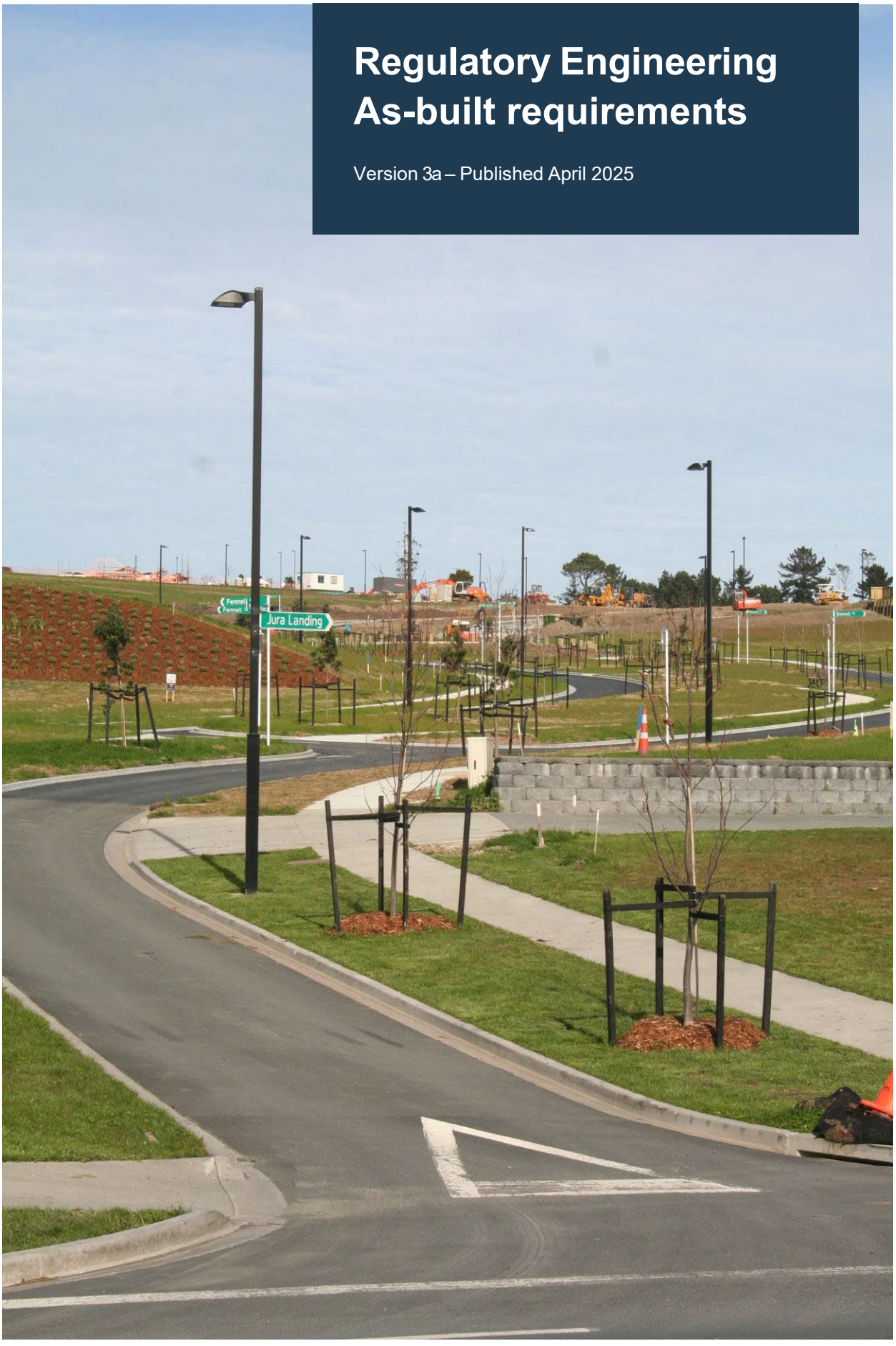
Regulatory Engineering As-built requirements

Version 3a – Published April 2025



Introduction

This document sets out the requirements for as-built documentation for any Auckland Council public infrastructure works that create new assets or in some way alters the existing assets of Auckland Council asset owners. In some cases, it is also appropriate to apply these standards for private infrastructure assets constructed via and engineering plan approval or resource consent.

These as-built plans and documents are required by Auckland Council to ensure that the assets taken over meet engineering requirements, and that this information can then be loaded into GIS systems and databases to ensure an up-to-date record of infrastructure.

Structure

Auckland Council's regulatory engineering department is part of the following organisational delegation:

Auckland Council

↓

Regulatory Service Directorate

↓

Regulatory Engineering Department

Failure to comply

Auckland Council will not take on ownership and assets will remain private until the as-built documentation has been received, checked, and approved. The acceptance of such documentation is guided by the requirements set out in this document and engineering practicability.

Document control provisions

Controlled document

Auckland Council ("the council") as-built requirements is a controlled document with the latest edition available free (pdf format) on our website. The council will always retain the copyright for the as-built requirements and will retain the master copy.

The as-built requirements should always be used in conjunction with the relevant Code of Practice (COP) and Quality Assurance Manual (QAM). It is the developer and/or consultant's responsibility to ensure that they are referring to the latest edition of the as-built requirements, COP and QAM.

Document control amendments

The as-built requirements for Auckland Council is a "live" document and will be subject to changes to maintain relevance to the council policies, developing best practices, procedures and changing industry standards.

Please submit any proposed changes to the attention of the Regulatory Engineering General Manager.

Key changes in this version

Version 3a of the Regulatory Engineering As-built requirements is being released to incorporate changes to:

- New Zealand Vertical Datum 2016 (NZVD 2016) has replaced AUK1946 datum from the 1st of July 2024. From then any new As-builts submitted must be in NZVD2016.
- The As-built Certification section 3.2 and stamp has been updated to include NZVD2016 and Certified Professional Engineering Surveyor as an acceptable signature.
- Sample Drawings have been updated.

Previous changes

As-built certification required on As-built drawings (3.2 page 12) and the schedule of vested assets (appendix c) no longer requires private connection information.

From the 2nd of July 2018 the Engineering Plan Approval process will make sole use of the Watercare Services Limited Compliance Statement process for all newly approved Water and Wastewater assets to be vested. Following the approval of the assets under the engineering approval, all construction observation and documentation reviews will be undertaken by Watercare Services Limited in accordance with the Watercare "Compliance statement policy – Part 1 for land development and subdivision works – September 2017" and their asset recording standards.

Auckland Council Development Engineers will manage the asset acceptance processes associated with stormwater, roading and park assets within the Engineering Plan Approval, and will coordinate with Watercare engineers for the final issuance of the Engineering Approval Completion Certificate.

Table of contents

Contents

1. Engineering Approvals - background

1.1. Public works

Engineering Approvals are issued predominantly for any changes or additions to public infrastructure in the Auckland region. This infrastructure includes wastewater and stormwater drainage, water supply, roading, street trees, street furniture, and other miscellaneous asset types.

1.2. Asset owners

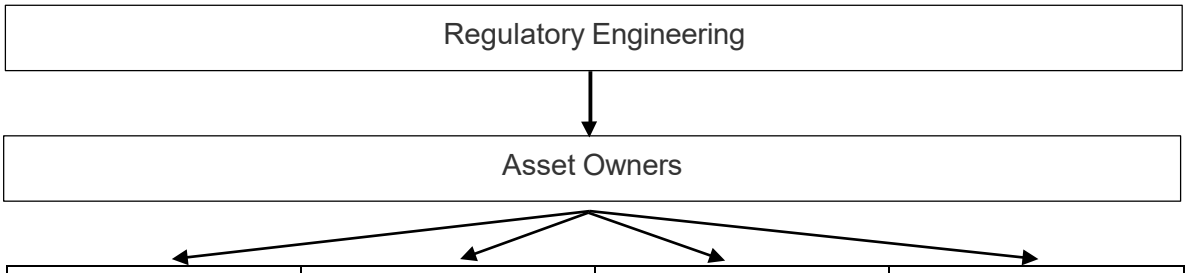
Assets to be vested to Auckland Council as public infrastructure will eventually become the property of one of five asset ownership bodies within or outside council. These asset owners are:

- Watercare Services Limited (Watercare)
- Healthy Waters - Infrastructure and Environmental Services
- Auckland Transport
- Community Facilities
- Property

These bodies have defined responsibilities in terms of asset ownership. Auckland Council (the consenting authority) acts on their behalf to manage the approval process to ensure the integrity of the new assets as a pre-requisite before the respective groups accept ownership. Auckland Council undertakes compliance activities and as-built reviews for these assets, except in the case of water and wastewater infrastructure which from the 2nd of July 2018 will be managed by Watercare directly but still within the Engineering Approval process.

In this capacity, the council requires as-built documentation and performs checks to the satisfaction of all internal Council departments and Auckland Transport. Projects of significant scale and / or of perceived risk may also include direct involvement with those asset owners.

1.3. Asset ownership roles diagram



Watercare Services Limited	Healthy Waters Dept	Auckland Transport	Community Facilities Dept
WW infrastructure	SW infrastructure	Roads	Street trees
WW pipes	SW pipes	Footpaths	Street gardens
WW manholes	SW manholes	Kerb & channel	Formed planters
WW pump stations	SW outlets	Road marking	Grass berms
Watermains	SW inlets	Pram crossings	Public paved areas
Non-potable water	Treatment devices	Street lights	Bus shelters
Fire hydrants	Ponds	Road drainage	Litter bins
Sluice valves	Dams	Road signs	Fountains
Peet valves		Traffic lights	Seats / benches
			Public artwork

Note: Asset types above not limited to i.e. examples only

1.4. Scope of works

This guide is designed for the majority of private development works in the Auckland region. These tend to consist of subdivisions of existing sites and commercial redevelopments. For major development projects that will have a transformative effect on the local infrastructure networks, direct contact with the consenting authority and asset owners may be required throughout the entire consent process.

