Application for Resource Consent

Central Interceptor Connection Works

Land use consent for minor works in a floodplain and overland flow path

Haycock Avenue, Mt Roskill

September 2020

Tonkin & Taylor Ltd

Document Control

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Date	**Version**	**Description**	**Prepared by:**	**Reviewed by:**	**Authorised by:**
29/09/2020	1	Final for lodgement	L Alkamil	K Baverstock	K Baverstock

Distribution:

Watercare Services Limited	1 PDF copy
Tonkin & Taylor Ltd (FILE)	1 PDF copy

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1 Introduction

1.1 Overview of proposed works

This Assessment of Effects on the Environment (AEE) report has been prepared on behalf of Watercare Services Limited (Watercare) to support a resource consent application to authorise a replacement manhole in a floodplain and overland flow path as part of the Central Inceptor (CI) project at Haycock Avenue in Mt Roskill.

This report has been prepared in fulfilment of Section 88 of the Resource Management Act 1991 (RMA), and in accordance with Tonkin & Taylor Ltd's (T+T) letter of engagement dated 21 September 2020.

1.2 Background

The CI is a fundamental part of Watercare's long-term strategy to effectively manage wastewater within the Auckland region, to protect public health and the environment, and to provide for growth. The CI is a 14.7-kilometre long and 4.5-metre wide tunnel that runs between Grey Lynn and the Māngere Wastewater Treatment Plant (MWTP), collecting and transferring wastewater for treatment and safe disposal. It will have permanent shafts for operational use and future access – these will collect and transfer wastewater from the existing network into the tunnel providing a more direct route to the MWTP.

The Haycock Avenue shaft site is located along a connector tunnel that then feeds into the main CI tunnel at the May Road site. The purpose of this section is to divert flows from the current older western network into the CI tunnel. Construction at this site will include the building of a shaft and diversion chamber connection to both the Western Interceptor and the local network.

The site at 4 Haycock Avenue is designated by Watercare (ref. 9466) under the Auckland Unitary Plan (AUP) for the purpose of the construction, operation and maintenance of wastewater infrastructure[1]. In addition to this designation, the existing regional and district resource consents authorise the wider site works associated with CI, including the removal of existing buildings on site, traffic management and the establishment of site construction areas and associated earthworks[2].

As part of the detailed design process, Watercare has identified a manhole that requires replacing and upgrading. This manhole is located outside of Designation 9466 at the back of the property at 81 White Swan Road, and partly within an overland flow path and floodplain identified in Auckland Council's GIS viewer. While the manhole and associated construction is provided for under the existing suite of CI resource consents, Auckland Council (AC) has advised that a further resource consent is required in accordance with Rule E36.4 (A56) of the AUP due to the location of the manhole (being in a floodplain and overland flow path).

[1] Works in accordance with a designation do not require land use consent under Section 9(3) of the Resource Management Act 1991 (RMA)

[2] R/LUC/2012/2846, R/LUC/2012/2846/1, PRC40962, PRC40963, 40834, 40835, 40836, 40837, 40838, 40839, 40840, 40841, 40842, 40843, 40844, 40845, 40846, 40848, 40849 and 40850

1.3 Applicant and property details

Table 1.1: Applicant and property details

Applicant	Watercare Services Ltd
Owner/occupier of application site	2 and 4 Haycock Avenue - Watercare Services Ltd 81 White Swan Road - Minh Diep Nguyen, John Hylton Ryland, Daksha Dharmesh Parekh, Dharmesh Labhubhai Parekh
Site address / map reference	2 and 4 Haycock Avenue and 81 White Swan Road, Mt Roskill
Site area	2 Haycock Avenue - 688 m^2 4 Haycock Avenue - 680 m^2 81 White Swan Road - 1200 m^2
Legal description	2 Haycock Avenue - Lot 80 Deposited Plan 48241 4 Haycock Avenue - Lot 79 Deposited Plan 48241 81 White Swan Road - 2 6-7 Deposited Plan 79043, 5 Deposited Plan 79043, 3-4 Deposited Plan 79043, Lot 2 Deposited Plan 76882
Record of Title reference	NA34D/1500, NA34D/1499, NA34D/1498, NA36A/, 1NA1875/80 NA1875/79
Council / Plans	Auckland Council Auckland Unitary Plan Operative in Part (AUP)
Address for service during consent processing	Tonkin & Taylor Ltd Attention: Laila Alkamil Phone: 09 352 2948 Email: LAlkamil@tonkintaylor.co.nz
Address for service during consent implementation and invoicing	Watercare Services Ltd Attention: Xenia Meier Phone: 021 574 585 Email: xenia.meier@water.co.nz

We attach copies of the relevant Record of Titles in **Appendix A** and drawings in **Appendix B**.

1.4 Overview of resource consent requirements

AC has advised that resource consent is required under Rule E36.4.1 (A56) of the AUP as a restricted discretionary activity for infrastructure in the 1 percent annual exceedance probability (AEP) floodplain and in an overland flow path not otherwise provided for as a permitted activity.

Pursuant to Section 125(1) of the RMA, a standard lapse date of 5 years is sought.

2 Site description

The site works are located at 2 and 4 Haycock Avenue with the replacement manhole located in 81 White Swan Road ('the site') (see Figure 2.1 below). Site establishment, including removal of the existing residential dwellings on Haycock Avenue, has been completed and works authorised under the existing designation and resource consents have commenced[3].

The site is adjacent to the Haycock Avenue Reserve and is surrounded by residential development. It is zoned Residential – Mixed Housing Suburban under the AUP.

The site topography is relatively flat. Site surface runoff is currently directed to Haycock Avenue and the stream to the east of the site. A tributary of the Avondale Stream runs through Haycock Avenue Reserve at the southern end of the site.

Part of the site is located within an identified 1 per cent annual exceedance probability (AEP) floodplain. In addition, an overland flow path runs through the site (see Figure 2.2 below).

As set out in the original application and assessment of effects on the environment (AEE)[4], there are no recorded archaeological or heritage sites within the construction area and there is little potential for discovery of unrecorded archaeological remains. A previous ground contamination study did not identify any potentially contaminating activities that have occurred on the site[5]. In any case, these matters are addressed through the existing resource consents and associated conditions and do not form part of this application.

Figure 2.1: Site location plan. (Source: Watercare, 2019).

[3] R/LUC/2012/2846, R/LUC/2012/2846/1, PRC40962, PRC40963, 40834, 40835, 40836, 40837, 40838, 40839, 40840, 40841, 40842, 40843, 40844, 40845, 40846, 40848, 40849 and 40850.
[4] "*Central Interceptor Main Project Works: Resource Consent Applications and Assessment of Effects on the Environment*" prepared by Watercare Services Ltd, dated August 2012.
[5] "*Desk Study and Ground Contamination Assessment – Main Works Central Interceptor Project*", prepared by Tonkin + Taylor Ltd, dated July 2012.

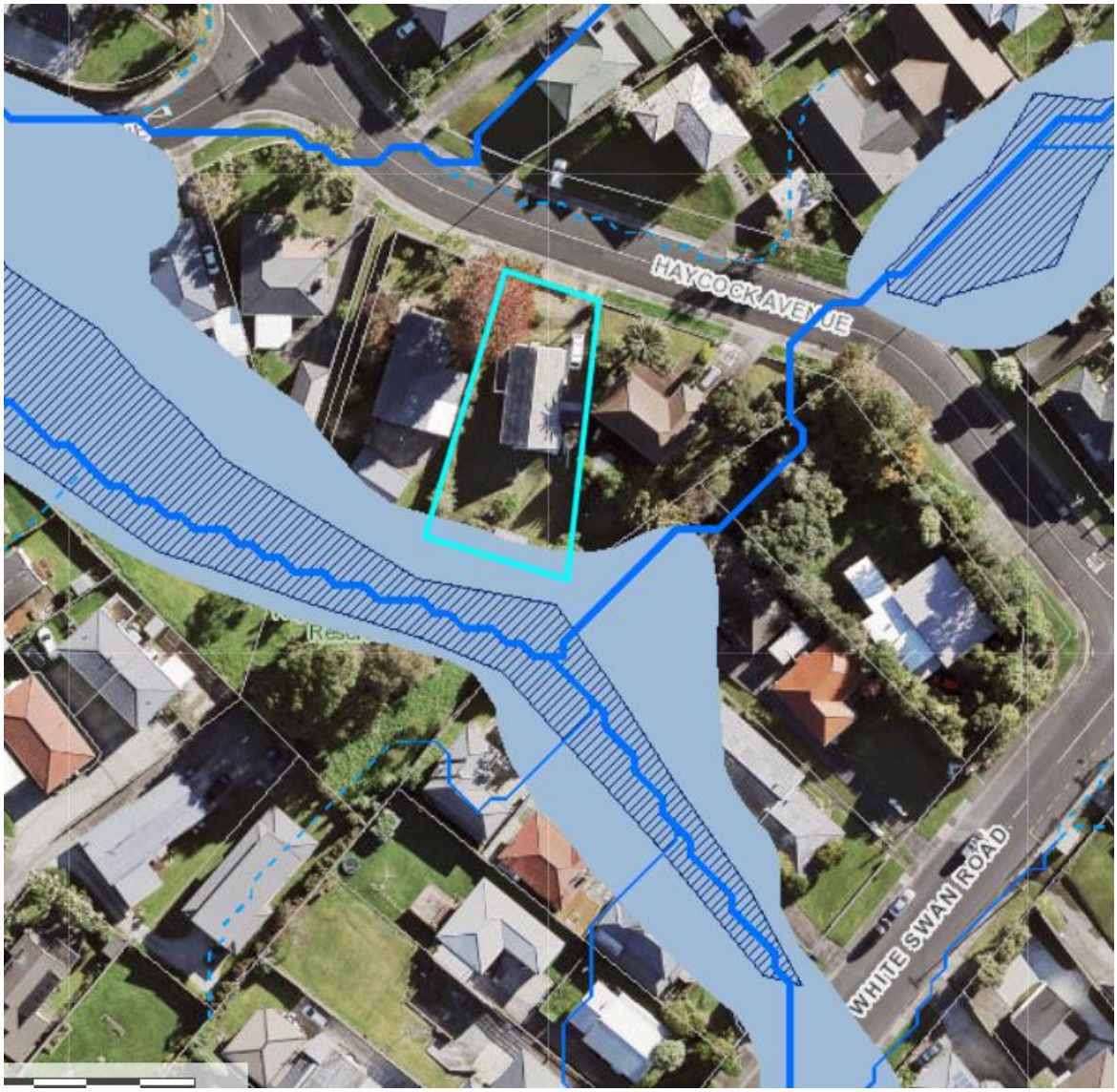

Figure 2.2: Haycock Avenue overland flow paths and floodplain with approximate designation boundary shown in blue. (Source: Auckland Council GeoMaps, 2020).

3 Description of works

3.1 Consented CI works

The Haycock Avenue construction site is on the Link Sewer 3 alignment and is required to provide connections to the Western Interceptor, Lynfield Branch Sewer and CSO Collector CC-8. It is a secondary construction site and will also be used for the retrieval of the Micro Tunnel Boring Machine (MTMB) for Link Sewer 3.

