

# Application for resource consent or fast-track resource consent

(Or Associated Consent Pursuant to the Resource Management Act 1991 (RMA)) (If applying for a Resource Consent pursuant to Section 87AAC or 88 of the RMA, this form can be used to satisfy the requirements of Schedule 4). Prior to, and during, completion of this application form, please refer to Resource Consent Guidance Notes and Schedule of Fees and Charges — [both available on the Council's web page](#).

## 1. Pre-Lodgement Meeting

Have you met with a council Resource Consent representative to discuss this application prior to lodgement? ☒ Yes ☐ No

*via email*

## 2. Type of Consent being applied for

*(more than one circle can be ticked):*

- |   |   |
|---|---|
| <input checked="" type="radio"/> Land Use   | <input type="radio"/> Discharge                           |
| <input type="radio"/> Fast Track Land Use*  | <input type="radio"/> Change of Consent Notice (s.221(3)) |
| <input type="radio"/> Subdivision   | <input type="radio"/> Extension of time (s.125)           |
| <input type="radio"/> Consent under National Environmental Standard<br>(e.g. Assessing and Managing Contaminants in Soil) |   |
| <input type="radio"/> Other (please specify) _____  |   |

*\*The fast track is for simple land use consents and is restricted to consents with a controlled activity status.*

## 3. Would you like to opt out of the Fast Track Process?

☒ Yes ☐ No

## 4. Consultation

Have you consulted with Iwi/Hapū? ☐ Yes ☒ No

If yes, which groups have you consulted with?

Who else have you consulted with?

For any questions or information regarding iwi/hapū consultation, please contact Te Hono at Far North District Council [tehonosupport@fndc.govt.nz](mailto:tehonosupport@fndc.govt.nz)

## 5. Applicant Details

**Name/s:**

Jared and Jocelyn Bleakley

**Email:**

**Phone number:**

**Postal address:**

(or alternative method of service under section 352 of the act)

## 6. Address for Correspondence

*Name and address for service and correspondence (if using an Agent write their details here)*

**Name/s:**

Jared and Jocelyn Bleakley

**Email:**

**Phone number:**

**Postal address:**

(or alternative method of service under section 352 of the act)

*\* All correspondence will be sent by email in the first instance. Please advise us if you would prefer an alternative means of communication.*

## 7. Details of Property Owner/s and Occupier/s

*Name and Address of the Owner/Occupiers of the land to which this application relates (where there are multiple owners or occupiers please list on a separate sheet if required)*

**Name/s:**

Jared and Jocelyn Bleakley

**Property Address/  
Location:**

22 Vidar Way  
Coopers Beach  
Northland

**Postcode** 0420

## 8. Application Site Details

Location and/or property street address of the proposed activity:

Name/s:

Tared and Jocelyn Bleakley

Site Address/  
Location:

22 Vidar Way  
Coopers beach

Postcode 0420

Legal Description:

Lot 1 dp 560 503

Val Number:

00083 - 28536

Certificate of title:

Please remember to attach a copy of your Certificate of Title to the application, along with relevant consent notices and/or easements and encumbrances (search copy must be less than 6 months old)

### Site visit requirements:

Is there a locked gate or security system restricting access by Council staff? ☐ Yes ☒ No

Is there a dog on the property? ☐ Yes ☒ No

Please provide details of any other entry restrictions that Council staff should be aware of, e.g. health and safety, caretaker's details. This is important to avoid a wasted trip and having to re-arrange a second visit.

located at end of culdesac in subdivision  
of Kauri grove

## 9. Description of the Proposal:

Please enter a brief description of the proposal here. Please refer to Chapter 4 of the District Plan, and Guidance Notes, for further details of information requirements.

new building of single family house with  
detached garage. cping calcs supplied for  
earthworks and storm water.

If this is an application for a Change or Cancellation of Consent Notice conditions (s.221(3)), please quote relevant existing Resource Consents and Consent Notice identifiers and provide details of the change(s), with reasons for requesting them.

## 10. Would you like to request Public Notification?

☐ Yes ☒ No

### 11. Other Consent required/being applied for under different legislation

(more than one circle can be ticked):

☒ Building Consent

☐ Regional Council Consent (ref # if known)

☐ National Environmental Standard consent

☐ Other (please specify)

### 12. National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health:

The site and proposal may be subject to the above NES. In order to determine whether regard needs to be had to the NES please answer the following:

Is the piece of land currently being used or has it historically ever been used for an activity or industry on the Hazardous Industries and Activities List (HAIL) ☐ Yes ☒ No ☐ Don't know

Is the proposed activity an activity covered by the NES? Please tick if any of the following apply to your proposal, as the NESCS may apply as a result. ☐ Yes ☒ No ☐ Don't know

☐ Subdividing land

☐ Disturbing, removing or sampling soil

☐ Changing the use of a piece of land

☐ Removing or replacing a fuel storage system

### 13. Assessment of Environmental Effects:

*Every application for resource consent must be accompanied by an Assessment of Environmental Effects (AEE). This is a requirement of Schedule 4 of the Resource Management Act 1991 and an application can be rejected if an adequate AEE is not provided. The information in an AEE must be specified in sufficient detail to satisfy the purpose for which it is required. Your AEE may include additional information such as Written Approvals from adjoining property owners, or affected parties.*

Your AEE is attached to this application ☒ Yes

### 13. Draft Conditions:

Do you wish to see the draft conditions prior to the release of the resource consent decision? ☐ Yes ☒ No

If yes, do you agree to extend the processing timeframe pursuant to Section 37 of the Resource Management Act by 5 working days? ☐ Yes ☐ No

## 14. Billing Details:

This identifies the person or entity that will be responsible for paying any invoices or receiving any refunds associated with processing this resource consent. Please also refer to Council's Fees and Charges Schedule.

**Name/s:** (please write in full)

Jared Bleakley

**Email:**

**Phone number:**

**Postal address:**

(or alternative method of service under section 352 of the act)

### Fees Information

An instalment fee for processing this application is payable at the time of lodgement and must accompany your application in order for it to be lodged. Please note that if the instalment fee is insufficient to cover the actual and reasonable costs of work undertaken to process the application you will be required to pay any additional costs. Invoiced amounts are payable by the 20th of the month following invoice date. You may also be required to make additional payments if your application requires notification.

### Declaration concerning Payment of Fees

I/we understand that the Council may charge me/us for all costs actually and reasonably incurred in processing this application. Subject to my/our rights under Sections 357B and 358 of the RMA, to object to any costs, I/we undertake to pay all and future processing costs incurred by the Council. Without limiting the Far North District Council's legal rights if any steps (including the use of debt collection agencies) are necessary to recover unpaid processing costs I/we agree to pay all costs of recovering those processing costs. If this application is made on behalf of a trust (private or family), a society (incorporated or unincorporated) or a company in signing this application I/we are binding the trust, society or company to pay all the above costs and guaranteeing to pay all the above costs in my/our personal capacity.