2. The as-built process

2.1. General

To enable efficient processing of the as built and completion of the Engineering Approval, the following is required:

1. Submit as-built to the Regulatory Engineer in .pdf (vectorised i.e. not scanned), and dwg or .dxf format. Contact details can be found in your letter of Engineering Plan Approval. The subject line should show address and engineering approval number, for example: 150 Great South Road, Manukau – ENG60311000. Once the as-built has been approved, an electronic copy of the certification form, Schedule of Vested Assets and (if required) Road Asset Maintenance Management **(**RAMM) data templates and Schedule of Abandoned Assets will be forwarded for completion. Section 3 provides details as to how these documents are to be completed. The schedule must reflect true pipe lengths and number of manholes as denoted on the final accepted as-built. Any copies of asset owner's confirmations should be provided.

2. A CCTV of all new public stormwater drainage will be required where the full extent of the pipes to be vested as public must be surveyed. This should be submitted to the council for review along with the accompanying log sheets and letter from suitable qualified professional comments on the findings of the CCTV.
3. A Development Engineer will advise if further requirements are needed, including final inspection. Please only reply via email to maintain a clear correspondence trail and enable Council to process your as-built as quickly as possible.
4. Once the as-built data has been checked and approved by Auckland Council the signed pdf copy is to be sent by email to the Regulatory Engineer.
5. Final inspection of works will be required after steps one to four have been completed. Asset owners are to be invited to the inspection.
6. On acceptance of public infrastructure works by Council, an Engineering Approval Completion Certificate will be sent to the applicant's engineer.

NB: For Water and Wastewater assets covered by the Engineering Approval, please refer to Watercare as-built requirements. Regulatory Engineering will receive the finalised as-built plans, schedule of assets and Watercare Certificate of Acceptance.

Note specific drawing requirements are covered under Sections 2.1 to 2.3.

2.2. Processing times

For Regulatory Engineering to process your as-built documentation promptly, we will endeavor to assess within 10 working days, depending on the accuracy and completion of information. Please submit as-built plans to your Regulatory Engineer as soon as possible following the completion of physical works.

- Any errors identified on the as-built plans will require a revised plan to be provided for reassessment.

2.3. Completing a stormwater as-built

2.3.1. The as-built

Stormwater As-built Plans must show the following:

- Co-ordinates to be in New Zealand Transverse Mercator (NZTM) for all assets shown in the electronic file and on the signed paper copies. For examples refer to the sample drawings in Appendices D, E, F, I and J. Accuracy is to be to 0.05m.
- North point.
- Property boundaries, street names and numbers.
- Property address and engineering approval number.
- Any assets related to or affected by the project clearly detailed and labelled as new / existing, public / private, clearly denoting all assets that are to be taken over as public. *Note to include at least the first connecting manhole, pipe etc.*
- All affected pipe inlet levels and outlet levels (including existing assets); levels to be in orthometric heights related to Auckland 1946 Height Datum – accuracy (local) to 0.01m or New Zealand Vertical Datum (NZVD2016) and from 30TH June 2024 NZVD only.
- All material types and sizes of new assets (e.g.; 1050 precast concrete manhole/ 225 RCRRJ / Class x).
- Pipe grade (in percentage).
- Status of any pipes removed, abandoned or grout filled.
- True pipe length (not MH center to MH center).
- Flow directions.

- Dimensions from boundaries to private service connections.
- If a drop manhole has been constructed, a section will be required giving all invert levels.
- All pipe protection measures, e.g. concrete capping.
- Company logo, address and contact details of persons completing the as-built.
- Certification panel - refer section 3.2.

All revisions are to be clear on the drawing and a table provided on the drawing block. Revision dates must be included.

The code of drawing colours to be used are as follows:

- Stormwater: Green
- Removals and abandonments: Orange
- Combined stormwater and wastewater: Magenta
- Wastewater: Red
- Watermain: Blue
- Non-potable water: Purple

2.3.2. Stormwater inlet / outlet details

- Co-ordinates at the point of the inlet / outlet pipe.
- Inlet / outlet pipe invert level.
- Outlet or inlet structure details, e.g. concrete apron, rip rap constructed with 150mm rock spall etc. In general, the approved consent drawings give a good outline of the detail required for the inlet /outlet structures and associated works.
- The receiving and contributing environment must be detailed, and if not surveyed at least generally identified and named e.g. Wiri Stream.
- Where natural water bodies are concerned, it is helpful to reference the outfall structures in relation to ten-year flood levels and flood prone areas as identified on council GIS.
- Any existing regional stormwater discharge consents associated with the works **must** be transferred to Auckland Council at the time of lodging the as-built. Upon vesting, Auckland Council will take ownership of the associated responsibilities (Refer Application form “Notice of Transfer of a Resource Consent to Another Person” in appendices).

2.3.3. Ponds, wetlands, and treatment devices

Stormwater Ponds and treatment devices shall be identified on the plan as follows:

- Coordinates provided for the outline.
- All inlets, outlets, orifices, risers, trash rack device (e.g. scruffy dome) and their dimensions and material types etc.
- A long section and cross section showing the water level control device, and various storage levels, i.e. WQS, specific AEP levels and dead water level.
- A long section and sufficient cross sections to show the general profile and features of the pond or wetland and a long and cross-section of the spillway.
- The length, width, and depth of the pond area sufficient as to confirm design volumes.
- Any erosion control measures at inflow and outflow
- Completion report with notes and measurements confirming any special design features and on-site clean-up and disposal. Statement on seeding and fencing and safety and access features. Must be signed and dated including statement that the feature meets or exceeds the approved design.
- A certification panel as shown in the sample drawings.
- Clearly show access tracks and safety aspects such as fencing, handrails, benching:
    - As generally shown in the sample drawings provided in Appendices J & K.

2.3.4. Re-lays

- Re-lays of existing public stormwater do not require a surveyed as-built. In its place a drafted plan, produced by the registered drainlayer who carried out the works and submitted with the original consented plan as a reference meets requirements.
- As with any other as-built, a completed statement of certification from the engineer overseeing the works, a schedule of vested assets, a post construction CCTV, and verification of completed inspections (carried out by a Development Engineer, not a Building Inspector) are all required for acceptance of the infrastructure.
- As with a standard drainage as-built, pipe lengths, diameter, material, and class must be given, along with address, engineering consent number, and site locality.
- Connection details to the existing pipes / system must also be given.

- The re-lay must be located with distances from known fixed points e.g. boundaries and/or manholes.
- Further to this it must be clear from the as-built which section of public drainage pipe it is that has been replaced i.e. adjacent public manholes named as per GIS description or any other means which makes the infrastructure affected clear.

2.4. Completing roading as-builts

2.4.1. The as-built

Roading as-built plans, certificates, Road Asset Maintenance Management (RAMM) and other forms are required for all new Roading infrastructure to be vested in Council. Regulatory Engineering will forward the documentation to Auckland Transport (AT) for review. Note AT will require a minimum of 5 working days to check information provided.

On acceptance Regulatory Engineering will issue the Engineering Approval Completion Certificate. A final joint inspection with AT assets representative and Regulatory Engineer will be required.

Roading as-built plans must comply with the general requirements set out for a drainage as-built in that it must: have the electronic file set in and show all assets in terms of NZTM; property boundaries, street names, numbers, and locality must be identified; address and consent number must be stated on the as-built. In addition to this, a roading as-built must show the following:

- The extent of the works carried out under the consent must be clearly denoted, with any public / private boundaries clearly defined.
- The roading as-built must show as surveyed; new roads, kerb lines, footpaths, streetlighting, road drainage with catchpit leads, road signs, road marking, traffic signals, pram crossings, bus shelters, other associated street furniture and any retaining walls located within the road reserve and to be vested with council.
- Kerb lines on curves to be surveyed at 5m intervals and show coordinates.
- Company logo, address and contact details of persons completing the as-built.
- Certification panel.
- All revisions are to be clear and obvious on the drawing and in the revisions table of the drawing title block.

2.4.2. Catchpit details

- Centre co-ordinates for catchpit grates (in NZTM)
- Catchpit dimensions

- Invert levels of inlet(s) sump and outlet pipe.
- Invert levels of any subsoil drains entering catchpit.
- True pipe lengths for catchpit leads, also pipe diameter, material, class, and grade.
- Siphon details (or as listed via drawing note that all constructed as per Regulatory Engineering standard engineering detail drawing).
- Catchpit leads are to be shown up to the connection with the existing public Stormwater system, and this connecting system must also be adequately identified and surveyed.
- Drainage RAMM sheets must be filled out for any alterations or additions to public roading drainage. If you have not already received the template RAMM sheet for this asset type via email, it can be obtained upon request from the Regulatory Engineer.

2.4.3. Retaining walls

- Location clearly identified with reference to names of adjacent properties or parks.
- Length of wall, foundation type, structure material and deck / rail material.
- Legal status (to be owned by whom).
- Building consent reference number.

2.4.4 Other required documentation

- RAMM sheets for roading assets are required for upload into the asset owner's RAMM database. These come as an electronic excel spreadsheet document with different sheets for the different information required. The different sheets include a berm inventory, footpath inventory, footpath surfacing, carriageway kerb & channel, carriageway inventory, shoulder inventory, barrier fence rail inventory, carriageway surface, carriageway base, feature inventory, minor structure, vehicle crossing, ads signs. For any particular job, some or all of these sheets may be necessary.
- RAMM sheets will be forwarded with the template to any consent holders for which this asset type is relevant. If you have not received your electronic copy of the RAMM sheets, please contact your Development Engineer.
- Streetlights - Live data capture is required for streetlight as-built pick-up. This is to be carried out by Auckland Transport's nominated contractor at the developer's cost. Streetlights must also be identified on the as-built drawing with general specifications included (as a side note if appropriate). Submission of documentation must be supported at

that time by a producer statement completed by the lighting manufacturer and installer. The following is required:

- Approved Street Lighting Design and a certified pdf as-built plan showing street light position
- Sign off from the Design Engineer that the installation has been built in accordance with the approved design.
- The Electrical Safety Certificate, Record of Inspection and Certificates of Compliance for individual Street Lights.
- The RAMM data for the streetlights.
- Certificate of Completion and record of Inspection for the electrical work from Network Contractor: e.g.-Vector/North power.

- Road signs - Live data capture is required for road sign as-built pick-up. This is to be carried out by Auckland Transport's nominated contractor, at the developer's cost. Road sign locations must also be identified on the as-built drawing.
- Traffic lights - The client must contract one of the known traffic light installation companies within the Auckland region to carry out these works. These companies have the expertise to complete the as-built documentation process and submit the details to the Traffic Management Unit (TMU), a separate body, for upload into their systems. Upon acceptance of this data, the contracted company will supply you with a copy of the accepted data, which must be provided to Regulatory Engineering, which will in turn be stored by Auckland Transport in their document registry. In addition to this a producer statement must also be provided for the traffic light infrastructure.