The consented works at this location generally comprise the Link Sewer 3 and CSO Collector CC-8, along with connecting pipes to the Western Interceptor and Lynfield Branch Sewer, a drop shaft, connection chambers, air intake and manholes. Works are programmed to take place over a 16-month period, having commenced in May 2020 and finishing in September 2021. Once construction and site reinstatement are complete, the permanent visible works will consist of two chamber lids (at ground level, flush with the adjacent surface), a shaft cover and three manholes.

As discussed in Section 1.2 above, the CI works are authorised under the designation and existing regional and district resource consents.

Figure 3.1: Haycock Avenue Construction Site (note: One way traffic is now westbound). (Source: Watercare, 2020).

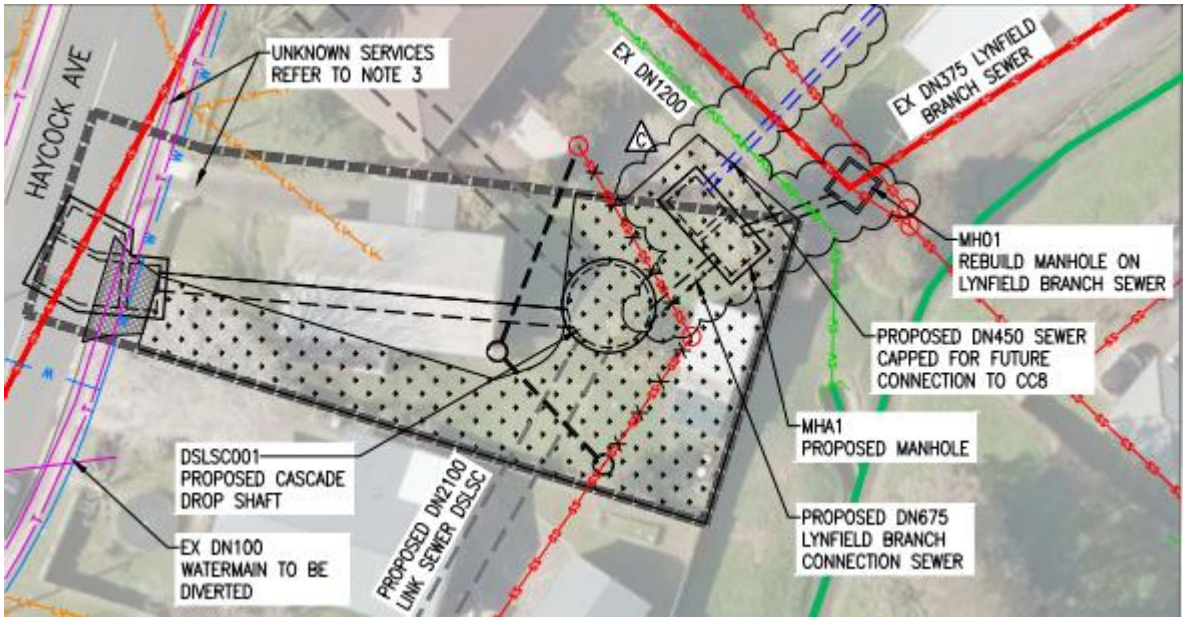

Figure 3.2: Haycock Avenue Manhole MH01. (Source: Watercare, 2020).

3.2 This application

For the purpose of this application, the works which require resource consent are limited to a manhole upgrade within the 1% Annual Exceedance Probability (AEP) floodplain and overland flow path – specifically the rebuilding of manhole MH01 on the Lynfield Branch Sewer. As outlined in Section 3.1, the current manhole is authorised under Watercare's existing resource consent and hence this application relates to the location of the manhole in a floodplain and overland flow path only.

The existing manhole requires upgrading as stop plates are needed within the structure. To install stop plates, a new square manhole is required to replace the existing circular structure. In addition, two new access hatches will be constructed and positioned at the existing ground level. The access hatch level is 23.42 m RL, which is below both the 10-year and 100-year maximum probably development flood level. The surface will be reinstated with topsoil and grass.

The existing manhole MH01 has the following dimensions: 1.5 m diameter and 2.8 m deep with a 600 mm diameter lid flush with the existing ground level. The upgraded manhole exceeds the 10% increase in size provided for as a permitted activity in Chapter E36 of the AUP. As per the current design, the existing manhole will be replaced with a new square manhole that is 3.7 m by 3.7 m and 3.9 m deep. The upgraded manhole will have a 1 m by 1.8 m external rectangular lid and a 600 mm diameter lid which are both flush with the existing ground level i.e. up to approximately 2 m^2 total area at ground level (see **Appendix B**)[6].

[6] Note that design may change (+/- 20%) once construction commences due to unexpected ground conditions or to accommodate other underground services.

4 Resource consent requirements

4.1 Auckland Unitary Plan

The requirements for resource consents are determined by the rules in the AUP. The rules which apply are determined by the zoning of the site, any identified notations in the plan and the nature of the activities proposed. Zoning and planning notations which apply to the site are set out in Table 4.1 and resource consent requirements are identified in Table 4.2 below.

Table 4.1: Zoning and planning notations

Zoning/planning limitation	Comment
Residential – Mixed Housing Suburban Zone	Applies across the entire site and provides for residential activities.
Designation 9466	Purpose of this designation is the construction, operation and maintenance of wastewater infrastructure with Watercare as the requiring authority. Applies across 4 Haycock Avenue only.
1 per cent annual exceedance probability (AEP) floodplain	Indicates areas predicted to be covered by flood water as a result of a rainstorm event of a scale that occurs on average once every hundred years. Applies across the southern end of the site at 2 Haycock Avenue and north-western end of 81 White Swan Road.
Overland flow path	Applies across 2 Haycock Avenue and 81 White Swan Road.

Table 4.2: Resource consents required

Proposed activity	Rule reference / description	Comment	Activity status
Replacement of an existing manhole structure within a floodplain	**Infrastructure in the 1 per cent AEP floodplain and overland flow path** Rule E36.4.1 (A56) – All other infrastructure in areas listed in heading above not otherwise provided for.	The proposed replacement manhole structure exceeds the 10% increase in width and height of the original manhole as provided for under the permitted activity standard E36.6.1.13(i).	Restricted discretionary

Under Rule E36.8.1 (18) the Council has restricted its discretion. These matters of discretion are addressed in Section 5 of this report.

AC has advised that consent is required as the manhole exceeds the permitted activity threshold for the upgrading of infrastructure (i.e. a 10% increase in size), despite the replacement manhole being flush with the ground surface and having no potential effects in terms of flooding.

It is also relevant to note that Rules E36.4.1 (A34) and (A35) of Chapter E36 of the AUP provide for a range of activities and structures located within a 1 percent annual exceedance probability (AEP) floodplain and/or overland flow path as permitted activities well beyond what is proposed in this application.

The consent requirement triggered for these proposed works is not a reflection of actual or potential effects (which are negligible - see Section 5), but rather a consequence of plan drafting and this activity not being specifically provided for in the plan provisions.

4.2 Permitted activities and existing resource consents

Chapter E26 of the AUP establishes a broad range of permitted activities in relation to infrastructure including underground pipelines (A49), manholes (A57) and associated earthworks (A100).

Notwithstanding this, as discussed in Section 1.2 above, the existing designation and regional and district consents already authorise the works associated with CI. This includes wastewater infrastructure at the Haycock Avenue construction site as well as traffic management and the establishment of site construction areas and associated earthworks. Therefore, the proposed works are already provided for under the existing regional and district consents. The consent requirement advised by Auckland Council is therefore limited specifically to the location of the upgraded manhole in an overland flow path and floodplain.

5 Assessment of effects on the environment

The following assessment identifies and assesses the types of effects that may arise from the proposed works. This assessment also outlines the measures that the applicant proposes to avoid, remedy or mitigate any potential adverse effects on the environment.

As set out in Section 3.2, the scope of this application is very narrow and is limited to the replacement of the existing manhole structure within a floodplain and overland flowpath. This is reflected in the assessment set out below.

5.1 Positive effects

The proposed works contribute to the wider CI project, which has significant numerous positive effects. These include providing network capacity for growth and development, addressing asset risk due to the ageing Western Interceptor and reducing overflows to the stream environment in the catchment it serves.

The CI main works will be integral to the ongoing operation of wastewater network in Auckland over the next 50 years and beyond. The wastewater network enables the communities of Auckland to provide for their ongoing health and wellbeing and for continued economic growth and development across Auckland. The wastewater network is fundamental to the health and operation of Auckland.

5.2 Flooding effects

Under Rule E36.8.1 (18) of the AUP, Council has restricted its discretion to the matters assessed in Table 5.1 below. For further details regarding flood risk, please refer to the Flood Risk Assessment in **Appendix C**.

Table 5.1: Assessment against matters of discretion

Matters of discretion	Assessment
a the functional and/or operational need to locate within the hazard area	There is a functional and operational need for the replacement manhole structure to be located within a floodplain and overland flow path in order to connect to the existing wastewater network.
b the risk of adverse effects to other people, property and the environment including all of the following: i risk to public health and safety;	There is no change to the existing public health and safety risk from flooding as a consequence of rebuilding MH01.
ii impacts on landscape values and public access associated with the proposed activity including a need for hard protection structures to be required to protect the utility from the natural hazard;	The proposed works are not located within any notable landscapes or in proximity to any notable landscape features. There are no effects on landscape values. The proposed works are located on private land and public access arrangements will not be affected.
iii the management or regulation of other people and property required to mitigate natural hazard risks resulting from the location of the infrastructure;	The proposed works will have a less than minor adverse effect on flood risk and therefore no management or regulation of other people or property is required to mitigate natural hazard risk.

Matters of discretion	Assessment
iv the storage or use of hazardous substances in relation to the activity;	Hazardous substances will not be stored in the hazard area.
v any exacerbation of an existing natural hazard or creation of a new natural hazard as a result of the structure;	The works proposed are very minor in nature and will involve the replacement of an existing manhole structure which will be flush with ground level. Therefore, there will be no exacerbation of an existing natural hazard.
vi the use of non-structural solutions instead of hard engineering solutions; and	Not applicable to the proposed works, being a replacement manhole flush with ground level.
vii the ability to relocate or remove structures	The replacement manhole is required as part of wider CI works. It cannot be relocated as it is required to be located on the Lynfield Branch Sewer

Table 5.2 contains an assessment of the proposed works against the relevant assessment criteria contained in the AUP.