**Name:** (please write in full)

Jared Bleakley

**Signature:**

(signature of bill payer)

Date 22 June 2025

MANDATORY

## 15. Important Information:

### Note to applicant

You must include all information required by this form. The information must be specified in sufficient detail to satisfy the purpose for which it is required.

You may apply for 2 or more resource consents that are needed for the same activity on the same form. You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991.

### Fast-track application

Under the fast-track resource consent process, notice of the decision must be given within 10 working days after the date the application was first lodged with the authority, unless the applicant opts out of that process at the time of lodgement. A fast-track application may cease to be a fast-track application under section 87AAC(2) of the RMA.

### Privacy Information:

Once this application is lodged with the Council it becomes public information. Please advise Council if there is sensitive information in the proposal. The information you have provided on this form is required so that your application for consent pursuant to the Resource Management Act 1991 can be processed under that Act. The information will be stored on a public register and held by the Far North District Council. The details of your application may also be made available to the public on the Council's website, [www.fndc.govt.nz](http://www.fndc.govt.nz). These details are collected to inform the general public and community groups about all consents which have been issued through the Far North District Council.

### 15. Important information continued...

#### Declaration

The information I have supplied with this application is true and complete to the best of my knowledge.

Name: (please write in full)

Jared Bleakley

Signature:

[Redacted Signature]

Date 22 June 2025

A signature is not required if the application is made by electronic means

#### Checklist (please tick if information is provided)

- ☐ Payment (cheques payable to Far North District Council)
- ☒ A current Certificate of Title (Search Copy not more than 6 months old)
- ☐ Details of your consultation with Iwi and hapū
- ☒ Copies of any listed encumbrances, easements and/or consent notices relevant to the application
- ☐ Applicant / Agent / Property Owner / Bill Payer details provided
- ☒ Location of property and description of proposal
- ☒ Assessment of Environmental Effects
- ☐ Written Approvals / correspondence from consulted parties
- ☒ Reports from technical experts (if required)
- ☒ Copies of other relevant consents associated with this application
- ☒ Location and Site plans (land use) AND/OR
- ☐ Location and Scheme Plan (subdivision)
- ☒ Elevations / Floor plans
- ☒ Topographical / contour plans

Please refer to Chapter 4 of the District Plan for details of the information that must be provided with an application. Please also refer to the RC Checklist available on the Council's website. This contains more helpful hints as to what information needs to be shown on plans.

## Assessment of environmental effects.

The proposal is to build a single family dwelling with detached garage in an established subdivision.

The effects of this project that required clarification is evidence/design to illustrate stormwater will not exceed what existed pre development for storm events up to and including 10% annual exceedance probability plus allowance for climate change of 2.5c° prepared by cpeng or qualified person. The attached stormwater calculations by cpeng shows compliance to these rules and divergence to constructed drains for proper management.

The effects of this project that also needed clarification was excavation was not to exceed 300 cubic meters in a 12 month period and cut not to exceed 1.5m

in height. This has been calculated by a cpeng via spread sheet calculation and design is within the acceptable capacity and height (as per design).

There is no adverse risk to the environment as the new build mitigates water to the existing drainage designed for all subdivided sections. The excavated soil will mostly be used as raised garden beds along driveway planted with natives and used to benefit the area with a rejuvenation of trees.

This project fits the purpose of what the subdivision was developed for with the following provided as per design: roading, drainage power to boundary.

As this is in a subdivision with many new houses others in the subdivision will

benefit from controlled water runoff as per design and planting of trees to mitigate erosion and improve aesthetics on a currently empty lot.



**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Search Copy**



R.W. Muir  
Registrar-General  
of Land

**Identifier** **989271**  
**Land Registration District** **North Auckland**  
**Date Issued** 21 October 2022

**Prior References**  
540762

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**Estate** Fee Simple  
**Area** 4361 square metres more or less  
**Legal Description** Lot 1 Deposited Plan 560503  
**Registered Owners**  
Jared Richard McGill Bleakley and Jocelyn Ann Bleakley

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**Estate** Fee Simple - 1/80 share  
**Area** 8950 square metres more or less  
**Legal Description** Lot 11 Deposited Plan 407591  
**Registered Owners**  
Jared Richard McGill Bleakley and Jocelyn Ann Bleakley

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**Interests**

Subject to Section 59 Land Act 1948

Appurtenant to Lot 1 DP 560503 and part Lot 11 DP 407591 (formerly Lot 1 DP 195701) herein is a cable television supply right created by Transfer D506002.6 - 16.5.2000 at 1.22 pm

Subject to a right to convey water over part Lot 11 DP 407591 marked E on DP 407591 created by Easement Instrument 6058130.4 - 28.6.2004 at 9:00 am

Land Covenant in Easement Instrument 6058130.5 - 28.6.2004 at 9:00 am (Affects part Lot 11 DP 407591 formerly Lot 28 DP 331991)

Subject to a right (in gross) to drain water over part Lot 11 DP 407591 marked E on DP 407591 in favour of Far North District Council created by Easement Instrument 6058130.7 - 28.6.2004 at 9:00 am

The easement created by Easement Instrument 6058130.7 is subject to Section 243 (a) Resource Management Act 1991

Subject to a right of way and rights to convey electricity, telecommunications, computer media and water and to drain sewage over part Lot 11 DP 407591 marked D, E and F on DP 407591 created by Easement Instrument 6630103.6 - 1.11.2005 at 9:00 am

Appurtenant hereto is a right to convey water created by Easement Instrument 6630103.6 - 1.11.2005 at 9:00 am

The easements created by Easement Instrument 6630103.6 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant created by Easement Instrument 8262440.3 - 21.8.2009 at 9:03 am (affects Lot 1 DP 560503)

Subject to a right (in gross) to convey electricity over part Lot 11 DP 407591 marked C, D, E and F on DP 407591 in favour of Top Energy Limited created by Easement Instrument 8262440.5 - 21.8.2009 at 9:03 am

The easements created by Easement Instrument 8262440.5 are subject to Section 243 (a) Resource Management Act 1991