2.5. Completing a streetscape (Parks) as-built

2.5.1. The as-built

Streetscape as-built documents have different requirements from the other asset types. Parks asset types may have different as-built requirements depending on the asset type. If you are uncertain what may be required of you, please contact your Development Engineer (Assets), who may forward your query on to Parks for specific / uncommon asset types.

Street trees are the most common asset type to be vested with Auckland Council – Parks. They must fulfil the requirements as following:

Upon application to Regulatory Engineering, a CSV file will be provided that must be completed by the applicant giving details about the street trees. This is essentially a spreadsheet format

and will include information such as co-ordinates of the assets, tree type and age, and potentially other information fields. Upon request of the file format, you will be put in direct contact with a representative of Parks who will assess the information that will be necessary for that instance and will provide guidance as to how to complete the documentation correctly.

Street furniture is also a common asset type that may be vested. Again, you will be provided with the appropriate CSV file and contacts within Parks to ensure that you can complete the documentation as required.

2.5.2. Supporting documentation

- The Engineering Approval issued for these works will be explicit in outlining the requirements to be met throughout the course of the works. These include site and nursery inspections to be carried out by Parks Inspectors.
- To satisfy Regulatory Engineering, the conditions of the consent must be shown to have been met and complied with throughout. Full written sign-off for the completion of the works is required from the City Parks Services representative who has been assigned to this project. This is to be forwarded to your Development Engineer.
- Activity reports are generally required for sign-off of landscaping / street trees. The full set of these reports must be submitted to your Development Engineer along with the completed As-built drawing and sign-off from Parks.
- A schedule of vested assets is still required for this asset type, however a Statement of Certification: Engineering Approval is not appropriate. Sign-off is instead required from the landscape architect, stating that the completed works adhere to the agreed design and methodology.

3. Required Documentation

3.1. Engineering completion certificate

When Regulatory Engineering is satisfied that all as-built documentation has been accepted and the public works have been approved, the consent file will be sent for final invoicing. The applicant as listed on the original Engineering Approval application form will be sent the final invoice, and upon payment, an engineering approval completion certificate (EACC) will be issued. This document is what may be required to support application for 224c certificate or building code compliance certificate.

An example of a final engineering completion certificate is found in Appendix L - Sample engineering approval completion certificate.

3.2. As-built certification

Final copies of the as-built plan must include a signed certification statement by the Registered Professional Surveyor, Licensed Cadastral Surveyor or Certified Professional Engineering Surveyor responsible for the as- built, in the following manner:

I certify that these As-built Plans are an accurate record of the works undertaken and that:

- *The **Coordinates** (X, Y) are in terms of NZTM on NZGD (2000), and are within ± 50mm.*
- *The **Levels** (Z) are in terms of the NZVD 2016 / Auckland 1946 (MSL) LINZ datum (DOSLI datum), and are within the following tolerances:*
  - *For all pipe inverts & roadside channels to be within +/- 10mm (local circuit i.e. internal/relative consistency required only)*
  - *For all other assets +/-20mm (e.g. Manhole covers, Earthworks)*

Name: _____

Signed: _____

Registered Professional Surveyor / Licensed Cadastral Surveyor/ Certified Professional Engineering Surveyor

Registration Number: _____ Date: _____

Contact Phone: _____

Email: _____

Regulatory Engineering acceptance of the as-built plans does not absolve the certifier of ongoing responsibility for the information provided nor does it absolve the certifier of any other approvals that may be required by Watercare Services Limited, Auckland Transport, Parks, or other bodies.

An example of a completed as-built certification panel is found in Appendix G - Sample Drainage As-built.

3.3. Schedule of vested assets

3.3.1. Function

The schedule of vested assets itemises the costs for the respective elements of the development. Auckland Council is required by law to apportion a value to its assets that reflects the true installation cost. In the case of assets created under engineering approvals, this value is provided by the developer or their agent and must exclude consenting fees and any consultant or project management fees.

3.3.2. Completing the form

The schedule of vested assets form is to be signed by the agent or developer and must break down itemised assets (for example, cost of wastewater pipes, manholes, fire hydrants etc). All pipe lengths and number of installed assets must be in accord with the final approved as-built. All fields in the bottom section of the form must be filled out i.e. name, company, position along with signing and dating the form.

An example of a completed schedule of vested assets is found in Appendix D - Sample Schedule of Vested Assets.

4. Vesting of infrastructure

Following final acceptance of the assets and issuance of the engineering approval completion certificate, Regulatory Engineering carry out certain processes in order to vest the infrastructure as an Auckland Council public asset. The main component of this is the release of a project completion documentation for each job. These documents summarise necessary information accepted though the as-built process, and formats them for release to the respective asset owners. On the rare occasion it is found at this point that necessary details may have been overlooked during the checking process and are now required to be submitted for completion of this document. Regulatory Engineering may contact the project engineer / surveyor at this point for further details in order to complete this document.

In conjunction with the internal release of the completion documents, the .dwg / .dxf drawing file submitted through the as-built process will be distributed to Auckland Council GIS for uploading onto the public system. From this point on the public assets formally vested will now be visible to Auckland Council residents and ratepayers and can be utilised for further development.

5. Post completion audit

Once vesting has been completed, a post completion audit may be carried out.

The respective asset owner, upon receipt of the assets through the vesting process, may carry out post completion audits to verify that the new assets meet minimum standards. If deficiencies are found, then they may defer ownership and request Regulatory Engineering to contact the client for remediation. In this capacity Regulatory Engineering carry out further investigations to resolve issues and satisfy all parties. The point of contact for this process is primarily the certifying chartered professional engineer / registered professional surveyor who has signed their name to the Statement of Certification.

6. Appendices below.

Statement of Certification: Engineering Approval

I, _____ of _____
(Company name)

being a Chartered Professional Engineer under the provisions of the Chartered Professional Engineer Act 2002 or Registered Professional Surveyor (New Zealand Institute of Surveyors), have personally or through personnel under my control carried out periodic reviews of the following works, and based upon these reviews and information supplied by the Contractor during the course of those works hereby certify that all engineering works;

shown on As-built plans: _____

prepared by _____

In accordance with the approved Engineering Plans, number: _____

_____

at address _____

Lot # _____ DP # _____

have been constructed in accordance with sound and accepted engineering principles, the manufacturers recommendations and comply with all provisions of the Unitary Plan, relevant Auckland Council Engineering Standards, and the specific requirements of the Development Consent(s) and Engineering Approval (and approved amendments), including completion and other tests.

I understand that by signing this statement of certification I am confirming that I am competent in the required engineering aspects and that this statement of certification, if accepted, will be relied upon by Council for the purposes of establishing compliance with the above Engineering Approval.

Signed:	_____	Professional qual (circle one):	CPEng / RPSurv
Date:	_____	Member of (circle relevant):	ACENZ / EngNZ / SSNZ
		Registration number:	_____

Schedule of Land and Assets to Vest in Council
Sheet 1: Four waters

Developer's name and address:

Notice for assets vested from a development at:
Site address:
Suburb:
Sub / Land use consent #:
Eng approval #:
Completion date:

All values are to be exclusive of GST

Category	Diam.	Material	*Measure*		*Cost / Value*	*Council's Contribution*
Stormwater						
Stormwater Pipes*			Length (m)			
			Length (m)			
Manholes / Chambers			No.			
Inlet / Outlet			No.			
Catchpits			No.			
Pumpstations			No.			
Treatment Devices			No.			
Detention Tanks			No.			
Ponds			No.			
Lot Connections			No.			
				Subtotal:		
Wastewater						
Wastewater Pipes			Length (m)			
			Length (m)			
Manholes / Chambers			No.			
Outlets			No.			
Valves			No.			
Pumpstations			No.			
Lot connections			No.			
				Subtotal:		
Water Supply - Potable						
Watermain			Length (m)			
			Length (m)			
Hydrants			No.			
Valves			No.			
Pumpstations			No.			
Manholes / Chambers			No.			
Bores			No.			
Intake Structures			Diam.			
				Subtotal:		
Water Supply - Non Potable						
Watermain			Length (m)			
Hydrants			No.			
Valves			No.			
Pumpstations			No.			
Manholes / Chambers			No.			
Reservoirs			No.			
				Subtotal:		

This information is certified as being true and correct

	Name:	Company:
	Signed:	Dated:
	Position of signatory in relation to developer:	

* Note: "Stormwater Pipes" to be vested as public are deemed public to the first joint or 1m inside the connection boundary whichever is the lesser.