Table 5.2: Assessment criteria

Relevant Criteria	Assessment
Rule E36.8.2 (17) – for the operation, maintenance, renewal, repair and minor infrastructure upgrading of infrastructure in the coastal erosion hazard area; or in the coastal storm inundation 1 percent annual exceedance probability (AEP) area; or in the coastal storm inundation 1 percent annual exceedance probability (AEP) plus 1 m sea level rise area; or in the 1 percent annual exceedance probability (AEP) floodplain; or in overland flow paths; or on land which may be subject to land instability: a the long-term management, maintenance and monitoring of any mechanisms associated with managing the risk of adverse effects resulting from the placement of infrastructure within a hazard area to other people, property and the environment including the management of hazardous substances;	The very minor nature of the works means that no particular long-term management or monitoring is required beyond Watercare's standards procedures. MH01 is completely below ground. Storage of hazardous substances at MH01 will not occur.
b the extent to which residual risks to people, property and the environment resulting from any mitigation measures implemented to manage the hazard;	There are no residual risks associated with a natural hazard.
c the extent to which an existing hazard is exacerbated or a new hazard is created as a result of the structure;	MH01 is buried completely below ground and existing ground levels will not change. The flood level, flows, velocities and overland flow path routes will not change as a consequence of rebuilding MH01 and hence there where be no exacerbation of existing flood risk.
d the extent to which the proposal includes non-structural solutions to protect infrastructure from the hazard and resulting adverse effects; and	Not applicable to this application.

Relevant Criteria	Assessment
e the extent to which landscape values and/ or public access are affected by the proposed structure or structures associated with the mitigation of the hazard.	The proposed works are not located within any notable landscapes or in proximity to any notable landscape features. There are no anticipated adverse effects on landscape values. The proposed works are located within private land and hence public access arrangements will not be affected.

As discussed above and in the Flood Risk Assessment (**Appendix C**), the proposed works will not result in any change to existing ground level. Furthermore, the continuity of the overland flow paths both within the site and upstream and downstream of the site will be maintained and there will be no diversion of overland flow paths or overall increase of impermeable surface area. Hence flooding effects are considered to be less than minor (negligible).

5.3 Conclusion

As is typical in relation to wastewater infrastructure, Watercare has taken into account the natural hazard (overland flow path and floodplain) in the design of the manhole structure. Watercare considers that the hazard will have no impact on the resilience of the infrastructure.

As discussed above, the proposed works will have a negligible (if any) effect on flood risk and more broadly will have significant positive effects in relation to improving wastewater infrastructure in Auckland as part of the wider CI project.

6 Statutory assessment

6.1 RMA assessment

Section 104 of the RMA sets out the matters to which a consent authority must have regard to, subject to Part 2 of the RMA, when considering an application for resource consent. These include:

- Any actual and potential effects on the environment of allowing the activity (refer Section 5 above);
- Any relevant provisions of:
  - a national environmental standard;
  - a national policy statement;
  - the AUP; and
- Any other matter the consent authority considers relevant and reasonably necessary to determine the application.

6.1.1 Part 2 of the RMA

Part 2 of the RMA sets out the purpose and principles of the Act. The purpose of the RMA is to promote the sustainable management of natural and physical resources. The AUP has been prepared recently and is clear and directive, and clearly deals with Part 2 subject matter such that recourse to Part 2 is not likely to add anything to the assessment.

6.1.2 National Environmental Standards

The Resource Management (National Environmental Standards for Freshwater) Regulations 2020 regulates activities that pose risks to the health and freshwater and freshwater ecosystems. The standards relate to activities related to streamworks, intensive irrigation and the discharge of sediment to waterways. There are no applicable standards relevant to this application.

6.2 National Policy Statements

The National Policy Statement for Freshwater Management 2020 (NPS-FM) provides guidance on how freshwater is to be managed in a manner that gives effect to Te Mana o te Wai.

As discussed in Section 5, the proposed works will contribute to the wider CI project, which will include positive effects such as reducing overflows to the stream environment. The proposed works are considered consistent with the overall objective of the NPS-FM, in terms of providing firstly for the health of freshwater ecosystems as well as the social, economic and cultural well-being of communities.

6.2.1 Auckland Unitary Plan policy assessment

An assessment against key relevant objectives and policies of the AUP is set out in Table 6.1 below.

Table 6.1: Objectives and policies assessment

Reference	Comment
Chapter B3 – Infrastructure, transport and energy	
B3.2.1 Objective (2) The benefits of infrastructure are recognised, including: a Providing essential services for the functioning of communities, businesses and industries within and beyond Auckland; ….. d Providing for public health, safety and the well-being of people and communities	The proposed works will contribute to the wider CI project – regionally significant infrastructure which will directly support the social, economic, environmental and cultural wellbeing of communities within Auckland.
B3.2.2 Policy (1) – Enable the efficient development, operation, maintenance and upgrading of infrastructure	The proposed works are required in order to replace the existing manhole structure and ensure the efficient upgrading of wastewater infrastructure.
B3.2.2 Policy (9) – Ensure where there is a functional or operational need for infrastructure to be located in areas subject to natural hazards: …. b That risk that cannot be avoided by location or design should be mitigated to the extent possible	The proposed works have a functional and operational need to be located in the floodplain and overland flowpath in order to rebuild the existing manhole structure and connect to the existing network. As discussed in Section 5, adverse effects on flood risk are considered to be negligible (no effects).
Chapter E26 – Infrastructure	
E26.2.1 Objective (4) – Development, operation, maintenance, repair, replacement, renewal, upgrading and removal of infrastructure is enabled.	The proposed works are required in order to replace existing wastewater infrastructure (specifically a manhole) as part of the wider CI package of works.
E26.2.1 Policy (2) – Provide for the development, operation, maintenance, repair, upgrade and removal of infrastructure throughout Auckland by recognising: a Functional and operational needs; b Location, route and design needs and constraints; c The complexity and interconnectedness of infrastructure services; d The benefits of infrastructure to communities within Auckland and beyond.	The proposed works have a functional and operational need to be located in the floodplain and overland flowpath in order to replace existing infrastructure and connect to the wastewater network. The proposed works contributes to the wider CI project, which will have numerous benefits in terms of providing an improved wastewater network for the communities within Auckland.
Chapter E36 – Natural hazards and flooding	
E36.2 Objective (4) - Where infrastructure has a functional or operational need to locate in a natural hazard area, the risk of adverse effects to other people, property, and the environment shall be assessed and significant adverse effects are sought first to be avoided or, if avoidance is not able to be totally achieved, the residual effects are otherwise mitigated to the extent practicable.	The proposed works have a functional and operational need to be located in a floodplain and overland flowpath, due to the location of the existing infrastructure. Adverse effects on flood risk have been assessed and are considered to be negligible (no effects).

6.3 Non-notification assessment

Section 95A of the RMA is relevant when a consent authority is considering whether a consent application should be considered with or without public notification.

Section 95A identifies a four step process. In relation to these steps we note the following:

- The applicant does not request public notification of the application;
- There is no rule or national environmental standard that precludes or requires public notification of this application;
- An assessment of effects on the environment is provided in Section 5 of this AEE report. This assessment concludes that the adverse effects on the environment are less than minor;
- No special circumstances are considered to exist in relation to the application.

Based on this assessment, we consider that this proposal meets the tests of the RMA to be processed without public notification.

For applications that are not publicly notified, under Section 95B, the consent authority must determine whether to give limited notification of an application to any affected parties. Section 95B identifies a four step process. In relation to these steps we note the following:

- The application does not need to be notified to any parties under Section 95B(4). The proposed change will not affect any customary rights;
- The proposed activity is not on or adjacent to, or does not affect, land that is the subject of a statutory acknowledgement;
- There are no applicable rules or national environmental standards precluding limited notification;
- No special circumstances are considered to exist that warrant limited notification.

In terms of Section 95E(1), the application is for a replacement manhole at ground level within a floodplain and overland flowpath. No person is considered to be adversely affected by the application and the proposal meets the tests of the RMA to be processed without limited notification.

The replacement manhole is a very minor component of the wider CI project which was publicly notified. Furthermore, the property owners and occupiers of 81 White Swan Road were notified of the works in 2018 in accordance with Section 181 of the Local Government Act 2002 ('Construction of works on private land'). No objections were received. As noted previously, construction has now commenced at the Haycock Avenue CI construction site.

Following the steps set out in Sections 95A and 95B, we consider that the application should be processed without public or limited notification.

7 Conclusion

This AEE report has been prepared on behalf of Watercare Services Ltd to accompany a resource consent application to AC for the replacement of an upgraded manhole structure in a floodplain and overland flowpath under Rule E36.4.1 (A56) of AUP.

The works are very minor in nature and the scope of this application is limited only to the replacement of an upgraded manhole structure within a floodplain and overland flowpath. The works will have negligible effect (if any) on overland flow paths or flood risk and are consistent with the relevant objectives and policies of the AUP as the top of the structure will be no higher than the existing ground level, the continuity of the overland flow paths both within the site and upstream and downstream of the site will be maintained. The structure's flush finish with the surrounding ground will also ensure that the manhole does not result in any diversion or alteration of the overland flow path.

Accordingly, we consider that this resource consent application should be granted on a non-notified basis, subject to fair and reasonable conditions.

8 Applicability

This report has been prepared for the exclusive use of our client Watercare Services Limited, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

We understand and agree that this report will be submitted to Auckland Council in support of an application for resource consent for the works described herein, and that Auckland Council will rely on this report for the purpose of assessing that application.

Tonkin & Taylor Ltd

Report prepared by:	Authorised for Tonkin & Taylor Ltd by:
	
.....	.....
Laila Alkamil	Karen Baverstock
Planner	Project Director

29-Sep-20
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Appendix A: Record of Title

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
UNIT TITLE
Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA34D/1498**
Land Registration District	**North Auckland**
Date Issued	30 March 1976

Prior References
NA33B/795

Supplementary Record Sheet
NA36A/1

Estate	Stratum in Freehold
Legal Description	Unit A and Accessory Unit 3-4 Deposited Plan 79043

Registered Owners
Dharmesh Labhubhai Parekh and Daksha Dharmesh Parekh

The above estates are subject to the reservations, restrictions, encumbrances, liens and interests noted below and on the relevant unit plan and supplementary record sheet
11697217.3 Mortgage to Westpac New Zealand Limited - 6.3.2020 at 3:08 pm

Identifier **NA34D/1498**

SUPPLEMENTARY RECORD SHEET UNDER UNIT TITLES ACT 1972

Search Copy

Identifier	**NA36A/1**
Land Registration District	**North Auckland**
Date Issued	30 March 1976
Plan Number	DP 79043