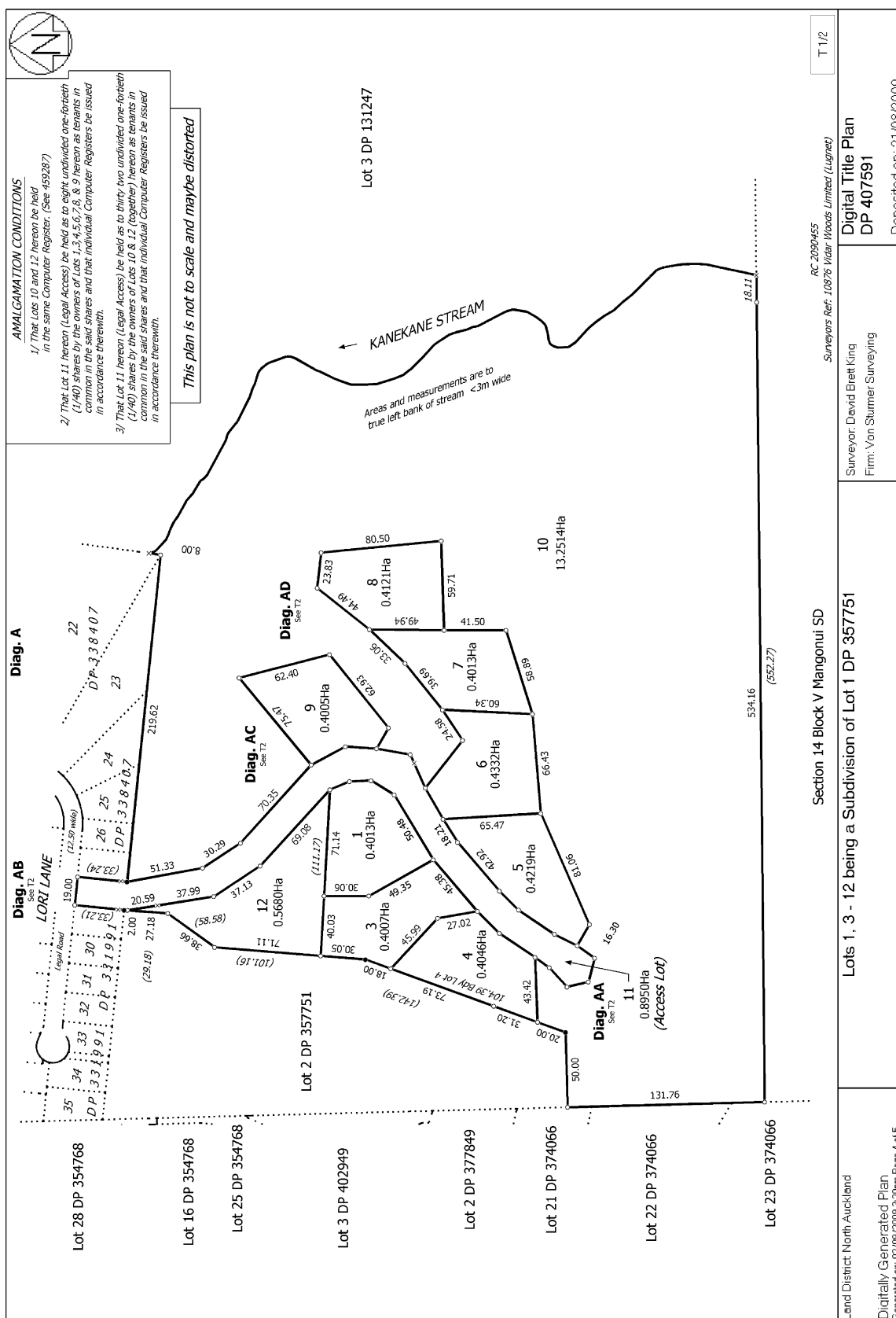
Subject to a right (in gross) to convey telecommunications and computer media over part Lot 11 DP 407591 marked C, D,  
E and F on DP 407591 in favour of Telecom New Zealand Limited created by Easement Instrument 8262440.6 - 21.8.2009  
at 9:03 am

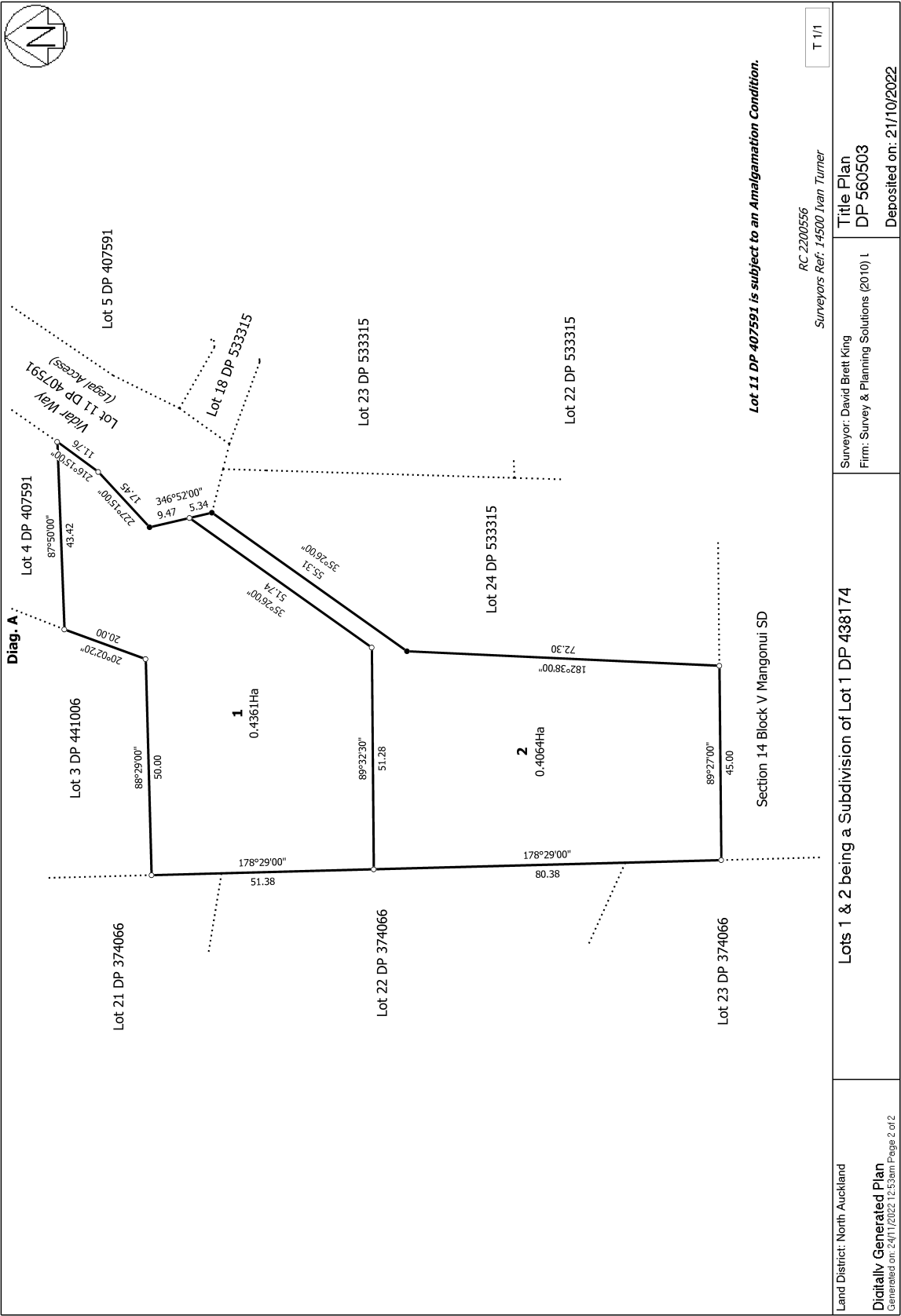
Fencing Covenant in Transfer 9001548.2 - 26.4.2012 at 11:00 am