For further clarification refer to "Stormwater Connections (inside the property)

Schedule of Land and Assets to Vest in Council
Sheet 2: Land, Roading and Parks

Developer's name and address

Notice for assets vested from a development at:
Site address:
Suburb:
Sub / Land Use Consent #:
Eng approval #:
Completion date:

All values are to be exclusive of GST

Land to Vest			
Land Use	*Area (m^2)*	*Cost / Value*	*Council's Contribution*
Roading			
Recreation Reserve		N/A – Council Office Use Only	
Local Purpose Reserve			
Accessway (Recreation Reserve)			
Accessway (Roading)			
Other			
		Subtotal:	

Category	*Measure*		*Cost / Value*	*Council's Contribution*
Roading				
Roading (must match RAMM sheet entries)	Area (m^2)			
Footpaths	Area (m^2)			
Kerb & Channel	Length (m)			
Street Lights	No.			
Street Trees	No.			
Traffic Signals	No.			
Traffic Signs	No.			
Bridges - vehicle	No.			
Catchpits	No.			
Retaining Walls	Item			
Fences	Item			
Noise Walls	Length (m)			
		Subtotal:		

Parks				
Bridges - Pedestrian	No.			
Trees, Shrubs	No.			
Boardwalks	Area (m^2)			
Planter Boxes	No.			
Playgrounds	No.			
Accessway (Improvement to Land Only)	Area (m^2)			
BBQ	No.			
Litterbin	No.			
Picnic Tables	No.			
Seats/benches	No.			
Carparks	Area (m^2)			
		Subtotal:		

Other				
Buildings	Item			

This information is certified as being true and correct
Name:
Company:
Position of signatory in relation to developer:
Signed:
Dated:

Schedule of Abandoned Assets
Sheet 1: Three Waters

Developer's name and address:

Notice for assets abandoned from a development at:
Site address:
Suburb:
Sub / Land use consent #:
Eng approval #:
Completion date:

Stormwater							
Asset name (from asbuilt)	Asset name (from GIS) * please note Council may add GIS references to this form if left blank.	Asset type (e.g. gravity pipe / manhole / outlet)	Size (mm)	Material	Quantity (see note below)	Disposal type (e.g. abandoned / removed)	Reason for disposal (e.g. capacity, deterioration, re-alignment)
Wastewater							
Asset name (from asbuilt)	Asset name (from GIS) * please note Council may add GIS references to this form if left blank.	Asset type (e.g. gravity pipe / manhole / outlet)	Size (mm)	Material	Quantity (see note below)	Disposal type (e.g. abandoned / removed)	Reason for disposal (e.g. capacity, deterioration, re-alignment)
Water supply							
Asset name (from asbuilt)	Asset name (from GIS) * please note Council may add GIS references to this form if left blank.	Asset type (e.g. pipe / manhole / outlet)	Size (mm)	Material	Quantity (see note below)	Disposal type (e.g. abandoned / removed)	Reason for disposal (e.g. capacity, deterioration, re-alignment)

This information is certified as being true and correct

Name:
Company:
Position of signatory in relation to developer:
Signed:
Dated:

Note: Only the length to be abandoned is to be entered. If an entire section between manholes, enter the length between (the outside) of each manhole. If it is a relaid section of pipe then only that length that has been removed and replaced is to be entered..

Schedule of Abandoned Assets
Sheet 2: Roading & other

Developer's name and address:

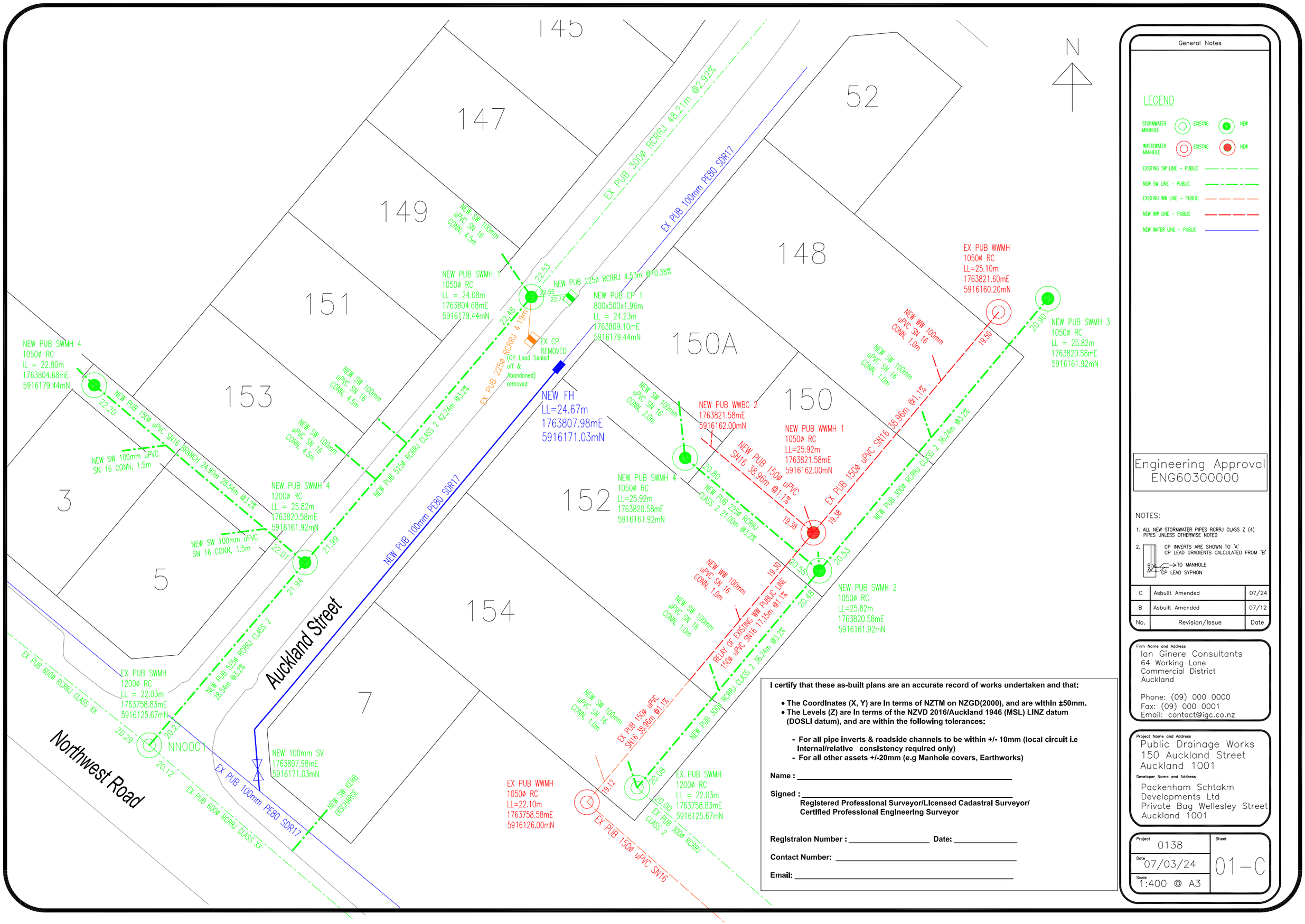
Notice for assets abandoned from a development at:
Site address:
Suburb:
Sub / Land use consent #:
Eng approval #:
Completion date:

Roading (affecting Cornerstone Drive and Elliot Rose Avenue)							
Asset name (from asbuilt)	Asset name (from GIS) * please note Council may add GIS references to this form if left blank.	Asset type (e.g. footpath, carriageway, streetlight)	Width	Material	Quantity (see note below)	Disposal type (e.g. abandoned / removed)	Reason for disposal
Kerb and channel		K & C			*55m*	*removed*	new intersections
footpaths		footpath			*55m*		new intersections
Parks							
Asset name (from asbuilt)	Asset name (from GIS) * please note Council may add GIS references to this form if left blank.	Asset type	Comments		Quantity (see note below)	Disposal type (e.g. abandoned / removed)	Reason for disposal
Other							
Asset name (from asbuilt)	Asset name (from GIS) * please note Council may add GIS references to this form if left blank.	Asset type	Comments		Quantity (see note below)	Disposal type (e.g. abandoned / removed)	Reason for disposal

This information is certified as being true and correct

Name: (Consultant)
Company:
Position of signatory in relation to developer:
Signed:
Dated:

Note: only the length to be abandoned is to be entered.



I certify that these as-built plans are an accurate record of works undertaken and that:

- **The Coordinates (X, Y) are in terms of NZTM on NZGD(2000), and are within ±50mm.**
- **The Levels (Z) are in terms of the NZVD 2016/Auckland 1946 (MSL) LINZ datum (DOSLI datum), and are within the following tolerances:**
  - **For all pipe inverts & roadside channels to be within +/- 10mm (local circuit i.e Internal/relative consistency required only)**
  - **For all other assets +/-20mm (e.g Manhole covers, Earthworks)**

Name : _____

Signed : _____
Registered Professional Surveyor/Licensed Cadastral Surveyor/ Certified Professional Engineering Surveyor

Registraion Number : _____ **Date:** _____

Contact Number: _____

Email: _____

General Notes

LEGEND

STORMWATER MANHOLE	EXISTING	NEW		
WASTEWATER MANHOLE	EXISTING	NEW		
EXISTING SW LINE – PUBLIC				
NEW SW LINE – PUBLIC				
EXISTING WW LINE – PUBLIC				
NEW WW LINE – PUBLIC				
NEW WATER LINE – PUBLIC				

Engineering Approval
ENG60300000

NOTES:

1. ALL NEW STORMWATER PIPES RCRRJ CLASS Z (4) PIPES UNLESS OTHERWISE NOTED
2. CP INVERTS ARE SHOWN TO 'A' CP LEAD GRADIENTS CALCULATED FROM 'B'

No.	Revision/Issue	Date
C	Asbuilt Amended	07/24
B	Asbuilt Amended	07/12

Firm Name and Address
Ian Ginere Consultants
64 Working Lane
Commercial District
Auckland

Phone: (09) 000 0000
Fax: (09) 000 0001
Email: contact@igc.co.nz

Project Name and Address
Public Drainage Works
150 Auckland Street
Auckland 1001

Developer Name and Address
Packenham Schtakm
Developments Ltd
Private Bag Wellesley Street
Auckland 1001

Project 0138	Sheet 01–C
Date 07/03/24	
Scale 1:400 @ A3	

Appendix G – drainage as-built sample.dwg

I certify that these as-built plans are an accurate record of works undertaken and that:

- **The Coordinates (X, Y) are in terms of NZTM on NZGD(2000), and are within ±50mm.**
- **The Levels (Z) are in terms of the NZVD 2016/Auckland 1946 (MSL) LINZ datum (DOSLI datum), and are within the following tolerances:**
  - **For all pipe inverts & roadside channels to be within +/- 10mm (local circuit i.e internal/relative consistency required only)**
  - **For all other assets +/-20mm (e.g Manhole covers, Earthworks)**