Subdivision of
Lot 2 Deposited Plan 76882

Unit Titles Issued
NA34D/1498 NA34D/1499 NA34D/1500

Interests

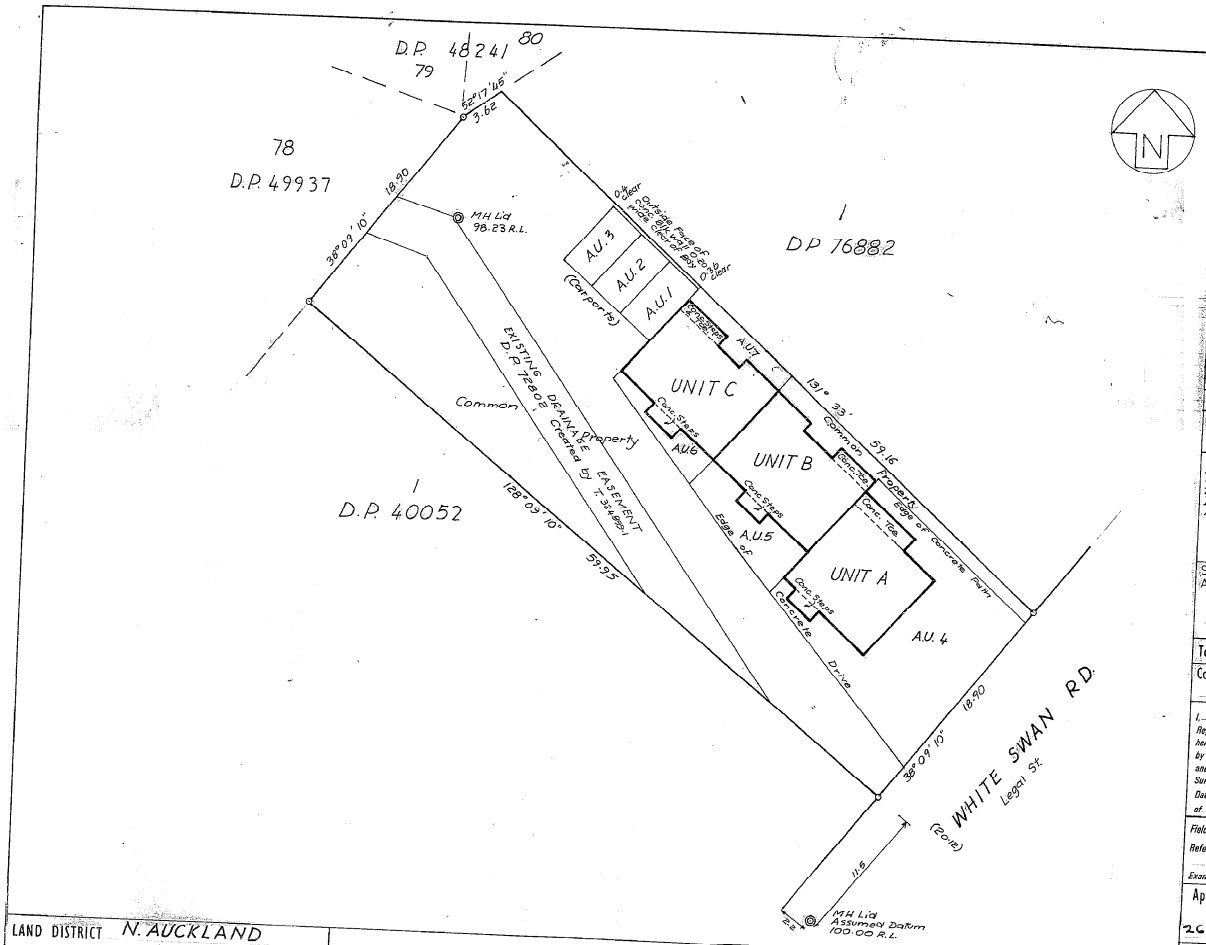
OWNERSHIP OF COMMON PROPERTY

Pursuant to Section 47 Unit Titles Act 2010 -

(a) the body corporate owns the common property and

(b) the owners of all the units are beneficially entitled to the common property as tenants in common in shares proportional to the ownership interest (or proposed ownership interest) in respect of their respective units.

The above memorial has been added to Supplementary Record Sheets issued under the Unit Titles Act 1972 to give effect to Section 47 of the Unit Titles Act 2010.
Subject to a drainage right (in gross) over part marked A on Plan 76882 in favour of The Mt. Roskill Borough Council created by Transfer 324899.1
C300634.1 Gazette Notice (GN 22.8.1991 No. 126 p2739) acquiring a Cathodic Protection System easement (in gross) in perpetuity over part marked B on Survey Office Plan 65534 in favour of Watercare Services Limited - 3.9.1991 at 10.14 am



Registered Owners: [illegible]

ADDRESS OF BODY CORPORATE:
81 WHITE SWAN RD
MT ROSKILL
AUCKLAND

I, Rex Hemmingsen Jensen, of Auckland, Reg'd. Valuer, hereby certify that I have assessed the unit entitlement shown hereon in accordance with the Unit Titles Act 1972

SCHEDULE

Descrip. -tion.	Approx. Area	Unit entit.	Height Limits upper	Height Limits lower	C.T.
UNIT A	80 m²	278	106.00	98.50	34D/1498
UNIT B	71 m²	532	116.50	98.00	34D/1499
UNIT C	77 m²	296	116.50	98.00	34D/1500
A.U.1	17 m²	14	102.00	98.00	
A.U.2	17 m²	14	102.00	98.00	
A.U.3	17 m²	14	102.00	98.00	
A.U.4	145 m²	80	102.00	97.50	
A.U.5	56 m²	19	102.00	97.00	
A.U.6	16 m²	9	102.00	97.00	
A.U.7	18 m²	10	102.00	97.00	
TOTAL ENTITLEMENT = 1000					

Levels are in terms of assumed origin datum of 100.00 R.L. on MH Lid 11.5m 203m of Lot 2 in White Swan Rd.

I, T. CLARKSEN Town Clerk of the Mt Roskill Borough Council do hereby certify pursuant to Section 5(1)(g) Unit Titles Act 1972 that I approve this plan of subdivision of the land into units.
Dated this [illegible] day of JANUARY 1976

T. A. Clarksen Town Clerk.

Supplementary Record Sheet = 36A/1
All Unit C.T. = 34D/1497

Total Area

Comprised in C.T. 33B/795 ALL

I, Edwin Dickason Miller of Auckland Registered Surveyor and holder of an annual practising certificate hereby certify that this plan has been made from Surveys executed by me or under my direction; that both plan and Survey are correct and have been made in accordance with the regulations under the Surveyors Act 1966

Dated at Auckland this 10th day of December 19 75 Signature E. Miller

Field Book 6587 p. 49 Traverse Book p.

Reference Plans

Examined N. CHILES Dated 26/2/76 LTS

Approved as to Survey

26/2/76 Assistant Chief Surveyor

Deposited this 23rd day of March 1976

District Land Registrar

Received 3 FEB 1976

File Instructions

DP 79043

LAND DISTRICT N. AUCKLAND
SURVEY BLK. & DIST. IVTITIRANGI
NZMS SHEET No.

PLAN OF UNITS ON LOT 2 D.P. 76882

LOCAL AUTHORITY MT ROSKILL BORO.
Surveyed by E.D. MILLER
Scale 1:200 Date NOV. 1975

Printed by Sterling Imports Ltd. Auckland.

L&S FORM N 83

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
UNIT TITLE
Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA34D/1499**
Land Registration District	**North Auckland**
Date Issued	30 March 1976

Prior References
NA33B/795

Supplementary Record Sheet
NA36A/1

Estate	Stratum in Freehold
Legal Description	Unit B and Accessory Unit 2 and 5 Deposited Plan 79043

Registered Owners
John Hylton Ryland

The above estates are subject to the reservations, restrictions, encumbrances, liens and interests noted below and on the relevant unit plan and supplementary record sheet

Identifier **NA34D/1499**

SUPPLEMENTARY RECORD SHEET UNDER UNIT TITLES ACT 1972

Search Copy

Identifier	**NA36A/1**
Land Registration District	**North Auckland**
Date Issued	30 March 1976
Plan Number	DP 79043

Subdivision of
Lot 2 Deposited Plan 76882

Unit Titles Issued
NA34D/1498 NA34D/1499 NA34D/1500

Interests

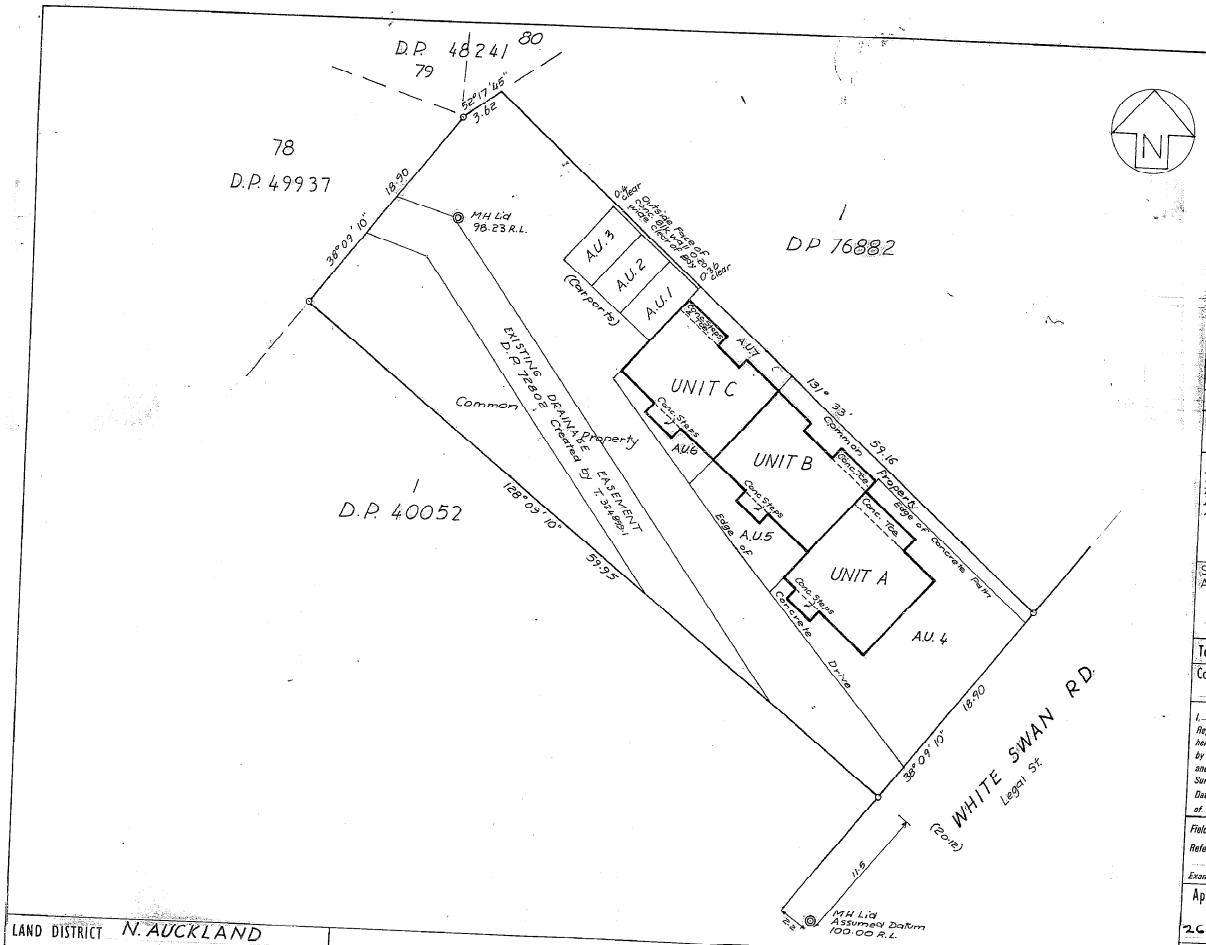
OWNERSHIP OF COMMON PROPERTY

Pursuant to Section 47 Unit Titles Act 2010 -

(a) the body corporate owns the common property and

(b) the owners of all the units are beneficially entitled to the common property as tenants in common in shares proportional to the ownership interest (or proposed ownership interest) in respect of their respective units.

