved).	☐	☐	☐		
7.6	Details of existing reticulation layout including all fittings (valves, hydrants, depth, materials etc).	☐	☐	☐		
7.7	Details of rider mains.	☐	☐	☐		
7.8	Long section required pipe 1km or over.	☐	☐	☐		
7.9	Positions of all service connections provided.	☐	☐	☐		
7.10	Separation distances from other underground services comply. (both horizontal and vertical).	☐	☐	☐		
7.11	Pipe cover meets minimum of 600mm (non trafficked areas) or 900mmm (trafficked areas).	☐	☐	☐		
7.12	Locator tape specified.	☐	☐	☐		
7.13	Notes regarding testing and disinfection.	☐	☐	☐		
7.14	Air release/ scour valves/ pressure reducing valves approved by Water services.	☐	☐	☐	Yes	

Item	Requirement	Yes	No	N/A	IQP ?	Comments
7.15	Design details of anchor and thrust blocks (including calculations). To be specifically designed by IQP.	☐	☐	☐	Yes	
7.16	Evidence of connection approval from Water Services. (Applicant has to submit details of proposed connection to water services for approval, NOTE we can not approve this!).	☐	☐	☐		
7.17	Details of pump stations booster pumps, control valves, proposed ownership written agreements, reservoirs, make model of pumps valves and other equipment - producer statement note	☐	☐	☐	Yes	
7.18	Fire risk classifications & calculations to confirm complying fire fighting capability in terms of SNZ PAS 4509:2008	☐	☐	☐	Yes	
7.19	Above ground backflow preventers (in cage) fitted to sewer pumpstation water supply.	☐	☐	☐		
7.20	Mowing strips & marker pegs round FH, valves etc	☐	☐	☐		
7.21	Notes regarding marking of the kerbing	☐	☐	☐		
7.22	Details of the water meter box location at the centre front boundary	☐	☐	☐		
7.23	Details showing complying distances to fire hydrants in terms of SNZ PAS 4509:2008.	☐	☐	☐		
7.24	Details of any above ground reticulation, pipe bridges etc. (this requires specific design and needs Water Services approval).	☐	☐	☐	Yes	
7.25	River crossings requiring Resource Consent from NRC.	☐	☐	☐		
7.26	Backflow preventers fitted to all connections and include isolation valves.	☐	☐	☐		
7.27	Meter box location connection location type of connection clearly visible and accessible noted	☐	☐	☐		
7.28	Private booster pumps	☐	☐	☐	Yes	
7.29	Water services approval stamp on plans, no work to be done unless this stamp is on the plans!!	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP ?	Comments
8	**Stormwater - Private** (Back to top)					
8.1	Assessment takes into account the whole catchment (details sub-catchments) and the effects from and mitigation for the development proposed. Calculations, modelling etc required.	☐	☐	☐	Yes	
8.2	Evidence that the existing public reticulation can service the proposed development.	☐	☐	☐	Yes	

Item	Requirement	Yes	No	N/A	IQP ?	Comments
8.3	Evidence that the proposed public reticulation can service the proposed development, and any undeveloped land beyond.	☐	☐	☐	Yes	
8.4	Attenuation meets EES requirements. Calculations/model to support attenuation design. Attenuation devices are serviceable. Producer statement provided.	☐	☐	☐	Yes	
8.5	Details of treatment proposed which complies with District Plan/EES/NRC-WSP	☐	☐	☐	Yes	
8.6	Assessment of any wetlands included/proposed.	☐	☐	☐	Yes	
8.7	Any proposed soakage requires soakage test in accordance with E2 of the Building Code. ***No soakage permitted in medium/high instability areas without Geo-specialist design.***	☐	☐	☐	Yes	
8.8	Any soakage proposed is serviceable. Silt etc is removed before entering the soakage area.	☐	☐	☐	Yes	
8.9	Plan and long sections. Details show compliance with horizontal and vertical separation distance requirements.	☐	☐	☐		
8.10	Reticulation adequate for 20%AEP event.	☐	☐	☐	Yes	
8.11	Details of open drains/swales, capacities etc.	☐	☐	☐	Yes	
8.12	No building over stormwater line or directly alongside without written approval from I&S and specific design.	☐	☐	☐	Yes	
8.13	Habitable buildings floor heights set min 500mm above 1% AEP flood event.	☐	☐	☐	Yes	
8.14	Commercial buildings floor heights set min 300mm above 1% AEP flood event.	☐	☐	☐	Yes	
8.15	Tidal areas (coastal hazard zones) floor height set a **minimum** of RL2.5m. Specific calculations and design for all sites in this zone. NRC to be notified and comments gained.	☐	☐	☐		
8.16	Demonstration of nil effects to surrounding properties as result of development.	☐	☐	☐	Yes	
8.17	Location clear of potential problems & boundaries	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP ?	Comments
9	**Stormwater – Public** (Back to top)					