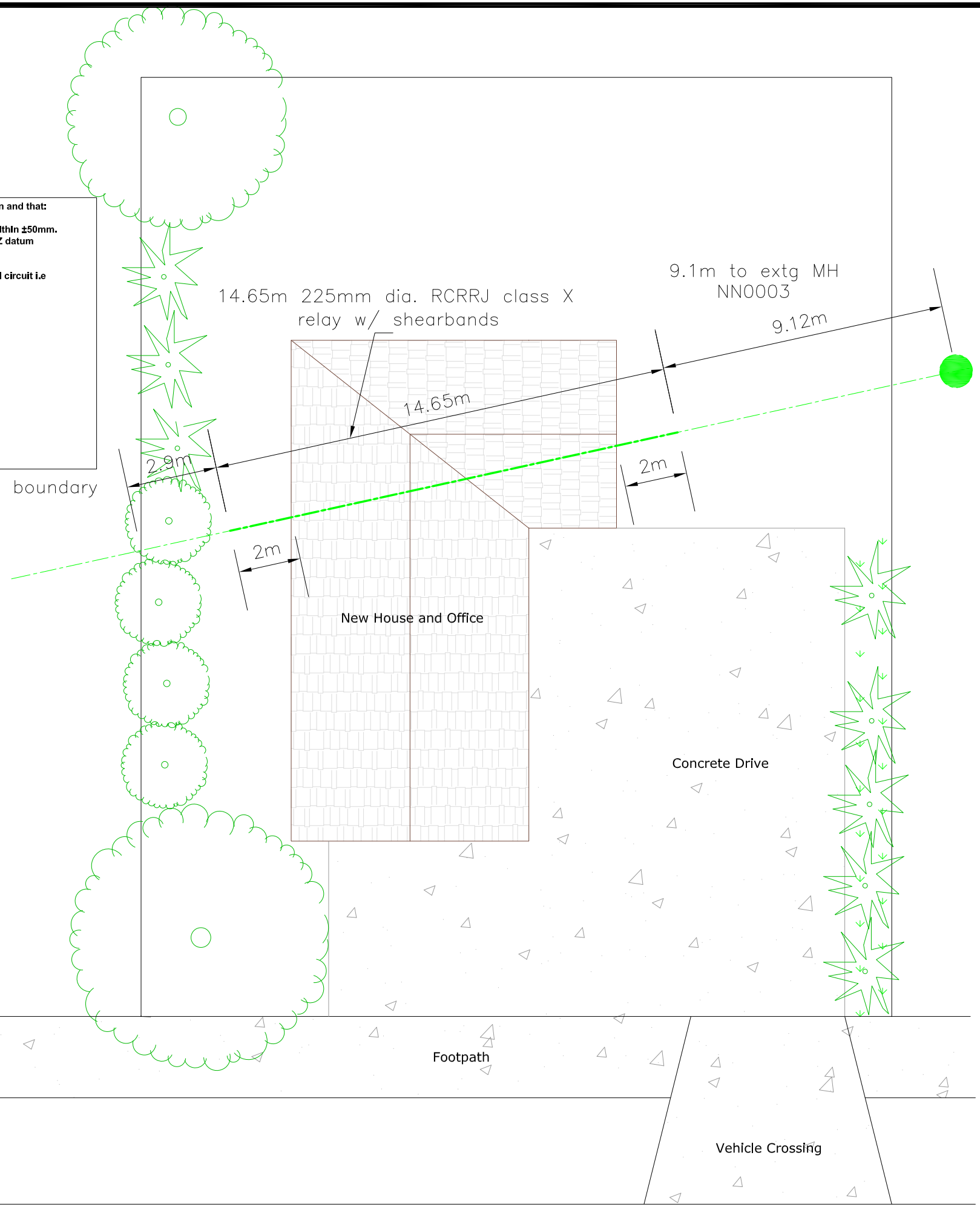
Name : _____

Signed : _____
Registered Professional Surveyor/Licensed Cadastral Surveyor/ Certified Professional Engineering Surveyor

Registraion Number : _____ **Date:** _____

Contact Number: _____

Email: _____



N

General Notes

LEGEND

Ex SW Line

New SW Line

SW Manhole: New ○ Existing ●

Engineering Approval
ENG0000000

No.	Revision/Issue	Date
C	Design REVIEW	07/24
B	Asbuilt to AC	07/12

Firm Name and Address
Ian Ginere Consultants
64 Working Lane
Commercial District
Auckland

Phone: (09) 000 0000
Fax: (09) 000 0001
Email: contact@igc.co.nz

Project Name and Address
Public Stormwater Relay
150 Auckland Street
Auckland 1001

Developer Name and Address
Packenham Schtakm Developments Ltd
Private Bag Wellesley Street
Auckland 1001

Project	Sheet
0138	02–C
Date: 7.03.2024	
Scale: NTS	

Appendix H – Re-lay as-built sample.dwg

I certify that these as-built plans are an accurate record of works undertaken and that:

- The Coordinates (X, Y) are in terms of NZTM on NZGD(2000), and are within ±50mm.
- The Levels (Z) are in terms of the NZVD 2016/Auckland 1946 (MSL) LINZ datum (DOSLI datum), and are within the following tolerances:
  - For all pipe Inverts & roadside channels to be within +/- 10mm (local circuit I.e Internal/relative consistency required only)
  - For all other assets +/-20mm (e.g Manhole covers, Earthworks)

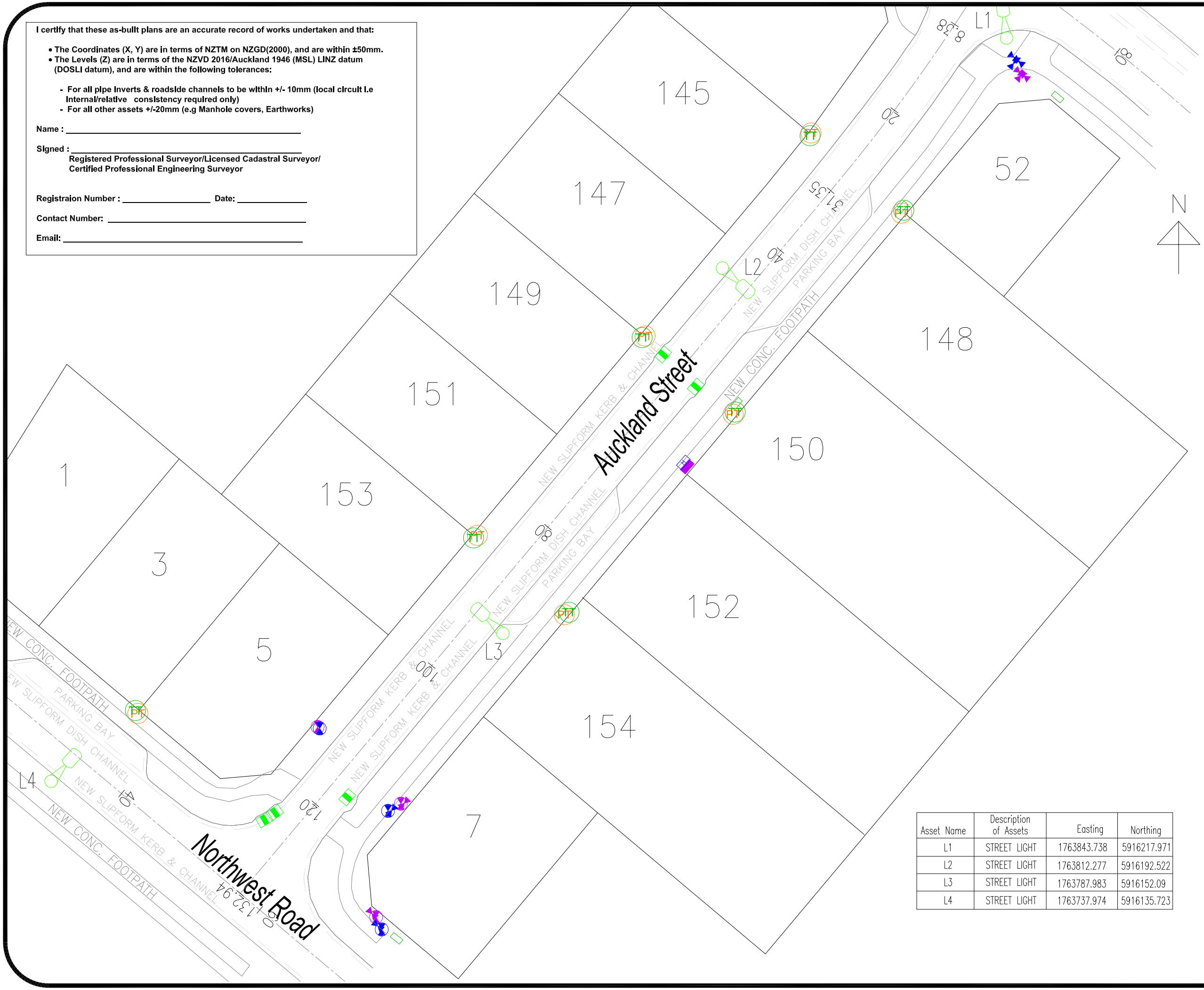
Name : _____

Signed : _____
Registered Professional Surveyor/Licensed Cadastral Surveyor/
Certified Professional Engineering Surveyor

Registraion Number : _____ Date: _____

Contact Number: _____

Email: _____



Asset Name	Description of Assets	Easting	Northing
L1	STREET LIGHT	1763843.738	5916217.971
L2	STREET LIGHT	1763812.277	5916192.522
L3	STREET LIGHT	1763787.983	5916152.09
L4	STREET LIGHT	1763737.974	5916135.723

General Notes

LEGEND

- STREET LIGHT
- STREET SIGN
- TACTILE CROSSING
- TELECOM PIT
- TELECOM TUDD
- POWER TUDD
- WATER HYDRANT
- PEET VALVE
- SLUICE VALVE
- CESSPIT

Engineering Approval
E/2012/0000

No.	Revision/Issue	Date
C	Asbuilt REVIEW	03/24
B	Asbuilt Amended	07/12

Firm Name and Address
Ian Ginere Consultants
64 Working Lane
Commercial District
Auckland

Phone: (09) 000 0000
Fax: (09) 000 0001
Email: contact@igc.co.nz

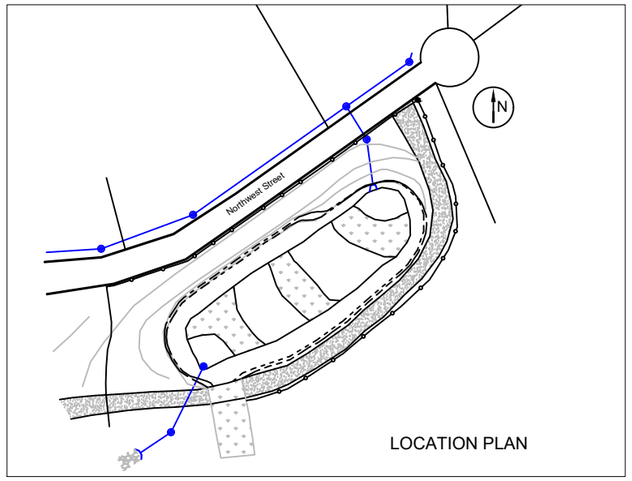
Project Name and Address
New Roading Works
150 Auckland Street
Auckland 1001