12559342.1 Encumbrance to Kauri Grove Management Limited - 21.10.2022 at 1:51 pm

Subject to Section 241(2) Resource Management Act 1991 (affects DP 560503)

12559342.7 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 21.10.2022 at 1:51 pm (affects Lot  
1 DP 560503)





23 May 2025

Jared Richard McGill Bleakley  
32 Midgard Road  
Coopers Beach 0420

Dear Sir / Madam,

**Building consent number:** EBC-2025-909/0  
**Property ID:** 3364093  
**Address:** 22 Vidar Way, Coopers Beach 0420  
**Description:** New dwelling with detached garage

### Requirement for Resource Consent

PIM Assessment of your application has highlighted the need for Resource Consent that must be granted prior to any building works or earthworks commencing.

**NB:** As of 27<sup>th</sup> July 2022, some rules and standards in the Far North District Council Proposed District Plan took legal effect and compliance with these rules applies to your building consent. Please visit our website to see these rules  
[Far North Proposed District Plan \(isoplan.co.nz\)](https://isoplan.co.nz)

The site is zoned **Rural Living** under the Operative District Plan and Resource Consent is required for breach of the following:

<b>Consent Notice:</b>	12559342.7 (iv) Requires at the time of lodging a building consent for any habitable dwelling provide suitable evidence/design to illustrate that stormwater disposal will not exceed that which existed pre-development for storm events up to and including the 10% annual exceedance probability plus allowance for climate change of 2.5°C prepared by a CPEng or suitably qualified person to the satisfaction of Councils development engineer or delegated representative.
<b>Reason:</b>	No evidence/design by a CPEng or suitably qualified person that illustrates that stormwater disposal will not exceed that which existed pre-development for storm events up to and including the 10% annual exceedance probability plus allowance for climate change of 2.5°C has been provided with the application.
<b>Rule:</b>	8.7.5.1.5 STORMWATER MANAGEMENT The maximum proportion or amount of the gross site area covered by buildings and other impermeable surfaces shall be 12.5% or 3,000m <sup>2</sup> , whichever is the lesser.
<b>Reason:</b>	12.5% = 559.10m <sup>2</sup> , stated as 551m <sup>2</sup> but this does not include the share of impermeable surface in the access lot.

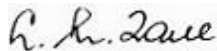
<b>Rule:</b>	<p>12.3.6.1.2 EXCAVATION AND/OR FILLING, INCLUDING OBTAINING ROADING MATERIAL BUT EXCLUDING MINING AND QUARRYING, IN THE RURAL LIVING, COASTAL LIVING, SOUTH KERIKERI INLET, GENERAL COASTAL, RECREATIONAL ACTIVITIES, CONSERVATION, WAIMATE NORTH AND POINT VERONICA ZONES</p> <p>Excavation and/or filling, excluding mining and quarrying, on any site in the Rural Living, Coastal Living, South Kerikeri Inlet Zone, General Coastal, Recreational Activities, Conservation, Waimate North and Point Veronica Zones is permitted, provided that:</p> <p>(a) it does not exceed 300m<sup>3</sup> in any 12 month period per site; and</p> <p>(b) it does not involve a cut or filled face exceeding 1.5m in height i.e. the maximum permitted cut and fill height may be 3m.</p>
<b>Reason:</b>	The volume of earthworks is stated as 400m <sup>3</sup> .

Please note there may be other rule breaches found during the Resource Consent process. It is your responsibility to ensure the Resource Consent approved plans match the Consented approved plans.

The application form can be downloaded from [www.fndc.govt.nz](http://www.fndc.govt.nz) and submitted to Council's (Planning Department) with the appropriate documentation and instalment fee.

If you have any queries, please contact the Duty Planner on [Duty.Planner@fndc.govt.nz](mailto:Duty.Planner@fndc.govt.nz) or 0800 920 029.

Yours faithfully



Leeanne Tane  
PIM Officer

**Delivery and Operations**

Emailed to: [cbsnorthland@gmail.com](mailto:cbsnorthland@gmail.com); [jared.bleakley@gmail.com](mailto:jared.bleakley@gmail.com)

**FORM 4**  
**Certificate attached to**  
**PROJECT INFORMATION MEMORANDUM**  
Section 37, Building Act 2004

**Building Consent Number: EBC-2025-909/0**

**RESTRICTIONS ON COMMENCING BUILDING WORK UNDER  
RESOURCE MANAGEMENT ACT 1991**

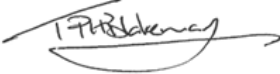
The building work referred to in the attached Project Information Memorandum is also required to have the following **Resource Consent(s)** under the Resource Management Act 1991:

• **Resource Consent – REQUIRED**

As the above Resource Consent(s) will affect the building work to which the Project Information Memorandum relates, until this has been granted no building work may proceed.

Failure to comply with the requirements of this notice may result in legal action being taken against you under the Resource Management Act 1991.

Signature:



Trent Blakeman  
Manager - Building Services –  
Delivery and Operations  
Far North District Council (Building Consent Authority)  
23 May 2025

Position:

On behalf of:

Date:

Assumptions used in these calculations.

Date: 15/06/25


FL = 69.7 floor level  
 20 mm flooring board thickness  
 140 mm floor joists  
 190 mm floor bearers  
 300 mm minimum clearance under the bearers

From these data, we need to excavate the site down to elevation 69.05

- \* for the sake of this calculations, it was decided to excavate the site down to elevation +69.00
- \* this excavation is just enough for the detached garage which has an FL of +69.4
- \* from the architectural plans, it can be seen that the garage attached to the house will require a fill of  
 1.70 m
- \* with the this excavation, it can be seen that the retained height of the retaining wall will not exceed  
 1.20 m
- \* therefore, in relation to Rule 12.3.6.1.2, the sum of the cut and fill will not exceed  
 3.00 m hence, OK.
- \* the volume of excavation was calculated with the aid of AutoCad and excel software.
- \* the area to be excavated was divided into strips with 1-metre width.
- \* the volume in each strip was calculated using a spreadsheet, using Elev. +69 as the base of excavation.
- \* the total excavated volume was calculated as  
 271.16 m<sup>3</sup>
- \* therefore, in relation to Rule 12.3.6.1.2, this is less than  
 300.00 m<sup>3</sup> hence, OK.