The above memorial has been added to Supplementary Record Sheets issued under the Unit Titles Act 1972 to give effect to Section 47 of the Unit Titles Act 2010.
Subject to a drainage right (in gross) over part marked A on Plan 76882 in favour of The Mt. Roskill Borough Council created by Transfer 324899.1
C300634.1 Gazette Notice (GN 22.8.1991 No. 126 p2739) acquiring a Cathodic Protection System easement (in gross) in perpetuity over part marked B on Survey Office Plan 65534 in favour of Watercare Services Limited - 3.9.1991 at 10.14 am



Registered Owners: [illegible]

ADDRESS OF BODY CORPORATE:
81 WHITE SWAN RD
MT ROSKILL
AUCKLAND

I, Rex Hemmingsen Jensen, of Auckland, Reg'd. Valuer, hereby certify that I have assessed the unit entitlement shown hereon in accordance with the Unit Titles Act 1972

SCHEDULE

Descrip. -tion.	Approx. Area	Unit entit.	Height Limits upper	Height Limits lower	C.T.
UNIT A	80 m²	278	106.00	98.50	34D/1498
UNIT B	71 m²	532	116.50	98.00	34D/1499
UNIT C	77 m²	296	116.50	98.00	34D/1500
A.U.1	17 m²	14	102.00	98.00	
A.U.2	17 m²	14	102.00	98.00	
A.U.3	17 m²	14	102.00	98.00	
A.U.4	145 m²	80	102.00	97.50	
A.U.5	56 m²	19	102.00	97.00	
A.U.6	16 m²	9	102.00	97.00	
A.U.7	18 m²	10	102.00	97.00	
TOTAL ENTITLEMENT = 1000					

Levels are in terms of assumed origin datum of 100.00 R.L. on MH Lid 11.5m 203m of Lot 2 in White Swan Rd.

I, T. CLARKSEN Town Clerk of the Mt Roskill Borough Council do hereby certify pursuant to Section 5(1)(g) Unit Titles Act 1972 that I approve this plan of subdivision of the land into units.
Dated this [illegible] day of JANUARY 1976

T. A. Clarksen Town Clerk.

Supplementary Record Sheet = 36A/1
All Unit C.T. = 34D/1497

Total Area

Comprised in C.T. 33B/795 ALL

I, Edwin Dickason Miller of Auckland Registered Surveyor and holder of an annual practising certificate hereby certify that this plan has been made from Surveys executed by me or under my direction; that both plan and Survey are correct and have been made in accordance with the regulations under the Surveyors Act 1966

Dated at Auckland this 10th day of December 19 75 Signature E. Miller

Field Book 6587 p. 49 Traverse Book p.

Reference Plans

Examined N. CHILES Dated 26/2/76 LTS

Approved as to Survey

26/2/76 Assistant Chief Surveyor

Deposited this 23rd day of March 1976

District Land Registrar

Received 3 FEB 1976

File Instructions

DP 79043

LAND DISTRICT N. AUCKLAND
SURVEY BLK. & DIST. IVTITIRANGI
NZMS SHEET No.

PLAN OF UNITS ON LOT 2 D.P. 76882

LOCAL AUTHORITY MT ROSKILL BORO.
Surveyed by E.D. MILLER
Scale 1:200 Date NOV. 1975

Printed by Sterling Imports Ltd. Auckland.

L&S FORM N 83

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
UNIT TITLE
Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA34D/1500**
Land Registration District	**North Auckland**
Date Issued	30 March 1976

Prior References
NA33B/795

Supplementary Record Sheet
NA36A/1

Estate	Stratum in Freehold
Legal Description	Unit C and Accessory Unit 1 and 6-7 Deposited Plan 79043

Registered Owners
Minh Diep Nguyen

The above estates are subject to the reservations, restrictions, encumbrances, liens and interests noted below and on the relevant unit plan and supplementary record sheet
11425037.2 Mortgage to ASB Bank Limited - 1.5.2019 at 2:02 pm

Identifier **NA34D/1500**

SUPPLEMENTARY RECORD SHEET UNDER UNIT TITLES ACT 1972

Search Copy

Identifier	**NA36A/1**
Land Registration District	**North Auckland**
Date Issued	30 March 1976
Plan Number	DP 79043

Subdivision of
Lot 2 Deposited Plan 76882

Unit Titles Issued
NA34D/1498 NA34D/1499 NA34D/1500

Interests

OWNERSHIP OF COMMON PROPERTY

Pursuant to Section 47 Unit Titles Act 2010 -

(a) the body corporate owns the common property and

(b) the owners of all the units are beneficially entitled to the common property as tenants in common in shares proportional to the ownership interest (or proposed ownership interest) in respect of their respective units.

The above memorial has been added to Supplementary Record Sheets issued under the Unit Titles Act 1972 to give effect to Section 47 of the Unit Titles Act 2010.
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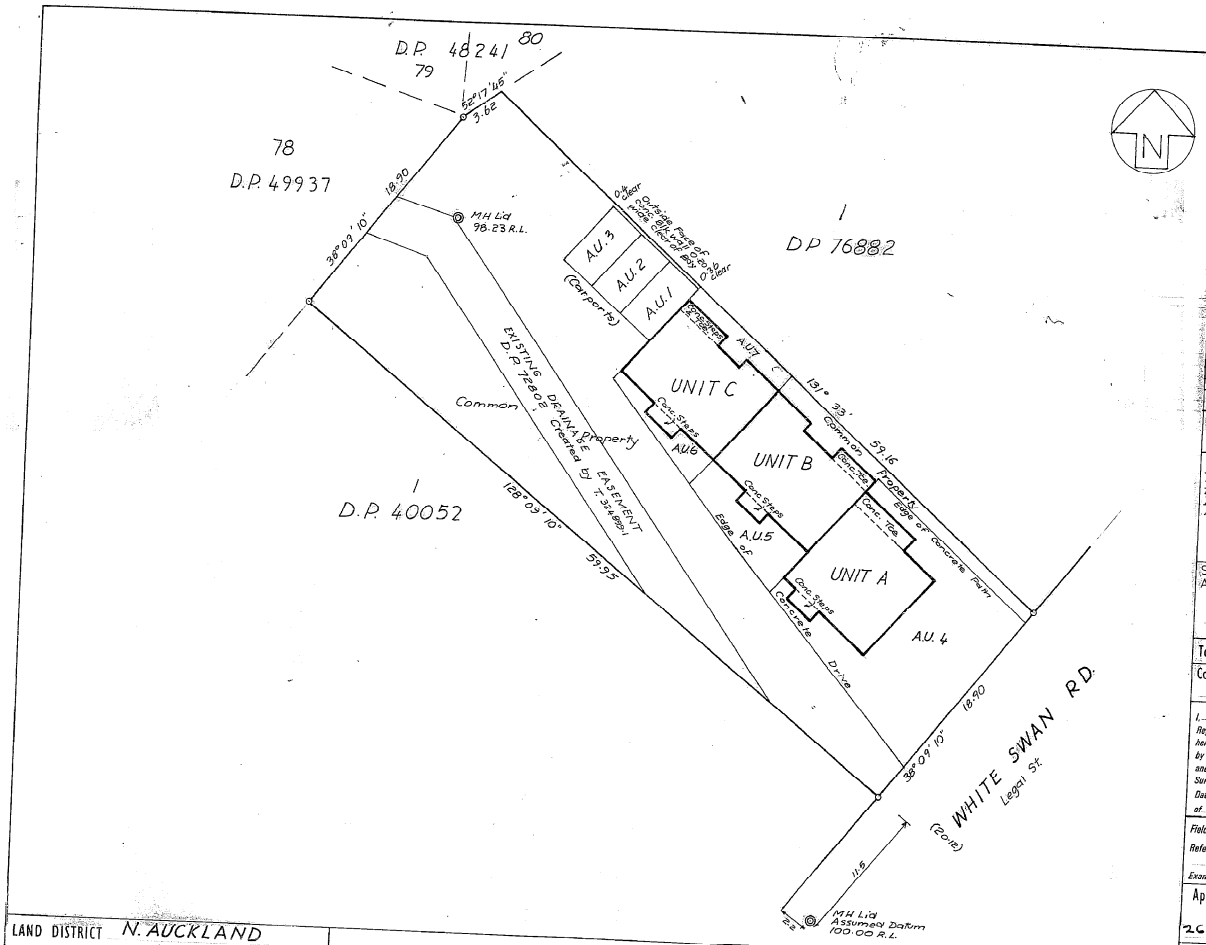
C300634.1 Gazette Notice (GN 22.8.1991 No. 126 p2739) acquiring a Cathodic Protection System easement (in gross) in perpetuity over part marked B on Survey Office Plan 65534 in favour of Watercare Services Limited - 3.9.1991 at 10.14 am



Registered Owners: [illegible]

ADDRESS OF BODY CORPORATE:
81 WHITE SWAN RD
MT ROSKILL
AUCKLAND

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SCHEDULE

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UNIT C	77 m²	296	116.50	98.00	34D/1500
A.U.1	17 m²	14	102.00	98.00	
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A.U.5	56 m²	19	102.00	97.00	
A.U.6	16 m²	9	102.00	97.00	
A.U.7	18 m²	10	102.00	97.00	
TOTAL ENTITLEMENT = 1000					

Levels are in terms of assumed origin datum of 100.00 R.L. on MH Lid 11.5m 203m of Lot 2 in White Swan Rd.

I, T. CLARKSEN Town Clerk of the Mt Roskill Borough Council do hereby certify pursuant to Section 5(1)(g) Unit Titles Act 1972 that I approve this plan of subdivision of the land into units.
Dated this [illegible] day of JANUARY 1976

T. A. Clarksen Town Clerk.

Supplementary Record Sheet = 36A/1
All Unit C.T. = 34D/1497

Total Area

Comprised in C.T. 33B/795 ALL

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Dated at Auckland this 10th day of December 19 75 Signature E. Miller

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Examined N. CHILES Dated 26/2/76 LTS

Approved as to Survey

26/2/76 Assistant Chief Surveyor

Deposited this 23rd day of March 1976

District Land Registrar

Received 3 FEB 1976

File Instructions

DP 79043

LAND DISTRICT N. AUCKLAND
SURVEY BLK. & DIST. IVTITIRANGI
NZMS SHEET No.

PLAN OF UNITS ON LOT 2 D.P. 76882

LOCAL AUTHORITY MT ROSKILL BORO.
Surveyed by E.D. MILLER
Scale 1:200 Date NOV. 1975

Printed by Sterling Imports Ltd. Auckland.