Developer Name and Address
Packenham Schtakm Developments Ltd
Private Bag Wellesley Street
Auckland 1001

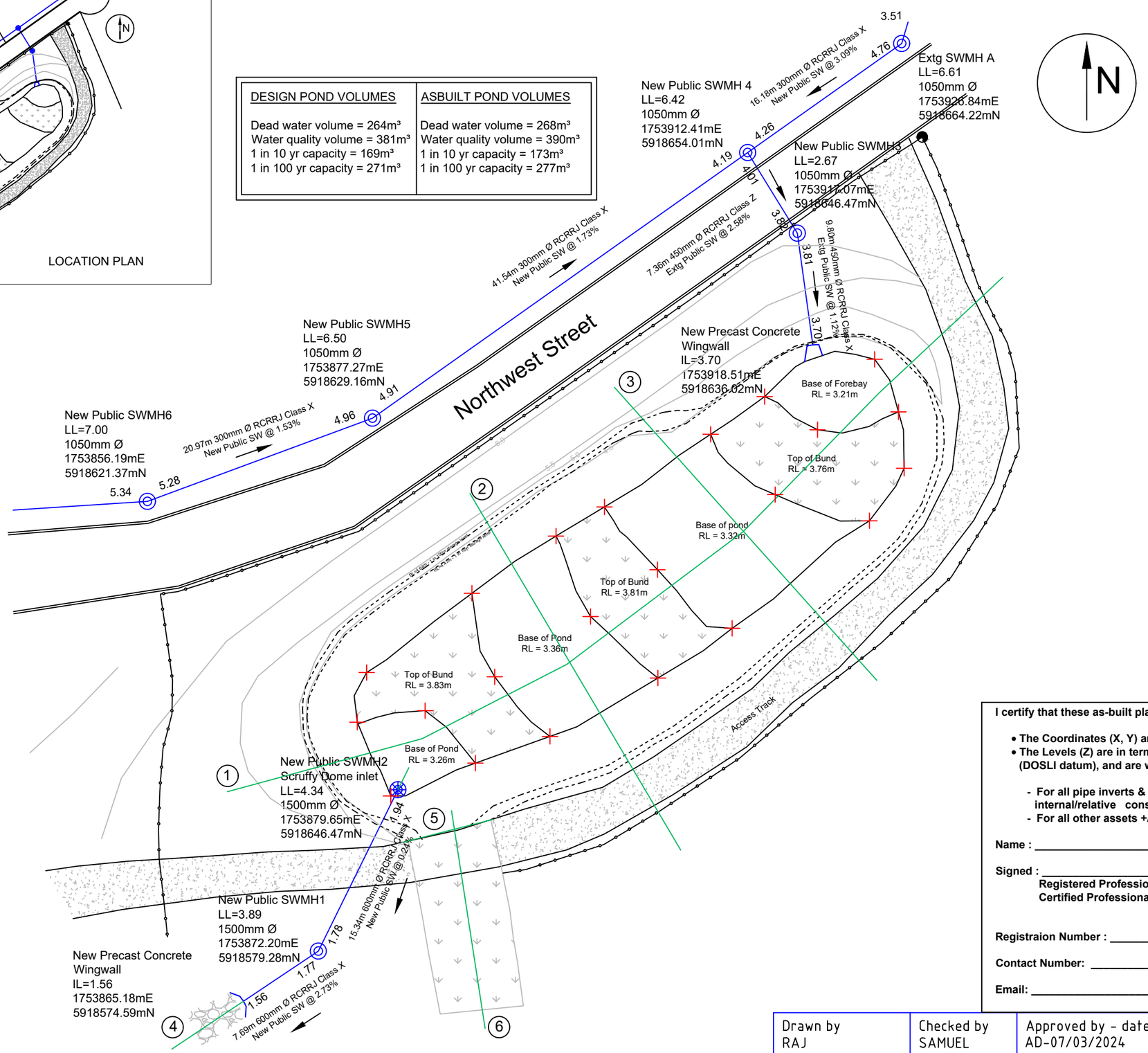
Project	Sheet
0138	03–C
Date: 07/03/2024	
Scale: 1:400 @ A3	

Appendix I – roading as-built sample.dwg

Rev			
Rev2	Added bund levels	22/3/12	DLS



DESIGN POND VOLUMES	ASBUILT POND VOLUMES
Dead water volume = 264m³	Dead water volume = 268m³
Water quality volume = 381m³	Water quality volume = 390m³
1 in 10 yr capacity = 169m³	1 in 10 yr capacity = 173m³
1 in 100 yr capacity = 271m³	1 in 100 yr capacity = 277m³



POND COORDINATES (NZTM)

Easting	Northing
1753928.97mE	5918633.57mN
1753914.00mE	5918631.18mN
1753908.95mE	5918627.65mN
1753898.00mE	5918620.85mN
1753894.46mE	5918618.12mN
1753886.58mE	5918612.77mN
1753876.72mE	5918605.36mN
1753875.85mE	5918600.70mN
1753878.98mE	5918593.80mN
1753886.90mE	5918596.87mN
1753893.89mE	5918599.38mN
1753904.01mE	5918604.84mN
1753910.96mE	5918609.49mN
1753923.82mE	5918619.56mN
1753927.07mE	5918624.47mN
1753926.54mE	5918629.75mN
1753918.95mE	5918628.08mN
1753914.98mE	5918622.00mN
1753903.96mE	5918614.98mN
1753897.69mE	5918610.59mN
1753888.72mE	5918604.95mN
1753882.20mE	5918601.79mN

I certify that these as-built plans are an accurate record of works undertaken and that:

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  - **For all pipe inverts & roadside channels to be within +/- 10mm (local circuit i.e internal/relative consistency required only)**
  - **For all other assets +/-20mm (e.g Manhole covers, Earthworks)**

Name : _____

Signed : _____
Registered Professional Surveyor/Licensed Cadastral Surveyor/ Certified Professional Engineering Surveyor

Registraion Number : _____ **Date:** _____

Contact Number: _____

Email: _____

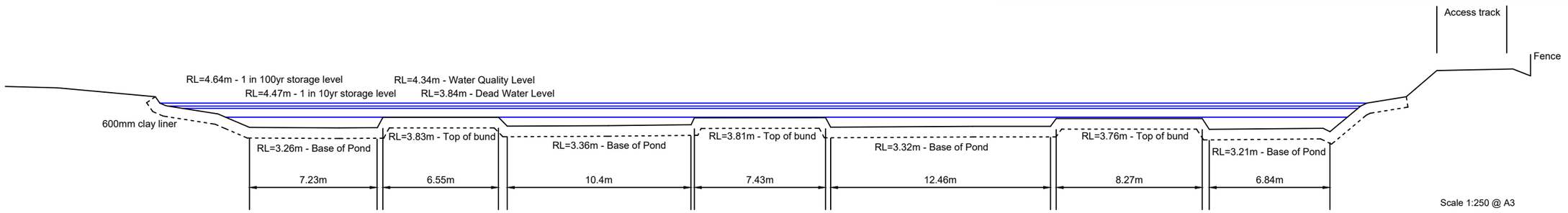
Drawn by	Checked by	Approved by - date	File name	Date	Scale
RAJ	SAMUEL	AD-07/03/2024	AC_POND	07/03/2024	1:400