Strip	width (m)	Length (m)	Elev 1	Elev 2	Vol (m3)
1	1.00	9.32	69.00	69.9	4.19
2	1.00	10.07	69.00	70.1	5.54
3	1.00	10.86	69.00	70.2	6.52
4	1.00	11.37	69.00	70.3	7.39
5	1.00	11.44	69.00	70.15	6.58
6	1.00	11.53	69.00	70.15	6.63
7	1.00	11.6	69.00	70.15	6.67
8	1.00	11.67	69.00	70.15	6.71
9	1.00	11.74	69.00	70.15	6.75
10	1.00	11.77	69.00	70.15	6.77
11	1.00	11.85	69.00	70.15	6.81
12	1.00	11.89	69.00	70.15	6.84
13	1.00	11.93	69.00	70.15	6.86
14	1.00	11.94	69.00	70.15	6.87
15	1.00	11.94	69.00	70.15	6.87
16	1.00	11.92	69.00	70.15	6.85
17	1.00	11.94	69.00	70.15	6.87
18	1.00	11.97	69.00	70.15	6.88
19	1.00	11.95	69.00	70.15	6.87
20	1.00	11.93	69.00	70.15	6.86
21	1.00	11.89	69.00	70.15	6.84
22	1.00	11.85	69.00	70.15	6.81
23	1.00	11.79	69.00	70.15	6.78
24	1.00	11.73	69.00	70.15	6.74
25	1.00	11.67	69.00	70.15	6.71
26	1.00	11.59	69.00	70.15	6.66
27	1.00	11.5	69.00	70.15	6.61
28	1.00	11.4	69.00	70.15	6.56
29	1.00	11.3	69.00	70.15	6.50
30	1.00	11.2	69.00	70.15	6.44
31	1.00	11.1	69.00	70.15	6.38
32	1.00	10.95	69.00	70.15	6.30
33	1.00	10.81	69.00	70.15	6.22
34	1.00	10.67	69.00	70.15	6.14
35	1.00	10.52	69.00	70.15	6.05
36	1.00	10.36	69.00	70	5.18
37	1.00	10.19	69.00	70	5.10
38	1.00	10.01	69.00	69.9	4.50
39	1.00	9.82	69.00	69.8	3.93
40	1.00	9.63	69.00	69.7	3.37
41	1.00	9.43	69.00	69.7	3.30
42	1.00	9.22	69.00	69.7	3.23
43	1.00	9	69.00	69.6	2.70
44	1.00	8.77	69.00	69.7	3.07
45	1.00	8.54	69.00	69.8	3.42
46	1.00	8.29	69.00	69.8	3.32
					271.16

 <b>T&amp;A STRUCTURES LTD</b> CHARTERED PROFESSIONAL ENGINEERS <small>www.tastructures.co.nz info.tastructures@gmail.com</small>	<b>PROJECT:</b>		Project No.	084-FND-25SD
	<b>22 Vidar Way New Dwelling</b>		Page No.	
	<b>DESIGN ELEMENT:</b>		Prepared:	Teo
	<b>Stormwater management</b>		Date	3/06/2025

## Summary:

*Stormwater management approach:*

*Provide 2 - 25,000L water tanks*

*Size of orifice: 10.00 mm diameter*

*Location: 2.40 m height of overflow pipe above orifice*

*the flow from the proposed dwelling should be piped towards the tank.*

## Calculations:

Design life: = 50 years up to year 2075

Taking into account the effects of climate change, using RCP 8.5

### 1. Existing site (no development):

$$\begin{aligned}
 A_T &= 4361 \text{ m}^2 && \text{Total area of the site} && \text{grassed/bush land.} \\
 Q &= CiA/3600 \\
 i_{10} &= 7.38 \text{ mm/hr} && \text{rainfall intensity, 10\% AEP} && \text{source: NIWA} \\
 C &= 0.25 && \text{runoff coefficients} && \text{bush \& scrub cover, medium soakage} \\
 Q_{10} &= 2.23 \text{ L/s} && \text{total peak flow, pre-development} \\
 &= 8.04 \text{ m}^3/\text{hr}
 \end{aligned}$$

### 2. Proposed impervious surfaces:

$$\begin{aligned}
 A_t &= 329.00 \text{ m}^2 && \text{house, garage and veranda roofs plus tanks} \\
 Q &= CiA/3600 \\
 i_{10} &= 7.38 \text{ mm/hr} && \text{rainfall intensity, 10\% AEP} && \text{source: NIWA} \\
 C &= 0.9 && \text{runoff coefficients (roof surface)} \\
 Q_{10} &= 0.61 \text{ L/s} && \text{total flow} \\
 &= 2.18 \text{ m}^3/\text{hr}
 \end{aligned}$$

### 3. Proposed driveway:

$$\begin{aligned}
 A_r &= 267.2 \text{ m}^2 && \text{Total impervious area (driveway)} \\
 Q &= CiA/3600 \\
 i_{10} &= 7.38 \text{ mm/hr} && \text{rainfall intensity, 10\% AEP} && \text{source: NIWA} \\
 C &= 0.5 && \text{runoff coefficients, unsealed} \\
 Q_{10} &= 0.27 \text{ L/s} && \text{total flow} \\
 &= 0.99 \text{ m}^3/\text{hr}
 \end{aligned}$$

### 5. Remaining pervious surfaces:

$$\begin{aligned}
 A_t &= 3765 \text{ m}^2 && \text{Net pervious area after development} \\
 \text{Coverage} &= 13.67\% && \text{this is more than 12.5\%} && \text{detention tanks are required} \\
 Q &= CiA/3600
 \end{aligned}$$

$i_{10} = 7.38$  mm/hr rainfall intensity, 10% AEP source: NIWA  
 $C = 0.25$  runoff coefficients garden/lawn  
 $Q_{10} = 1.93$  L/s total flow  
 $= 6.94$  m<sup>3</sup>/hr

6. Summary of peak flows:

$Q_{predev} = 8.04$  m<sup>3</sup>/hr peak flow rate before any development  
 $Q_{postdev} = 10.11$  m<sup>3</sup>/hr peak flow rate after development (considering the existing and proposed).  
 $6.94$  m<sup>3</sup>/hr peak flow rate coming from unsealed surfaces, except driveway  
 $0.99$  m<sup>3</sup>/hr peak flow rate coming from driveway (cannot be put in water tanks).  
 $2.18$  m<sup>3</sup>/hr peak flow rate coming from the proposed dwelling (can be put in water tank).

7. Proposed stormwater management:

Peak flow rate after development should be limited to peak flow rate before development.

To achieve this, the excess stormwater flow in 24-hour storm should be put in tanks and be release in a controlled manner after the storm is such a way that the pre-dev peak flow rate is not exceeded.