L&S FORM N 83

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA1875/79**
Land Registration District	**North Auckland**
Date Issued	17 October 1960

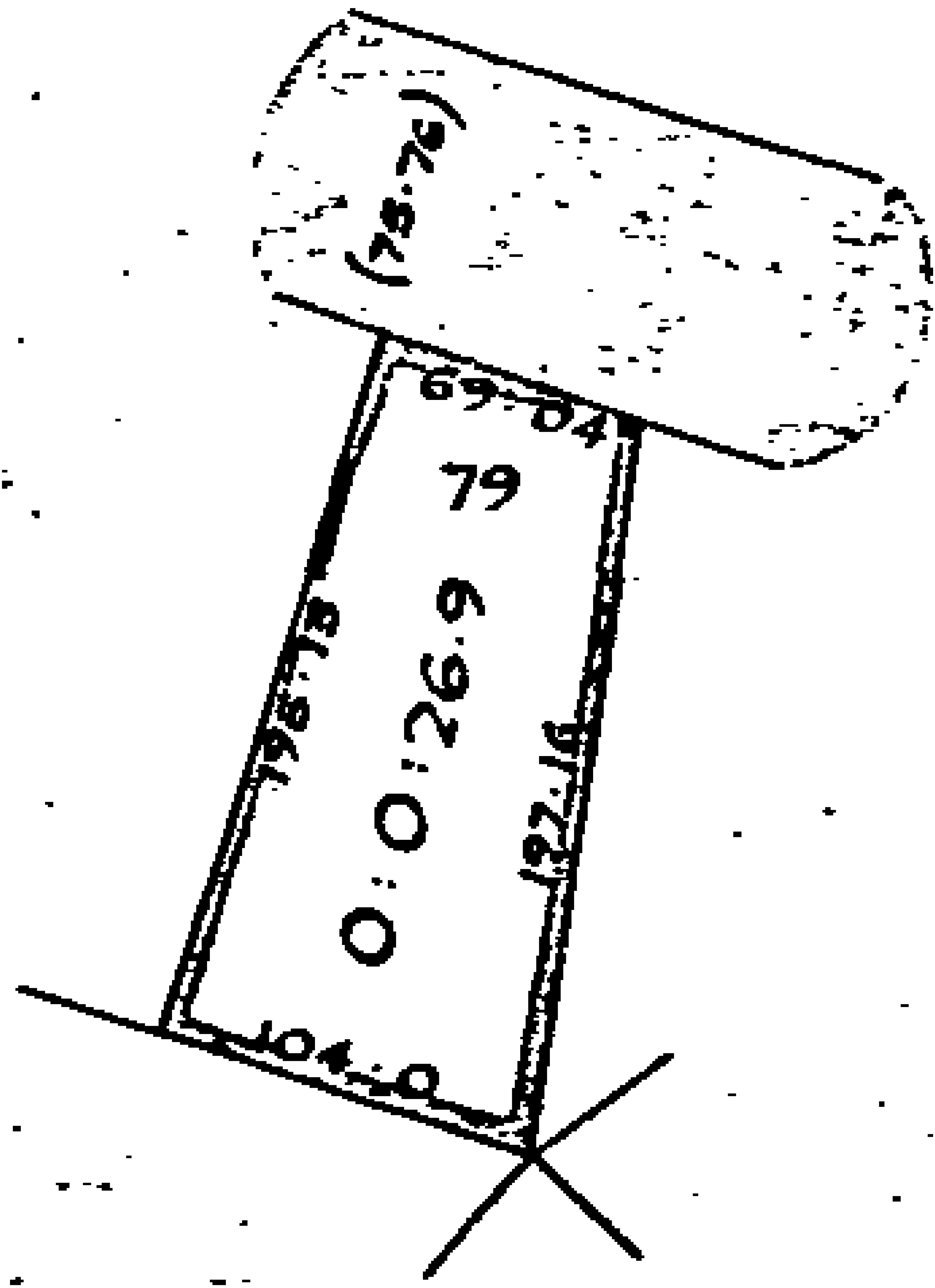
Prior References
NA1518/2

Estate	Fee Simple
Area	680 square metres more or less
Legal Description	Lot 79 Deposited Plan 48241

Registered Owners
Watercare Services Limited

Interests

K83194 Building Line Restriction



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69.04
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104.0

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA1875/80**
Land Registration District	**North Auckland**
Date Issued	17 October 1960

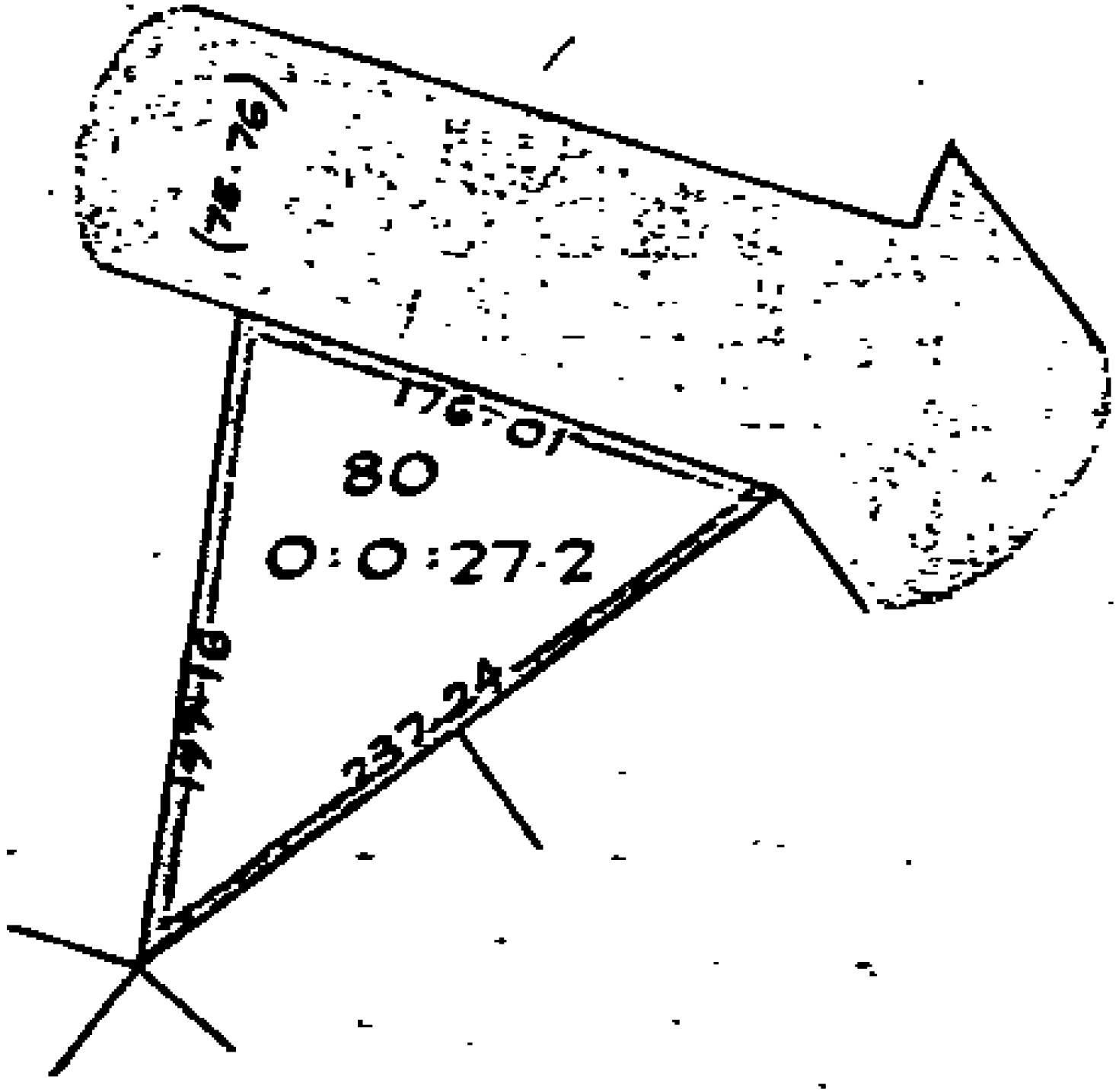
Prior References
NA1518/2

Estate	Fee Simple
Area	688 square metres more or less
Legal Description	Lot 80 Deposited Plan 48241

Registered Owners
Watercare Services Limited

Interests

K83194 Building Line Restriction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91·76
232·24

Appendix B: Drawings

Plot Date: 10-Aug-12 9:42 AM
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Project No.

ISSUE	DATE	AMENDMENT	BY	APPD.
A	17/08/12	CONSENT ISSUE	AP	PR

DESIGNED	NL		
DES. CHECKED	JS		08/12
DRAWN	AP		
DWG. CHECKED	NL		08/12
REV'D P.MGR	JS		
APP'D P.DIR	CC		
	BY		DATE

OPERATIONS

ASSET MANAGER

SITE LAYOUT AND DESIGNS INDICATIVE ONLY AND SUBJECT TO CHANGE DURING DETAILED DESIGN DEVELOPMENT

AEE AUGUST 2012

waterCare services limited

CENTRAL INTERCEPTOR
GENERAL
HAYCOCK AVENUE (L3S5) - PERMANENT WORKS PLAN

CAD FILE AEE-MAIN-19.1 | DATE 26-Jul-12

ORIGINAL SCALE A1 1:1000 A3 | CONTRACT No. 0538

DRAWING No. AEE-MAIN-19.1 | ISSUE A

Plot Date: 10-Aug-12 9:43 AM
File path: P:\0538 - Central Interceptor\04. Drawings\4.3 Working\AEE\AEE_Consent\General\Dwg

Project No.

ISSUE	DATE	AMENDMENT	BY	APPD.
A	17/08/12	CONSENT ISSUE	AP	PR

DESIGNED	NL		
DES. CHECKED	JS		08/12
DRAWN	AP		
DWG. CHECKED	NL		08/12
REV'D P.MGR	JS		
APP'D P.DIR	CC		

OPERATIONS

ASSET MANAGER

SITE LAYOUT AND DESIGNS INDICATIVE ONLY AND SUBJECT TO CHANGE DURING DETAILED DESIGN DEVELOPMENT

AEE AUGUST 2012

water Care services limited

CENTRAL INTERCEPTOR
GENERAL
HAYCOCK AVENUE (L3S5) - CONSTRUCTION WORKS PLAN

CAD FILE AEE-MAIN-19.2	DATE 26-Jul-12
ORIGINAL SCALE A1 1:1000 A3	CONTRACT No. 0538
DRAWING No. AEE-MAIN-19.2	ISSUE A

A08301A_312_L355_Haycock_Ave_revC.dgn

Note: Site layout indicative only. Final layout dependant on Construction Management Plan