SAMPLE POND ASBUILT PLAN

Northwest Street - ENG0000000

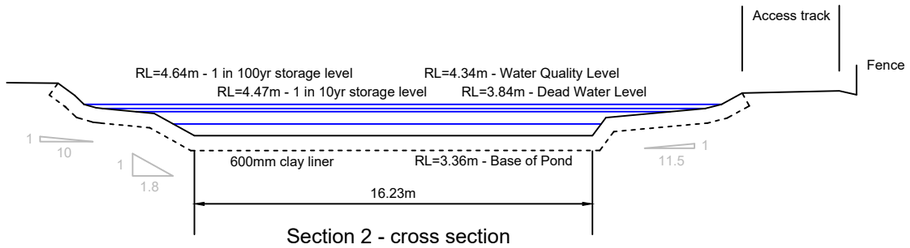
Sheet 1 of 2

Rev2	Added bund levels	22/3/12	DLS

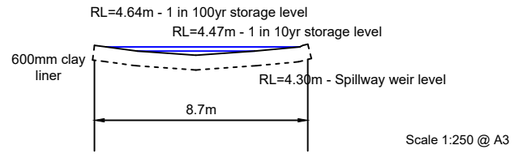


Scale 1:250 @ A3

Section 1 - Longsection

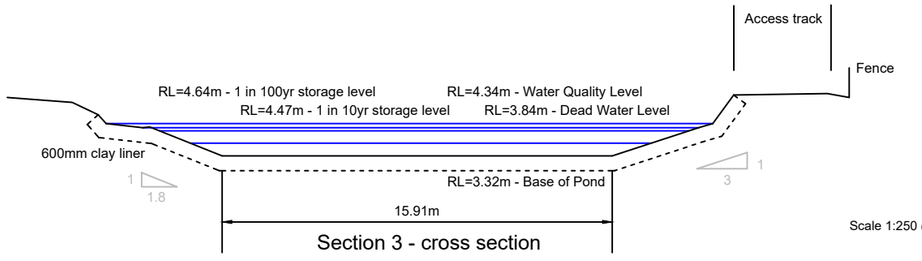


Section 2 - cross section



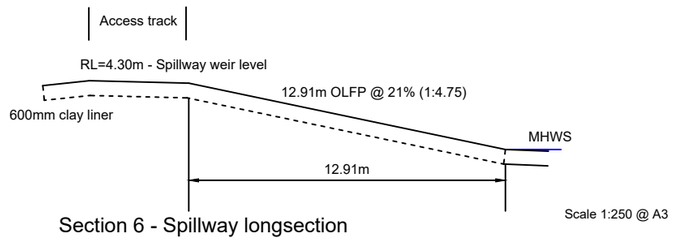
Scale 1:250 @ A3

Section 5 - Spillway cross section



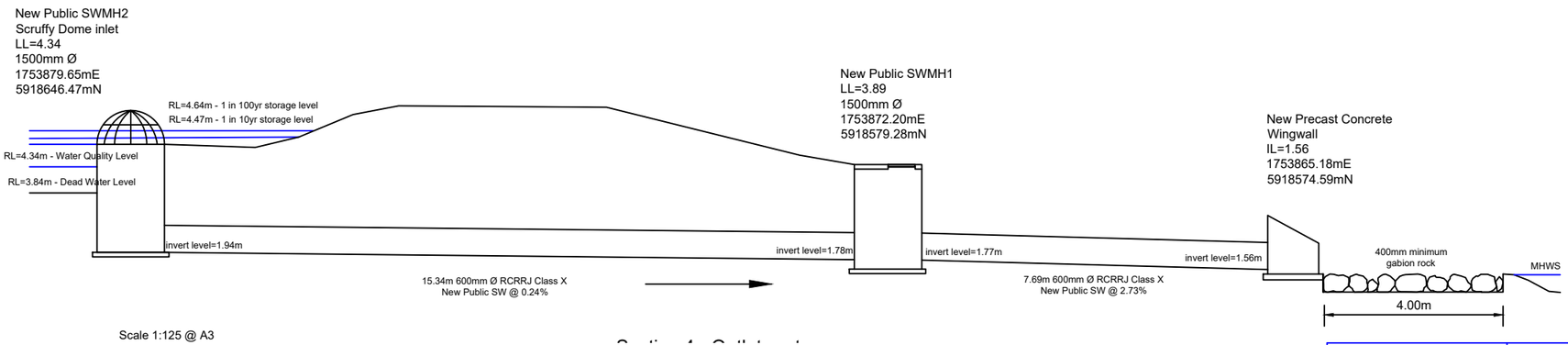
Section 3 - cross section

Scale 1:250 @ A3



Scale 1:250 @ A3

Section 6 - Spillway longsection



Scale 1:125 @ A3

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Name : _____

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Registraion Number : _____ **Date:** _____

Contact Number: _____

Email: _____

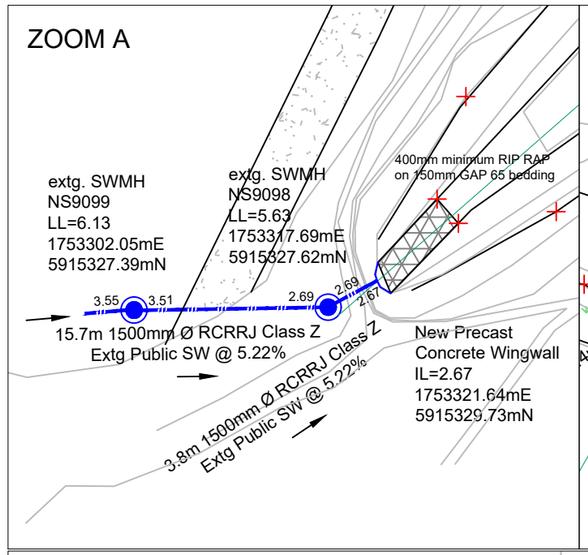
Drawn by	Checked by	Approved by - date	File name	Date	Scale
RAJ	SAMUEL	AD-07/03/2024	AC_POND	07/03/2024	VARIES

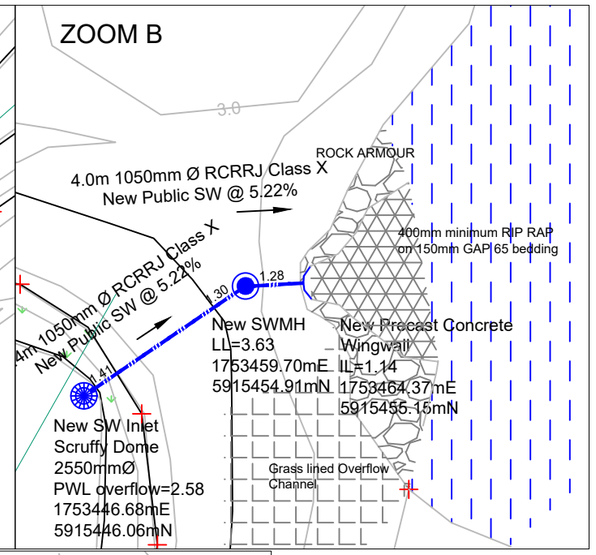
SAMPLE POND ASBUILT PLAN

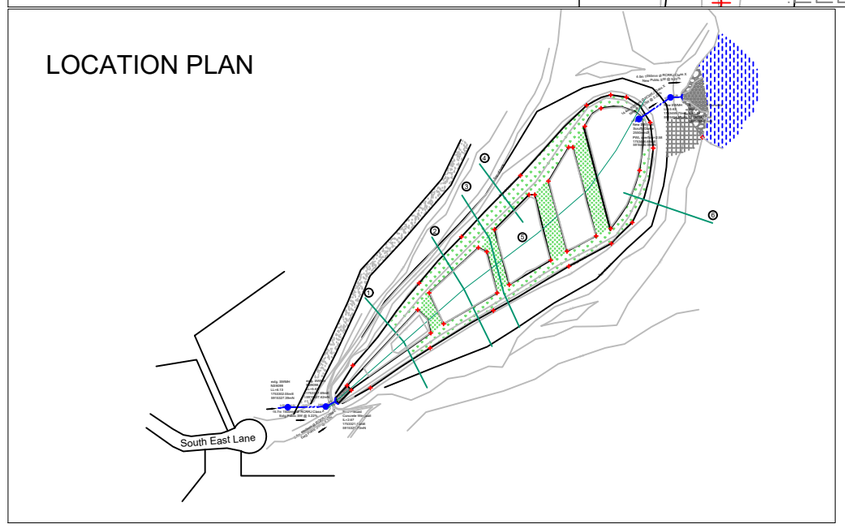
Northwest Street - ENG0000000

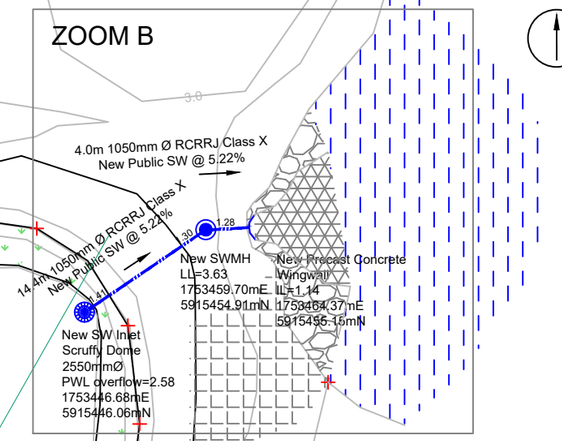
Sheet 2 of 2

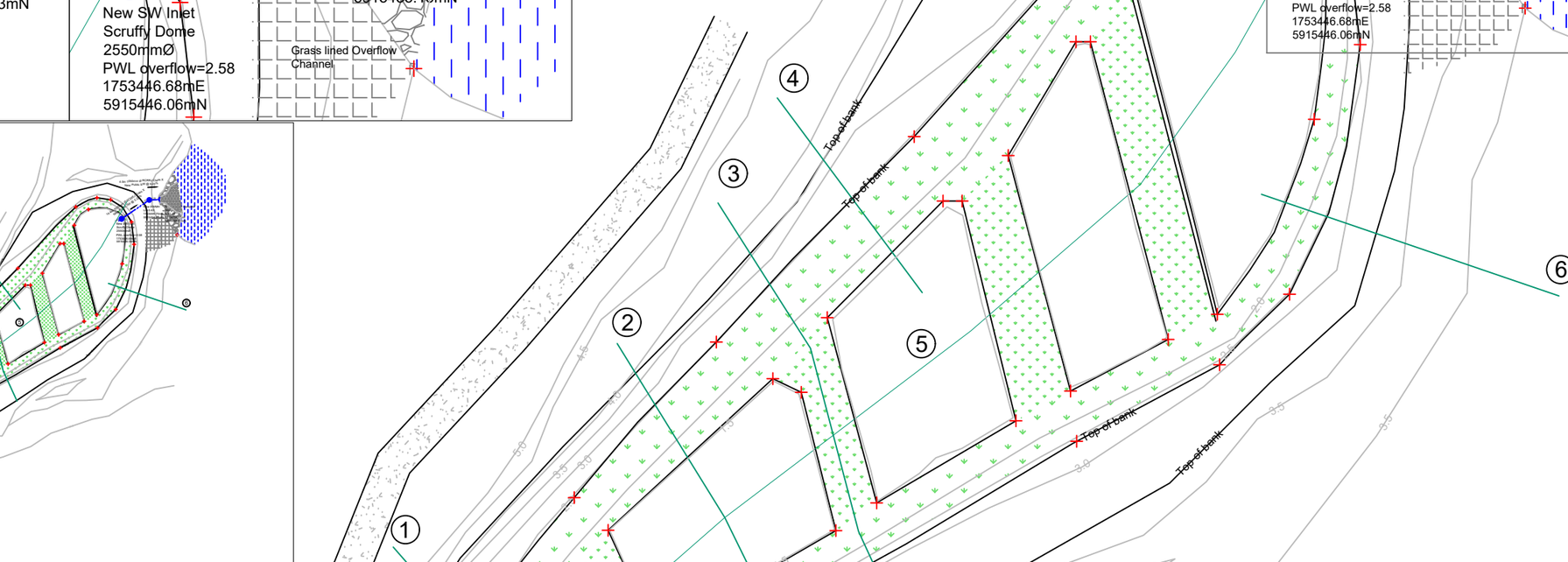
Rev1	Amended coordinate system - NZTM	22/3/12	DLS











N

POND PLANTING SCHEDULE

AQUATIC AREA

DEEP ZONE 0.5-1m
Juncus Palladus
Baumea Articulata

SHALLOW ZONE 0-0.5m
Eleocharis Sphacelata
Juncus Paladus

LOWER BANK ZONE
Carex Secta / Carex Virgata
Apadasmia Similis

MID BANK ZONE
Cortaceria Fulvida
Phormium Cookianum

UPPER BANK ZONE
Apodosmia Similis
Phormium Cookianum
Phormium Tenax
Cordyline Australis