$Q_{mitigation} = 2.07$  m<sup>3</sup>/hr

the flow from the proposed dwelling should be piped towards the tank.

$V_{storage} = 49.68$  m<sup>3</sup>

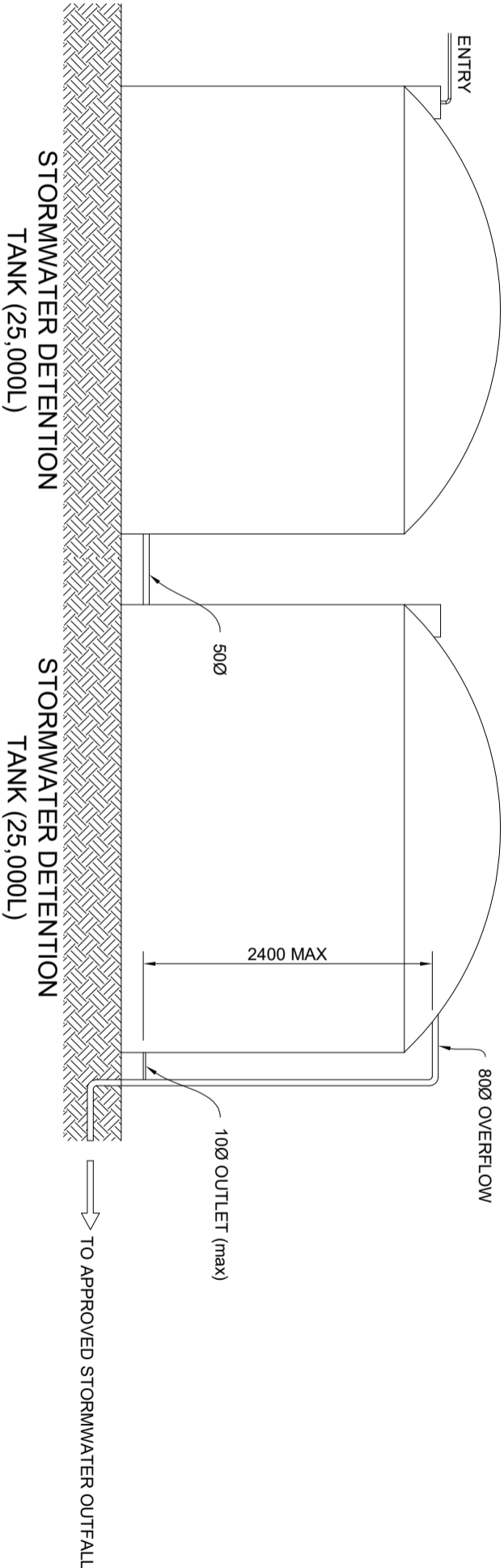
Provide 2 - 25,000L water tanks

8. Size of orifice:

The two tanks should be connected to each other, and the last tank should be fitted with an orifice.

Size of orifice (according to predev flow)

$Q = 0.62A (2hg)^{0.5}$   
 $Q = 8.04$  m<sup>3</sup>/hr  
 $= 0.0022$  m<sup>3</sup>/s  
 $h = 2.40$  m height of overflow pipe above orifice  
 $d = 10.00$  mm required diameter of orifice  
 $A = 0.00008$  m<sup>2</sup>  
 $Q = 0.0003$  m<sup>3</sup>/s should be less than  $0.0022$  m<sup>3</sup>/s  
 OK



NOTE:  
THE TWO TANKS ARE TO BE USED FOR STORMWATER MITIGATION, HENCE, SHOULD ALWAYS BE EMPTY WHEN THERE IS NO STORM.

ORIGINAL SIZE mm  
A3

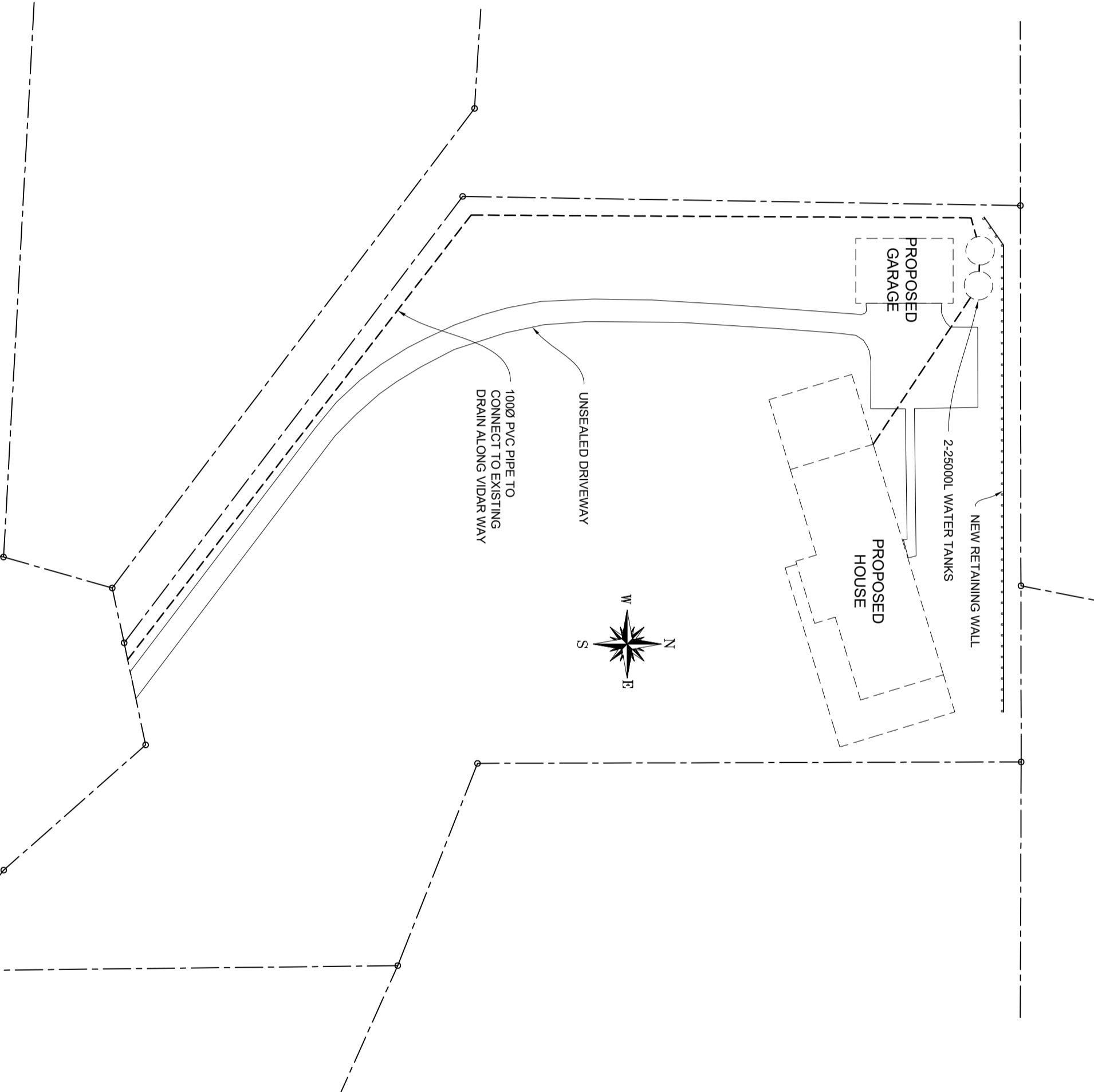
0 10 30 50 100 200

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Surveyed		Designed		Project	22 VIDAR WAY, COOPERS BEACH PROPOSED HOUSE