Boffa Miskell
www.boffamiskell.co.nz

N

0 30m

Scale: 1:1000 @ A3

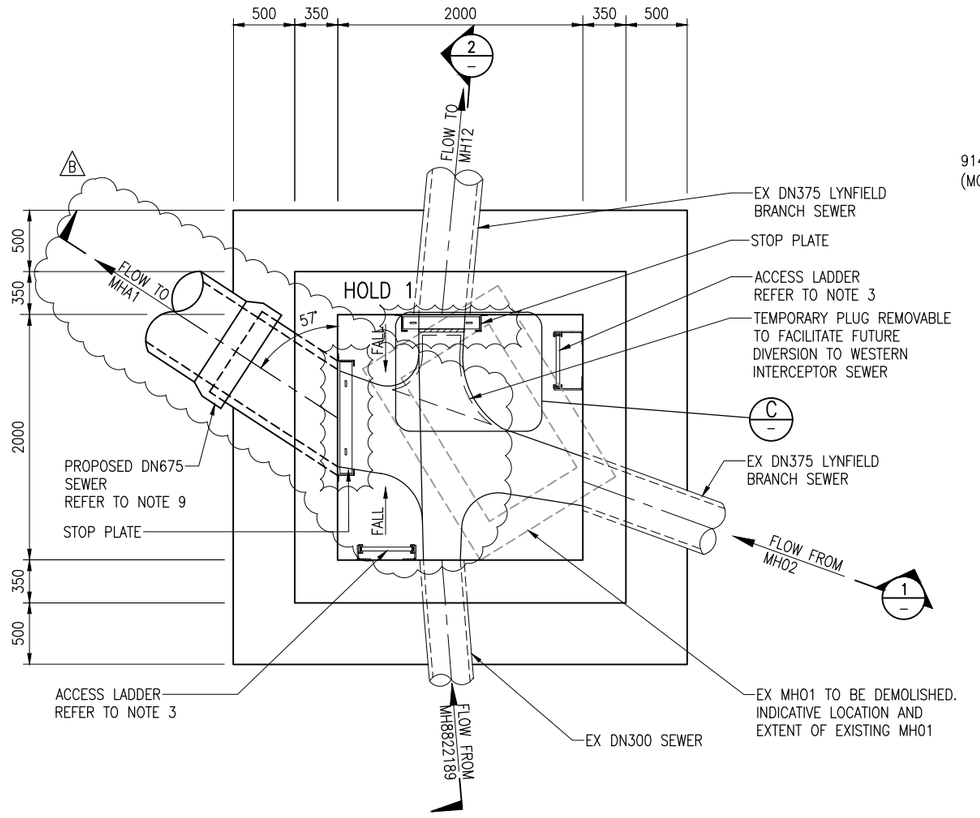
Data Sources: Site LIDAR (Nov. 2010), Aerials (2012) - AECOM
Auckland Council aerials (2010), BML
Projection: NZTM

Legend
- Wire Mesh (Scrim)
- Trees For Removal
- Solid Fence
- Footpath Existing
- Solid Fence (potential for graphic panels)
- Footpath Proposed
- Noise Wall (2m high unless noted otherwise)

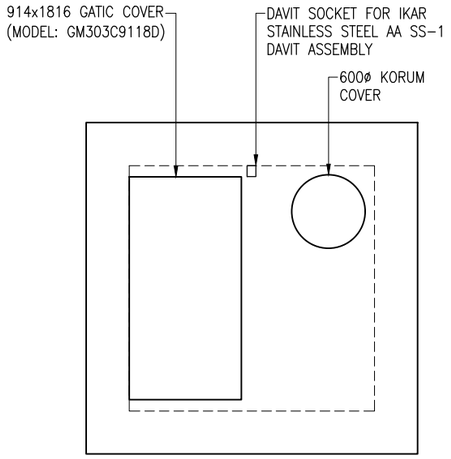
CENTRAL INTERCEPTOR AND ASSOCIATED WORKS
Haycock Avenue (L3S5)
Construction Site and Works
Date: 05 July 2013 | **Revision: D**

Graphic prepared for Watercare Services Ltd by Boffa Miskell Limited
Author: **bernie.ranum@boffamiskell.co.nz** | *Checked: J.Goodwin*

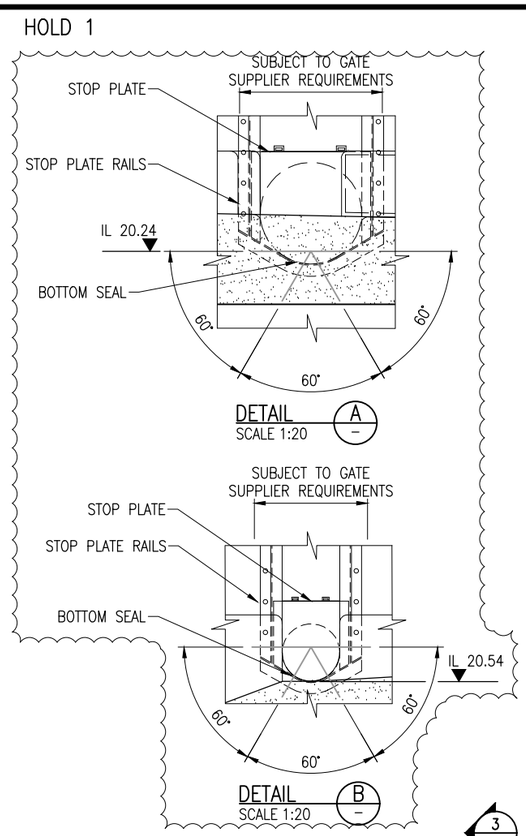
Figure 86



PLAN AT RL 22.00
SCALE 1:25 (A1)



PLAN ON COVER SLAB
SCALE 1:25 (A1)



DETAIL A
SCALE 1:20

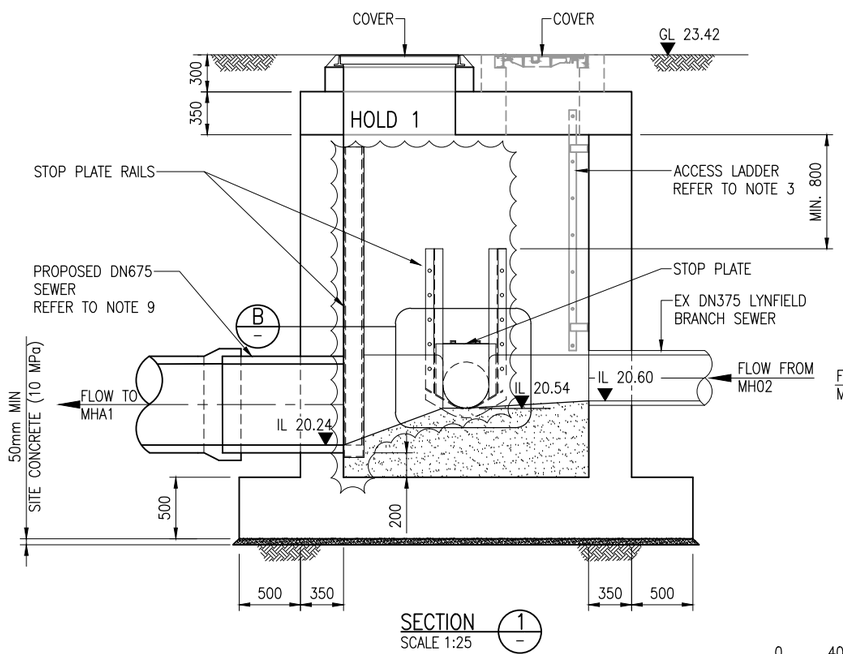
DETAIL B
SCALE 1:20

NOTES:

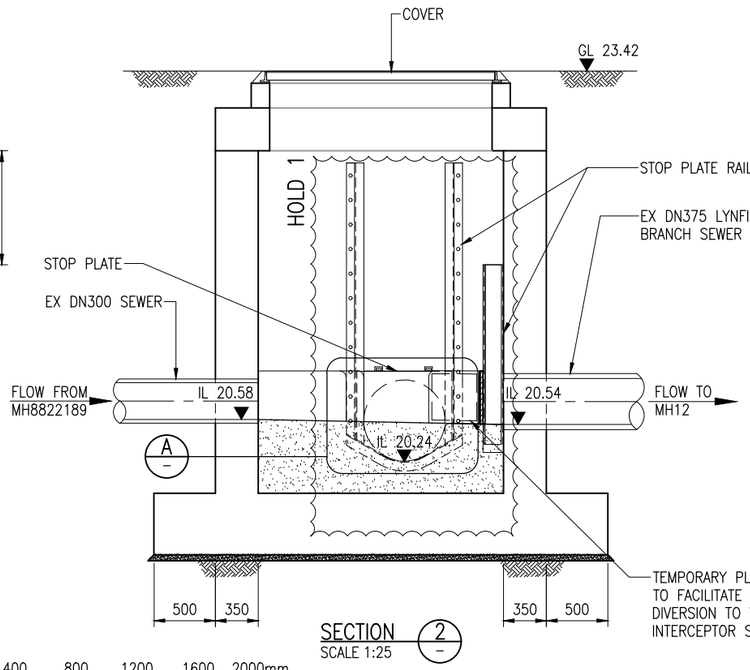
1. ALL LEVELS ARE IN METRES AND DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.
2. CONCRETE COVER SLABS ON MANHOLES AND CHAMBERS SHALL BE HN-HO-72 RATED.
3. REFER TO WATERCARE STANDARD DRAWING 2000244.003 FOR DETAILS OF GALVANISED STEEL ACCESS LADDER.
4. ALL COVERS SHALL BE TRAFFICABLE AND HAVE INTEGRAL SAFETY GRILLES UNLESS OTHERWISE STATED.
5. BENCHING FALL SHALL BE 1:12 UNLESS OTHERWISE STATED.
6. ALL STOP PLATE DIMENSIONS ARE BASED ON FONTAINE FABRICATED STAINLESS STEEL SLIDE GATES FOR DESIGN PURPOSES. FINAL STOP PLATES ARE SUBJECT TO ENGINEER'S ACCEPTANCE.
7. ALL INTERNAL AND EXTERNAL CONCRETE ANGLES SHALL HAVE 25mm CHAMFERS OR FILLETS UNLESS OTHERWISE STATED.
8. REFER TO WATERCARE STANDARD DRAWINGS 2000244.001 TO 2000244.044 FOR GENERAL MANHOLE DETAILS.
9. REFER TO WATERCARE STANDARD DRAWING 2000244.014 FOR PIPE CONNECTION DETAILS AND DRAWING 2011962.011 FOR ROCKER PIPE DETAILS.
10. STOP PLATE RAILS TO EXTEND TO UNDERSIDE OF COVER SLAB, EXCEPT OTHERWISE SHOWN.
11. FINAL SIZE OF COVERS AND FRAMES OVER STOP LOGS SUBJECT TO CONFIRMATION OF STOP LOG DIMENSIONS.

HOLDS:

1. STOP PLATE DIMENSIONS AND INSTALLATION DETAILS TO BE CONFIRMED BY CONTRACTOR DURING PROCUREMENT AND DESIGN OF STOP PLATES.