Wetland Coordinate Table

Easting	Northing	Easting	Northing
Top of Bank		Bay 2	
1753336.06mE	5915335.32mN	1753366.20mE	5915361.71mN
1753360.69mE	5915351.77mN	1753388.25mE	5915374.43mN
1753386.70mE	5915367.18mN	1753384.00mE	5915391.39mN
1753386.70mE	5915385.39mN	1753380.51mE	5915393.07mN
1753435.33mE	5915394.77mN	1753360.28mE	5915374.46mN
1753443.92mE	5915403.43mN	Bay 3	
1753452.60mE	5915434.06mN	1753393.25mE	5915377.83mN
1753451.33mE	5915444.61mN	1753410.35mE	5915387.90mN
1753441.54mE	5915455.04mN	1753403.75mE	5915414.86mN
1753435.09mE	5915455.98mN	1753401.40mE	5915414.86mN
1753425.10mE	5915451.66mN	1753387.18mE	5915400.56mN
1753397.85mE	5915422.77mN	Bay 4	
1753373.58mE	5915397.56mN	1753417.04mE	5915391.55mN
1753356.14mE	5915378.48mN	1753429.03mE	5915397.88mN
1753328.78mE	5915344.59mN	1753419.48mE	5915434.40mN
Forebay		1753417.70mE	5915434.40mN
1753328.18mE	5915334.38mN	1753409.39mE	5915420.45mN
1753360.93mE	5915357.92mN	Bay 5	
1753355.55mE	5915367.51mN	1753435.06mE	5915400.97mN
1753326.46mE	5915336.33mN	1753446.96mE	5915424.89mN
		1753431.04mE	5915450.46mN
		1753424.39mE	5915443.06mN

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  - **For all other assets +/-20mm (e.g Manhole covers, Earthworks)**

Name : _____

Signed : _____
Registered Professional Surveyor/Licensed Cadastral Surveyor/ Certified Professional Engineering Surveyor

Registraion Number : _____ **Date:** _____

Contact Number: _____

Email: _____

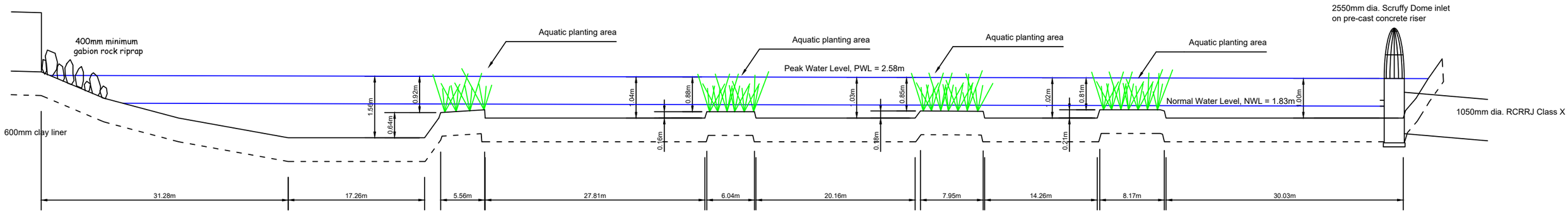
Drawn by	Checked by	Approved by - date	File name	Date	Scale
RAJ	SAMUEL	AD-07/03/2024	AC__WETLAND	07/03/2024	1:750

SAMPLE WETLAND ASBUILT

South East Lane - ENG0000000

Sheet 1 of 2

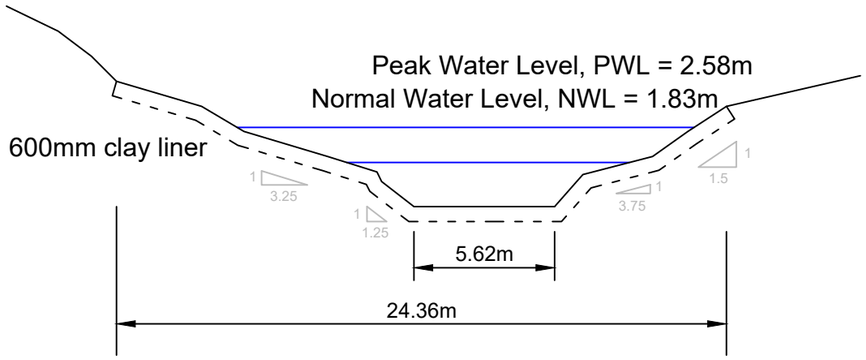
Rev1	Amended coordinate system - NZTM	22/3/12	DLS



Section 5 - Typical longsection

Scale 1H:5V

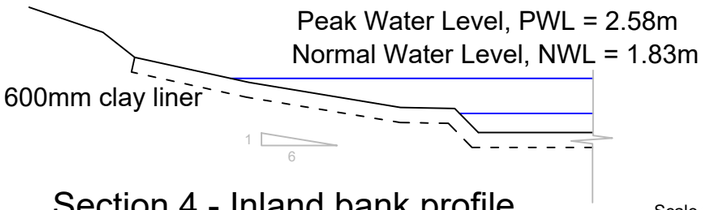
Scale 1:500 @ A3



Section 1 - Bay 1 cross section

Scale 1H:2V

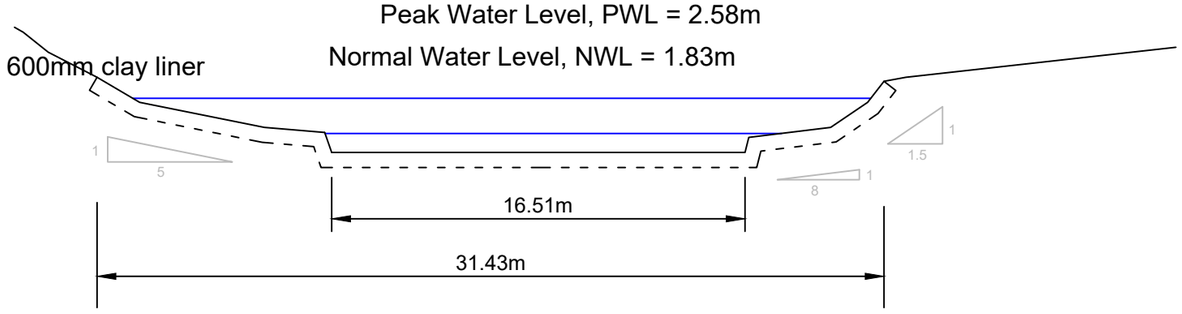
Scale 1:250 @ A3



Section 4 - Inland bank profile

Scale 1H:2V

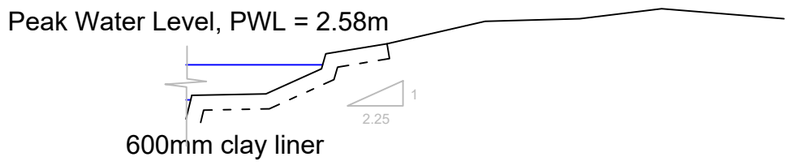
Scale 1:250 @ A3



Section 2 - Bay 2 cross section

Scale 1H:2V

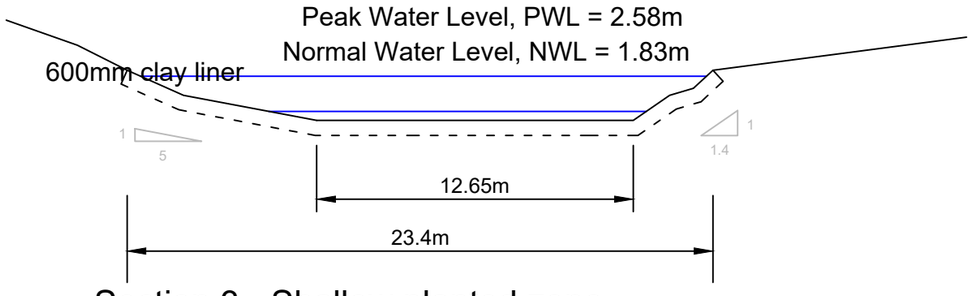
Scale 1:250 @ A3



Section 6 - Coastal bank profile

Scale 1H:2V

Scale 1:250 @ A3



Section 3 - Shallow planted zone

Scale 1H:2V

Scale 1:250 @ A3

I certify that these as-built plans are an accurate record of works undertaken and that:

- **The Coordinates (X, Y) are in terms of NZTM on NZGD(2000), and are within ±50mm.**
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  - **For all other assets +/-20mm (e.g Manhole covers, Earthworks)**

Name : _____

Signed : _____
Registered Professional Surveyor/Licensed Cadastral Surveyor/ Certified Professional Engineering Surveyor

Registraion Number : _____ **Date:** _____

Contact Number: _____

Email: _____

Drawn by	Checked by	Approved by - date	File name	Date	Scale
RAJ	SAMUEL	AD-07/03/2024	AC__WETLAND	07/03/2024	×VARIES

SAMPLE WETLAND ASBUILT - Longsection

South East Lane - ENG0000000

Sheet 2 of 2

Engineering Approval Completion Certificate

Issued By: **Auckland Council – Regulatory Engineering**

Project:	(Project type)	
Consent Number:	ENG600XXXXX	**Release Date:** D/M/Y

Project Address:
Street number, name
Suburb
City
Post code

Applicant:
(Name/Company)
(Address)
Auckland

Note: A final Engineering Approval Completion Certificate (EACC) issued in respect to all the engineering works covered by the above Approval.

The Statement of Certification has been signed and dated by:
(CPEng /Registered Surveyor)., Date
The As-built plan has been signed and dated by: (Surveyor)
Auckland Council Regulatory Engineering is satisfied upon reasonable grounds that: these works, certified by Name have met the requirements of the Engineering Approval.

This Engineering Approval Completion Certificate is granted subject to the following conditions:

- That 24-hour access to public infrastructure on private land be provided to Auckland Council, Watercare and its representatives in accordance with the Local Government Act 2004.
- That a post-construction audit may be carried out of these works.
- That subsequent to this audit, if the works associated with this consent are found to be deficient in any way, remedial works and / or revised documentation may be required.

Signed for and on behalf of Council on this day: < DD/MM/YY >

.....
<Name>
Team Leader
Regulatory Engineering
Auckland Council