Item	Requirement	Yes	No	N/A	IQP?	Comments
9.1	Assessment takes into account the whole catchment and the effects from and mitigation for the development proposed. Calculations, modelling etc required. Catchment and sub-catchments detailed.	☐	☐	☐	Yes	
9.2	Plan showing existing and proposed contours, overland flowpaths, drains etc.	☐	☐	☐		
9.3	Extent of overland flowpaths for 1% AEP event.	☐	☐	☐	Yes	
9.4	Easements to cover 1% AEP overland flowpaths.	☐	☐	☐		
9.5	Level of treatment complies.	☐	☐	☐	Yes	
9.6	Attenuation meets EES requirements. Calculations/model to support attenuation design.	☐	☐	☐	Yes	
9.7	Reticulation adequate for 20% AEP event.	☐	☐	☐	Yes	
9.8	Soakage tests in terms of E1 of the building code for any proposed soakage.	☐	☐	☐	Yes	
9.9	Any soakage proposed is serviceable. Silt etc is removed before entering the soakage area.	☐	☐	☐	Yes	
9.12	Flood susceptible areas on hazard maps have been assessed and flood level determined for 1% AEP event.	☐	☐	☐	Yes	
9.13	Demonstration of nil effects to surrounding properties as result of development.	☐	☐	☐	Yes	
9.14	Assessment of unstable ground and the effects stormwater will have on it, mitigation measures supplied to enhance stability.	☐	☐	☐	Yes	
9.15	Plan and long sections of reticulation. Details show compliance with horizontal and vertical separation distance requirements.	☐	☐	☐		
9.16	Water table drains – calculations to confirm capacity.	☐	☐	☐	Yes	
9.17	Velocity/scour control on steep grades on open drains.	☐	☐	☐	Yes	
9.18	Details of manholes, sumps, inlet and outlet structures.	☐	☐	☐		
9.19	Cement stabilisation steep grades	☐	☐	☐	Yes	
9.20	Pipe crossings/bridges	☐	☐	☐	Yes	
9.21	Calculations to show cesspit size adequate for design volume.	☐	☐	☐	Yes	
9.22	Design of treatment devices	☐	☐	☐	Yes	

Item	Requirement	Yes	No	N/A	IQP?	Comments

Item	Requirement	Yes	No	N/A	IQP ?	Comments
10 Parking and Manoeuvring (Back to top)						
10.1	Surfacing complies with EES/District Plan	☐	☐	☐		
10.2	Plan shows falls and sumps/reticulation/treatment/attenuation calculated to the 1%AEP event.	☐	☐	☐	Yes	
10.3	Turning curves demonstrate manoeuvrability	☐	☐	☐		
10.4	Signage entry / exit	☐	☐	☐		
10.5	Marking compliance with district plan	☐	☐	☐		
		☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP ?	Comments
11 Rights of Way/Accessways (Back to top)						
11.1	Width complies with EES including entrance width.	☐	☐	☐		
11.2	Maximum gradient of 4.5% not exceeded.	☐	☐	☐		
11.3	Entrance design complies with grades and break over angles.	☐	☐	☐		
11.4	Gates are sufficiently back in accordance with EES.	☐	☐	☐		
11.5	Passing bays have inter-visibility.	☐	☐	☐		
11.6	Private bridges require specific design and building consent.	☐	☐	☐	Yes	
11.7	Retaining structures require specific design and building consent.	☐	☐	☐	Yes	
11.8	Subgrade tests confirm CBR>7 (Subgrade <7 requires specific design by IQP).	☐	☐	☐	Yes	
11.9	Construction of access will not affect overland flowpaths (Up to and including 1%AEP event).	☐	☐	☐	Yes	
11.10	Consideration has been given to possible future subdivision (corridor width etc) and possibility of becoming public road.	☐	☐	☐		
11.11		☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP	Comments