SECTION 1
SCALE 1:25



SECTION 2
SCALE 1:25

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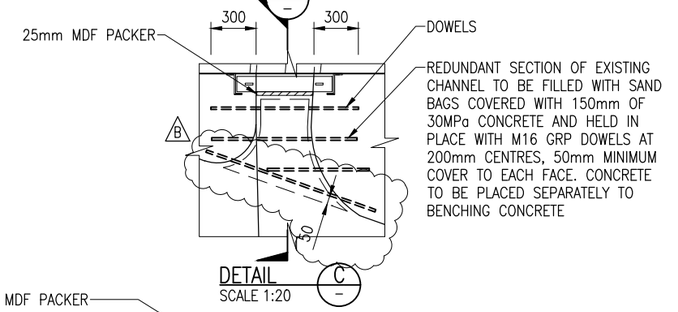
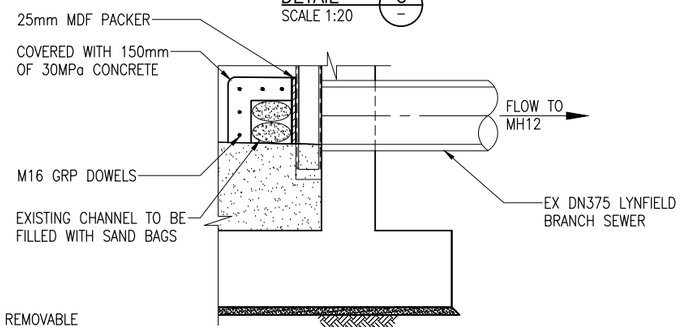


DETAIL C
SCALE 1:20



SECTION 3
SCALE 1:20

SCALE 1:25 (A1) 0 500 1000 1500 2000 2500mm
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CONSTRUCTION ISSUE

JACOBS AECOM McMILLEN JACOBS ASSOCIATES

ISSUE	DATE	AMENDMENT	BY	APPD.
B	19.06.20	REVISED CONSTRUCTION ISSUE	WIS	CW
A	28.06.19	CONSTRUCTION ISSUE	PMF	EB

	BY	DATE
DESIGNED	CW	11.15
DES. CHECKED	DJK	11.15
DRAWN	JRJ	07.15
DWG. CHECKED	CW	11.15
PROJECT LEADER	NK	08.17
INFRAST'R APP'D	SG	08.17

OPERATIONS

INFRASTRUCTURE

Watercare

DSLSC001 – HAYCOCK AVENUE MANHOLE AND STRUCTURE

LYNFIELD BRANCH SEWER MH01 DIVERSION CHAMBER – PLANS & SECTIONS

CAD FILE 2011962.010	DATE 19.06.20
ORIGINAL SCALE A1 AS SHOWN	CONTRACT No. 6661
REF. No. CI-CIVIL	ISSUE
DWG. No. 2011962 .010	B

Plot Date: Jun 19, 2020 - 8:59am
C:\Users\pfarr\AppData\Local\projectwise\watercare_ltd_projects\dms52552\ 2011962.010.dwg

Appendix C: Flood Risk Assessment

Memorandum

To: Xenia Meier

From: Tess Gillham
Reviewed: Matt Thomson

Subject: Central Interceptor Haycock Avenue MH01 Flood Risk Assessment

Doc. Ref: JNZ-TCM-00022 Revision 1

Date: 24 September 2020

Introduction

As part of the Central Interceptor project, it is proposed to rebuild existing MH01 to allow a direct connection from the Lynfield branch sewer to the Central Interceptor Link Sewer C tunnel. The proposed works will involve demolishing the existing MH01 and rebuilding a new larger chamber at the same location, within 3/81 White Swan Road.

The existing MH01 is located within a large overland flow path/flood plain and is positioned adjacent to an existing 1200mm diameter stormwater pipe.

Flooding and Overland Flow Path

The Central Interceptor Haycock Avenue site is located within the Whau catchment. The flood mapping shown on Auckland Council Geomaps dates from 2005. This modelling does not include climate change, sea level rise or maximum probable development now allowed under Auckland Unitary Plan.

Healthy Waters have developed an updated model for the Whau catchment. The flood plain extents and flow rates for the site from the updated catchment is shown in Figure 1. The corresponding flood levels are:

- 24.2mRL for the 100-year maximum probable development scenario,
- 23.6mRL for the 10-year maximum probable development scenario.

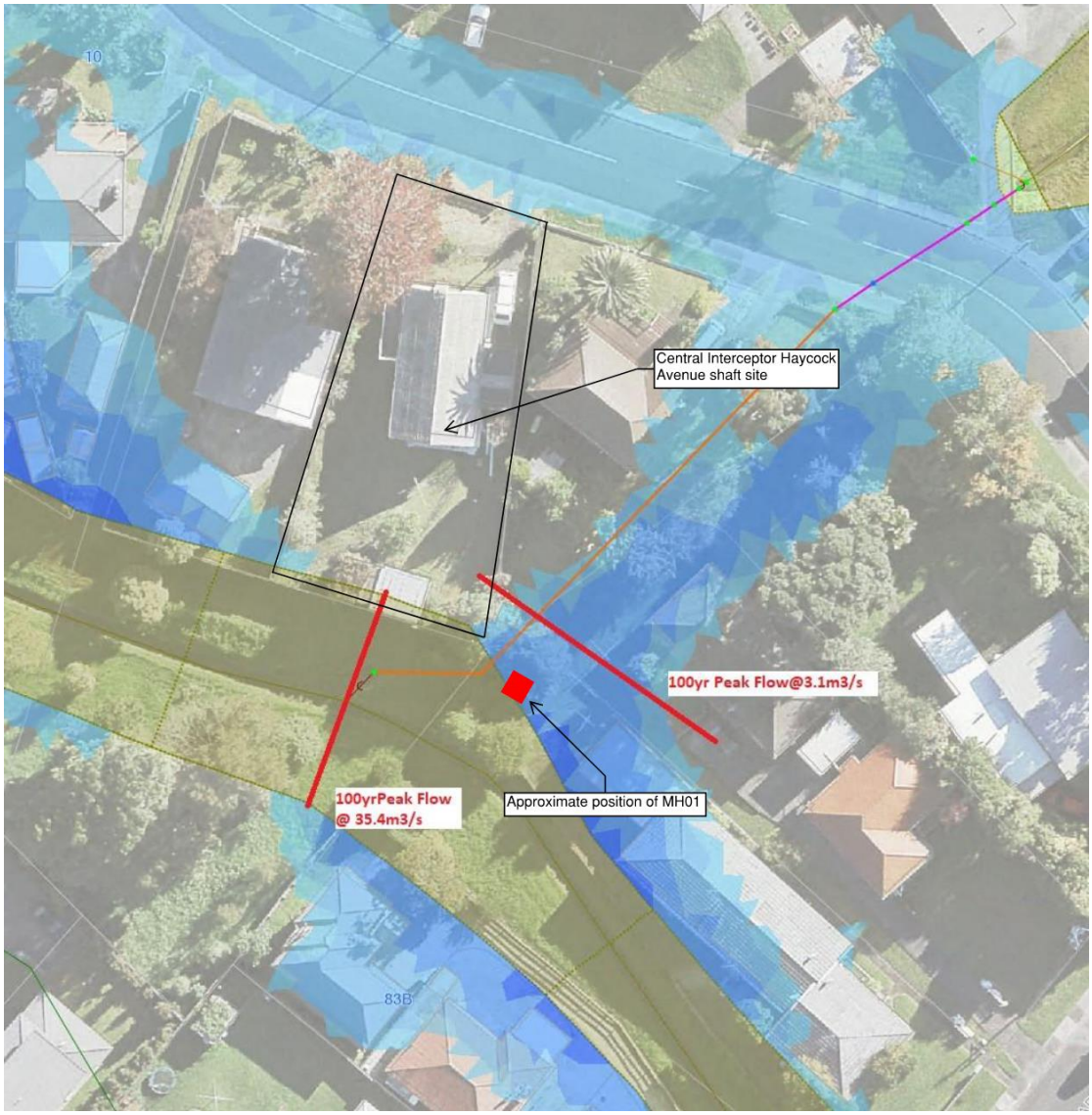

Figure 1 – Flood Extents and Flow Rates

Proposed MH01

The existing MH01 will be demolished and rebuilt as a larger underground chamber. MH01 will be buried 300mm below the existing ground level. Two new access hatches will be constructed. These access hatches will be positioned at the existing ground level. The surface will be reinstated with topsoil and grass.

There is no proposed above ground infrastructure and there is no proposed change to the existing ground levels.

The access hatch level is 23.42mRL, which is below both the 10-year and 100year maximum probably development flood level.

Risk Hazard Assessment

Existing MH01 is located with a flood plain/overland flow path. A risk assessment for rebuilding MH01 in the same location as the existing manhole is summarised in Table 1.0

Table 1 – Risk Mitigation

Risk	Mitigation Response
The risk of adverse effects to other people, property and the environment	There is no increased adverse risk to other people, property and the environment. MH01 is buried completely below ground and existing ground levels will not change. Hence the flood level, flows, velocities and overland flow path routes will not change as a consequence of rebuilding MH01. MH01 will only be accessed occasionally by Watercare maintenance workers. They will not attempt to gain access during a flood storm event.
The risk to public health and safety	There is no change to the existing public health and safety risk from flooding as a consequence of rebuilding MH01.
The management or regulation of other people and property required to mitigate natural hazard risks resulting from the location of the infrastructure	There is no change to the flooding risk as a consequence of rebuilding MH01 hence no mitigation is required.
Any exacerbation of an existing natural hazard or creation of a new natural hazard as a result of the structure	MH01 is buried completely below ground and existing ground levels will not change. Hence the flood level, flows, velocities and overland flow path routes will not change as a consequence of rebuilding MH01.
The ability to relocate or remove structures	Not applicable. MH01 is located below ground in the same position as the existing manhole to allow connections.
The long-term management, maintenance and monitoring of any mechanisms associated with managing the risk of adverse effects resulting from the placement of infrastructure within a hazard area to other people, property and the environment including the management of hazardous substances	Not applicable. Storage of hazardous substances at MH01 will not occur. MH01 is completely below ground.
Subdivision, use and development including redevelopment, is managed to safely maintain the conveyance function of floodplain and overland flow paths	MH01 is buried completely below ground and existing ground levels will not change. Hence the flood level, flows, velocities and overland flow path

	routes will not change as a consequence of rebuilding MH01.
Where infrastructure has a functional or operation need to locate in a natural hazard area, the risk of adverse effects to other people, property, and the environment shall be assess and significant adverse effects are sought first to be avoided or, if avoidance is not able to be totally achieved, the residual effects are otherwise mitigated to the extent practicable.	MH01 is being rebuilt in the same location as the existing manhole. MH01 cannot be moved due to the existing wastewater pipes and the existing 1200mm diameter stormwater pipe. MH01 is buried completely below ground and existing ground levels will not change. Hence the flood level, flows, velocities and overland flow path routes will not change as a consequence of rebuilding MH01.
Ensure all development in the 1 per cent annual exceedance probability (AEP) floodplain does not increase adverse effects from flood hazards or increased flood depths and velocities, to other properties upstream and downstream of the site	MH01 is buried completely below ground and existing ground levels will not change. Two new access hatches will replace one existing access hatch. There is no measurable increase in impermeable area which would result in additional flood flows. Hence the flood level, flows, velocities and overland flow path routes will not change as a consequence of rebuilding MH01.
Maintain the function of overland flow paths to convey stormwater runoff safely from a site to the receiving environment	There are no changes to the function of the overland flow path.
Require changes to overland flow paths to retain their capacity to pass stormwater flows safely without causing damage to property or the environment	There are no changes to the function of the overland flow path.