Sheet Title	STORMWATER MANAGEMENT
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Drawing Status	CONSENT	Drawing	SW2
Project No.	054-FND-25SD	Revision	1
Scale	1:50 (A3)		






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				22 VIDAR WAY, COOPERS BEACH		SITE PLAN		CONSENT	
1		First Issue		6 June 2025				Project No.: 054-FND-25SD	
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								Revision 1	

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	<b>22 Vidar Way New Dwelling</b>		Page No.	
	<b>DESIGN ELEMENT:</b>		Prepared:	Teo
	<b>Stormwater management</b>		Date	3/06/2025

## Summary:

*Stormwater management approach:*

*Provide 2 - 25,000L water tanks*

*Size of orifice: 10.00 mm diameter*

*Location: 2.40 m height of overflow pipe above orifice*

*the flow from the proposed dwelling should be piped towards the tank.*

## Calculations:

Design life: = 50 years up to year 2075

Taking into account the effects of climate change, using RCP 8.5

### 1. Existing site (no development):

$$\begin{aligned}
 A_T &= 4361 \text{ m}^2 && \text{Total area of the site} && \text{grassed/bush land.} \\
 Q &= CiA/3600 \\
 i_{10} &= 7.38 \text{ mm/hr} && \text{rainfall intensity, 10\% AEP} && \text{source: NIWA} \\
 C &= 0.25 && \text{runoff coefficients} && \text{bush \& scrub cover, medium soakage} \\
 Q_{10} &= 2.23 \text{ L/s} && \text{total peak flow, pre-development} \\
 &= 8.04 \text{ m}^3/\text{hr}
 \end{aligned}$$

### 2. Proposed impervious surfaces:

$$\begin{aligned}
 A_t &= 329.00 \text{ m}^2 && \text{house, garage and veranda roofs plus tanks} \\
 Q &= CiA/3600 \\
 i_{10} &= 7.38 \text{ mm/hr} && \text{rainfall intensity, 10\% AEP} && \text{source: NIWA} \\
 C &= 0.9 && \text{runoff coefficients (roof surface)} \\
 Q_{10} &= 0.61 \text{ L/s} && \text{total flow} \\
 &= 2.18 \text{ m}^3/\text{hr}
 \end{aligned}$$

### 3. Proposed driveway:

$$\begin{aligned}
 A_r &= 267.2 \text{ m}^2 && \text{Total impervious area (driveway)} \\
 Q &= CiA/3600 \\
 i_{10} &= 7.38 \text{ mm/hr} && \text{rainfall intensity, 10\% AEP} && \text{source: NIWA} \\
 C &= 0.5 && \text{runoff coefficients, unsealed} \\
 Q_{10} &= 0.27 \text{ L/s} && \text{total flow} \\
 &= 0.99 \text{ m}^3/\text{hr}
 \end{aligned}$$

### 5. Remaining pervious surfaces:

$$\begin{aligned}
 A_t &= 3765 \text{ m}^2 && \text{Net pervious area after development} \\
 \text{Coverage} &= 13.67\% && \text{this is more than 12.5\%} && \text{detention tanks are required} \\
 Q &= CiA/3600
 \end{aligned}$$

$$\begin{aligned}
 i_{10} &= 7.38 \text{ mm/hr} && \text{rainfall intensity, 10\% AEP} && \text{source: NIWA} \\
 C &= 0.25 && \text{runoff coefficients garden/lawn} \\
 Q_{10} &= 1.93 \text{ L/s} && \text{total flow} \\
 &= 6.94 \text{ m}^3/\text{hr}
 \end{aligned}$$

6. Summary of peak flows:

$$\begin{aligned}
 Q_{\text{predev}} &= 8.04 \text{ m}^3/\text{hr} && \text{peak flow rate before any development} \\
 Q_{\text{postdev}} &= 10.11 \text{ m}^3/\text{hr} && \text{peak flow rate after development (considering the existing and proposed).} \\
 &6.94 \text{ m}^3/\text{hr} && \text{peak flow rate coming from unsealed surfaces, except driveway} \\
 &0.99 \text{ m}^3/\text{hr} && \text{peak flow rate coming from driveway (cannot be put in water tanks).} \\
 &2.18 \text{ m}^3/\text{hr} && \text{peak flow rate coming from the proposed dwelling (can be put in water tank).}
 \end{aligned}$$

7. Proposed stormwater management:

Peak flow rate after development should be limited to peak flow rate before development.

To achieve this, the excess stormwater flow in 24-hour storm should be put in tanks and be release in a controlled manner after the storm is such a way that the pre-dev peak flow rate is not exceeded.

$$Q_{\text{mitigation}} = 2.07 \text{ m}^3/\text{hr}$$

the flow from the proposed dwelling should be piped towards the tank.