					?	
12	**Vehicle Entrance/Crossing** (Back to top)					
12.1	Crossing complies with minimum distances from intersections, taking into account speed limit.	☐	☐	☐		
12.2	Crossing design complies with break-over angles and grades. (Has long section been provided to demonstrate compliance?)	☐	☐	☐		
12.3	Sight distances comply.	☐	☐	☐		
12.4	Crossing is concrete design (Urban areas) or specific approval required.	☐	☐	☐		
12.5	Rural crossing, concrete min 0.5m from existing edge of seal (if used).	☐	☐	☐		
12.6	Cut-off drain is provided at boundary in terms of EES.	☐	☐	☐		
12.7	Crossing design prevents stormwater ingress off road.	☐	☐	☐		
12.8	Vehicle stacking complies	☐	☐	☐		
		☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP ?	Comments
8a	**Roading - Design** (Back to top)					
8a.1	Traffic report provided which substantiates road geometric design, intersection design, projected volumes and loadings etc.	☐	☐		Yes	
8a.2	Geotechnical report on stability of ground provided if road is designed in medium/high instability zone.	☐	☐	☐	Yes	
8a.3	Subgrade testing shows CBR>7, no specific design. (IQP to do testing).	☐	☐	☐	Yes	
8a.4	Subgrade testing shows CBR<7, requires specific design by IQP.	☐	☐	☐	Yes	
8a.5	Collector or arterial road requiring specific TOTAL design by IQP.	☐	☐	☐	Yes	
8a.6	Speed limit on road >50km/h requiring Specific geometric design by IQP.	☐	☐	☐	Yes	
8a.7	Intersections with collector or arterial road requiring specific design by IQP.	☐	☐	☐	Yes	
8a.8	Roundabout design requires IQP design.	☐	☐	☐	Yes	
8a.9	Street lighting requires IQP design.	☐	☐	☐	Yes	
8a.10	Non-standard light standards require approval from roading manager.	☐	☐	☐		
8a.11	Bridges, culverts, major waterways requires IQP design.	☐	☐	☐	Yes	

Item	Requirement	Yes	No	N/A	IQP?	Comments
8a.12	Retaining walls require IQP design.	☐	☐	☐	Yes	
8a.13	Peer/technical reviews and safety audits by IQP.	☐	☐	☐	Yes	
8a.14	Pavement design, possible IQP design, depends on CBR, type of road etc.	☐	☐	☐	Poss	
8a.15	Surfacing design, possible IQP design, depends on CBR, type of road etc.	☐	☐	☐	Poss	
8a.16	Surface drainage design.	☐	☐	☐	Yes	
8a.17	Design complies with Table 3.1/3.2	☐	☐			

Item	Requirement	Yes	No	N/A	IQP?	Comments
8b	**Roading - Plan View** (Back to top)					
8b.1	Road layout with chainages relative to long & cross sections	☐	☐	☐		
8b.2	Proposed road intersection with existing roads with sight distances.	☐	☐	☐	Yes	
8b.3	Vehicle crossings with sight distances.	☐	☐	☐		
8b.4	Roading to vest clearly marked.	☐	☐	☐		
8b.5	Proposed street lighting details layout	☐	☐	☐	Yes	
8b.6	Road signage and markings – existing & proposed.	☐	☐	☐		
8b.7	Traffic calming measures detailed- requires permission from Roading.	☐	☐	☐		
8b.8	Turning head details.	☐	☐	☐		
8b.9	Proposed road corridor width sufficient for all services, including future services and stormwater treatment.	☐	☐	☐		
8b.10	Details of footpaths, accessable (pram) crossings, pedestrian crossings. Footpath preferably clear of road edge.	☐	☐	☐		
8b.11	Details of tapers, turning bays etc	☐	☐	☐	Yes	
8b.12	Plan clearly details staged works, each stage to be 'stand alone', may require temp turning heads etc.	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP ?	Comments
8c	**Roading - Long Section** (Back to top)					
8c.1	Chainages are relative to plan view.	☐	☐	☐		
8c.2	Curves, both vertical and horizontal.	☐	☐	☐		
8c.3	Existing ground level (no local levels, to be to One Tree Point datum)	☐	☐	☐		
8c.4	Finished level	☐	☐	☐		
8c.5	Cut/fill	☐	☐	☐		
8c.6	Gradients	☐	☐	☐		
8c.7	Datum level	☐	☐	☐		
8c.8	Any intersecting roads	☐	☐	☐		
8c.9	Culverts, other underground services	☐	☐	☐		
8c.10	Appropriate scales	☐	☐	☐		
8c.11		☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP ?	Comments
8d	**Roading - Cross Sections** (Back to top)					
8d.1	Appropriate scales so cross-section can be used for quantities cut/fill.	☐	☐	☐		
8d.2	Prick points shown both ends of the cross-section (intersection of proposed ground with existing ground)	☐	☐	☐		
8d.3	Boundaries are shown on both sides	☐	☐	☐		
8d.4	Batters do not extend beyond boundaries.	☐	☐	☐		
8d.5	Boundaries min 0.5m from toe/top of batter unless batter slope <25%	☐	☐	☐		
8d.6	Centreline of road shown.	☐	☐	☐		
8d.7	Underground services/culverts shown.	☐	☐	☐		
8d.8	Stormwater treatment shown.	☐	☐	☐	Yes	
8d.9	Existing levels and finished levels shown, cut/fill.	☐	☐	☐	Yes	
8d.10	Steep cuts/fills require CPEng certification	☐	☐	☐	Yes	