$$V_{\text{storage}} = 49.68 \text{ m}^3$$

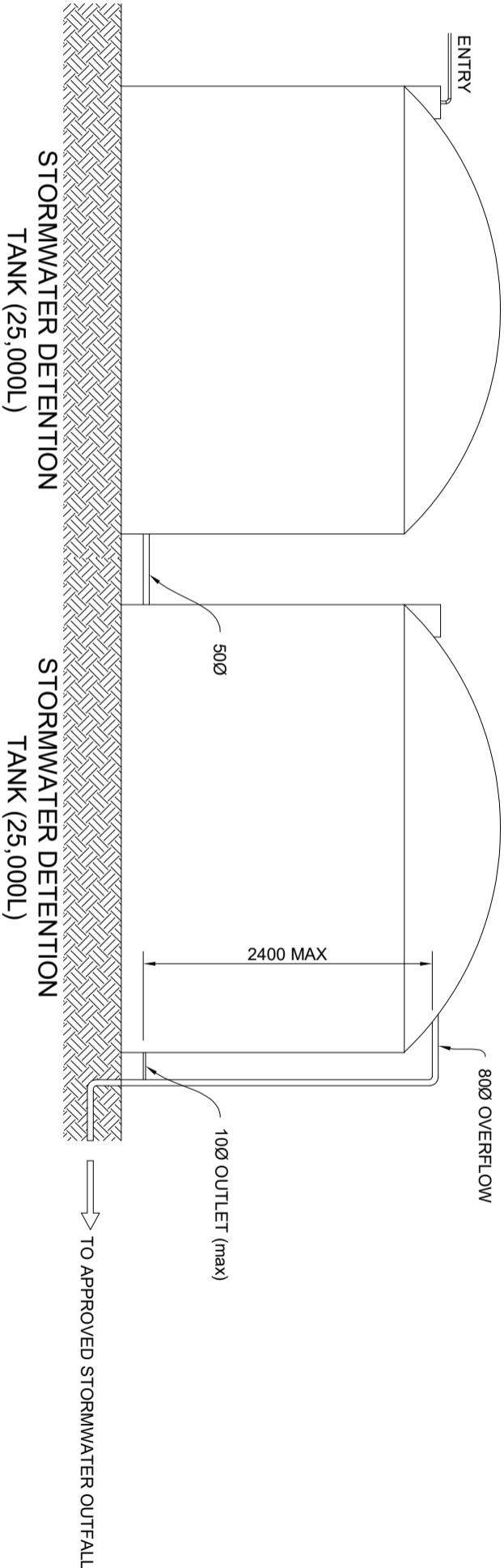
Provide 2 - 25,000L water tanks

8. Size of orifice:

The two tanks should be connected to each other, and the last tank should be fitted with an orifice.

Size of orifice (according to predev flow)

$$\begin{aligned}
 Q &= 0.62A (2hg)^{0.5} \\
 Q &= 8.04 \text{ m}^3/\text{hr} \\
 &= 0.0022 \text{ m}^3/\text{s} \\
 h &= 2.40 \text{ m} && \text{height of overflow pipe above orifice} \\
 d &= 10.00 \text{ mm} && \text{required diameter of orifice} \\
 A &= 0.00008 \text{ m}^2 \\
 Q &= 0.0003 \text{ m}^3/\text{s} && \text{should be less than } 0.0022 \text{ m}^3/\text{s} \\
 &\text{OK}
 \end{aligned}$$



NOTE:  
THE TWO TANKS ARE TO BE USED FOR STORMWATER MITIGATION, HENCE, SHOULD ALWAYS BE EMPTY WHEN THERE IS NO STORM.

ORIGINAL SIZE mm

A3

0 10 30 50 100 200



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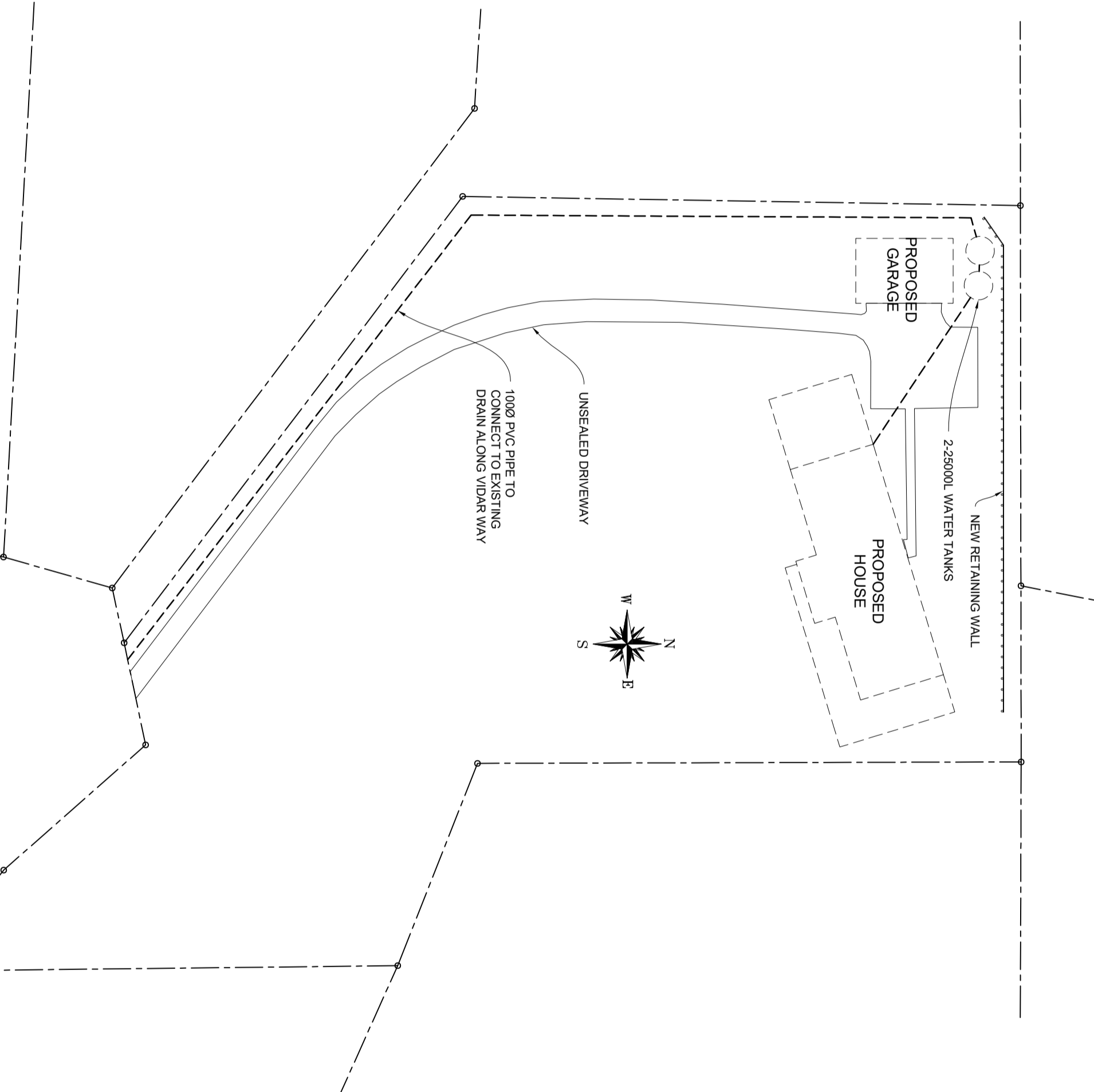
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Approved					
Project					
22 VIDAR WAY, COOPERS BEACH					
PROPOSED HOUSE					

Sheet Title		Drawing Status	
STORMWATER MANAGEMENT		CONSENT	
		Project No.: 054-FND-25SD	Drawing SW2
		Scale 1:50 (A3)	Revision 1





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								1	
								SW1	