Item	Requirement	Yes	No	N/A	IQP ?	Comments
8d.11	Retaining structures require building consent	☐	☐	☐	Yes	
8d.12	Cross-sections relative to plan view chainages	☐	☐	☐		
8d.13	Offset measurements	☐	☐	☐		
8d.14	Datum level	☐	☐	☐		
8d.15	Levels in terms of One Tree Point, no local levels.	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP ?	Comments
8e	**Roading - Typical Cross Sections** (Back to top)					
8e.1	Pavement design including what the pavement design is based on (IQP if CBR<7)	☐	☐	☐	poss	
8e.2	Seal laps & types	☐	☐	☐		
8e.3	Metal laps & pavements	☐	☐	☐		
8e.4	Proposed geo textile laps	☐	☐	☐		
8e.5	Footpaths (urban)/walkways (rural)	☐	☐	☐		
8e.6	Berms	☐	☐	☐		
8e.7	Services trench	☐	☐	☐		
8e.8	Kerb/water table drain including slopes/grades	☐	☐	☐		
8e.9	Cross falls of road/footpath.	☐	☐	☐		
8e.10	Subsoil drainage with geotextiles	☐	☐	☐	Yes	
8e.11	Chainages to which the typical cross-section relates.	☐	☐	☐		
8e.12	Widths	☐	☐	☐		
8e.13	Boundaries	☐	☐	☐		
8e.14	Kerb / water drains velocity control	☐	☐	☐		
8e.15	Road Markings	☐	☐	☐		
8e.16	Delineation posts	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP?	Comments
8e Roading - Typical Cross Sections (Back to top)						
8e.17		☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP?	Comments
8f Roading – Other Details (Back to top)						
8f.1	Road name design – pole size, blade colours	☐	☐	☐		
8f.2	Street furniture	☐	☐	☐		
8f.3	Re-vegetation of batters	☐	☐	☐		
8f.4	Proposed planting of berms (requires permission from Roading)	☐	☐	☐		
8f.5	Non-standard street furniture e.g. walls with development name. (requires permission from Roading)					
8f.6	Reinstatement of footpaths, berms, fencing etc	☐	☐	☐		
8f.7	License to occupy.	☐	☐	☐		
8f.8	Sight rails.	☐	☐	☐		
8f.9	Crash barriers.	☐	☐	☐		
8f.10	Mowing strips.	☐	☐	☐		
8f.11	Signs.	☐	☐	☐		
		☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP?	Comments
9 Landscaping (Back to top)						
9.1	Proposed planting – future effects	☐	☐	☐		
9.2	Fencing & mowing strips	☐	☐	☐		
9.3	Retaining structures	☐	☐	☐		

Item	Requirement	Yes	No	N/A	IQP ?	Comments
9.4	Heritage trees – protection requirements	☐	☐	☐		

Note *This form is provided as a courtesy to external parties. The items listed are those most commonly checked , but is by no means exclusive. Certain consents may require more specific items be provided as part of the application.*