RMA FORM 5

Submission on publicly notified Proposed Porirua District Plan

Clause 6 of the First Schedule, Resource Management Act 1991

poriruacity

To: Porirua City Council

1. Submitter details:

Full Name	*Last* SOUTHWOOD		*First* LINDA
Company/Organisation *if applicable*			
Contact Person *if different*			
Email Address for Service	**Linda.southwood@hotmail.com**		
Address	**44 EXPLORATION WAY, WHITBY**		
	City PORIRUA		*Postcode* 5024
Address for Service *if different*	*Postal Address*		*Courier Address*
Phone	*Mobile* **027 285 4550**	*Home*	*Work*

2. This is a ***submission*** on the **Proposed District Plan** for Porirua.

3. I could ☐ I could not ☐
gain an advantage in trade competition through this submission.
(Please tick relevant box)

If **you could** gain an advantage in trade competition through this submission please complete point four below:

4. I am ☑ I am not ☐
directly affected by an effect of the subject matter of the submission that:
(a) adversely affects the environment; and
(b) does not relate to trade competition or the effects of trade competition.
(Please tick relevant box if applicable)

Note:
If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991.

5. I wish ☐ I do not wish ☐
To be heard in support of my submission
(Please tick relevant box)

6. I will ☑ I will not ☐
Consider presenting a joint case with other submitters, who make a similar submission, at a hearing.
(Please tick relevant box)

Please complete section below (insert additional boxes per provision you are submitting on):

The specific provision of the proposal that my submission relates to:
CLASSIFYING APPROXIMATELY HALF MY PROPERTY AS - SIGNIFICANT NATURAL AREA
Do you: Support? Oppose? Amend?
OPPOSE
What decision are you seeking from Council? **What action would you like: Retain? Amend? Add? Delete?**
REMOVAL OF THE RESTRAINT ELSE, TO SIGNIFICANTLY REDUCE THE LARGE, BROAD AREAS IDENTIFIED ON THE MAP

Reasons:

- Purchased 23 years ago as a lifestyle property with outlook to develop in future years
- Price paid was for all the land and the existing limitations on the property – happy to pay the high price and the very high rates for 23 years with the potential that exists on property.
- Closest undeveloped block of land to central Whitby amenities. Zoned residential
- Size, soil etc not conducive to farming etc so always with intention to keep maintenance free by leaving trees and scrub to cover until need to develop
- The large areas identified as SNA in the report did not reflect what was actually there. A very large area on the west was clear when I purchased in the 1990s but has since had gorse and scrub regrow. Not significant natural trees.
- Approximately 2015 I had a large area cleared on the East side as a building platform for a possible new house.
- An extensive report was prepared by The Surveying Company at my expense 2015-2017. This was for subdividing an extra four sections and done in liaison with Porirua City Council and Three Waters Limited (who did a comprehensive study and report on the environment/soil/water). COPY ATTACHED TO EMAIL
- All properties around me have been clearing their properties – (my immediate neighbour in the past couple of weeks) – and they are all subdividing with properties above mine doing high-density townhouses. Please treat me the same as them.
- Keep public land as SNA and stop selling that off. For example – large bush area behind Whitby Tennis Club which fed into stream sold to retirement village. You can't sell to private land owners and then put in restrictions – keep as public if that important.

Please return this form no later than **5pm on Friday 20 November 2020** to:

- Proposed District Plan, Environment and City Planning, Porirua City Council, PO Box 50-218, PORIRUA CITY or
- email dpreview@pcc.govt.nz

Signature of submitter *(or person authorised to sign on behalf of submitter)*: Linda Southwood Date: 18/11/20

A signature is not required if you make your submission by electronic means

Louise White

From: Linda Southwood <linda.southwood@hotmail.com>
Sent: Thursday, 19 November 2020 11:06 AM
To: dpreview
Subject: [EXTERNAL] Re: Proposed Plan - Submission

Categories: Submission on PDP

Hi Louise
Sorry, it wasn't that clear to me.

I am not a business so tick 'I could not' please

I don't want to actually talk at the meeting but do want submission discussed as opposed so it probably 'I do not wish'

Thank you

Linda Southwood

From: dpreview <dpreview@poriruacity.govt.nz>
Sent: Thursday, 19 November 2020 10:58 AM
To: Linda Southwood <linda.southwood@hotmail.com>; dpreview <dpreview@poriruacity.govt.nz>
Subject: RE: Proposed Plan - Submission

Dear Linda,

Thank you for your submission on the Porirua Proposed District Plan.

To enable us to accept your submission, we respectfully ask you to please respond to the outstanding matters below via return email so that we can lodge your submission

Outstanding matters to be addressed

1. I could ☐ I could not ☐
   gain an advantage in trade competition through this submission.
   (Please tick relevant box)

2. I wish ☐ I do not wish ☐
   To be heard in support of my submission
   (Please tick relevant box)

Ngā mihi,

Louise White
Intermediate Policy Planner
Kaihanga Kaupapahere Māhuri

Contents

Appendix A

Title Information and Title plan

Appendix B

Subdivision scheme plan includes topographical survey information

Appendix C

Stormwater Analysis Report

Appendix D

Affected Party Consents

EXECUTIVE SUMMARY

The following is an application for and an assessment of environmental effects in accordance with the Resource Management Act 1991

Applicant:	Linda Southwood
Activity Location:	44 Exploration Way, Whitby
Applicant Status:	Landowner
Proposed Activity:	The subdivision of the underlying lot into 5 fee simple lots.
Activity Status:	Discretionary

Site Location:

Source: PCC website.

1.0 Introduction

The purpose of this report is to obtain resource consent approval to carry out a five lot fee simple subdivision at 44 Exploration Way, Whitby on behalf of Linda Southwood (the applicant). The information supplied as part of this application is intended to provide the information necessary for a full understanding of the proposal and any actual and potential effects that the proposed activity may have on the environment.

2.0 Description of Site

2.1 PROJECT SITE

Legal

The site is legally described as Lot 1767 DP 58749, comprising an area of 2.5218Ha contained in CFR WN44A/304, attached as appendix A.

Zoning

This site is zoned Suburban under Porirua City Councils Operative District plan. It is not subject to any other planning overlays or designations.

Topography and site description

The site could be described as a rural lifestyle block in that it is fenced for control of livestock. It contains a large two storey family home, swimming pool and tennis court. It is also fully serviced with power, phone, mains sewer and water services.

The site is trapezoidal in shape but accessed via a reciprocal right of way shared with 5 other users from Exploration Way.

The site is largely vegetated around the periphery of the site with large cleared areas which create natural grazing areas or potential build platforms.

The site contains a gully with high points on both the western and eastern boundaries. A stream runs through the centre of the site, as such there are identified minor overland flow paths and ponding areas.

Location

The application site, 44 Exploration Way is located in Whitby a large suburb of Porirua. While the suburb stretches predominantly along the Pauatahanui Inlet, the applicant site sits at the end of Exploration way within the hills of the suburb. Exploration Way is a cul-de-sac accessed from Discovery Drive, the entrance to Exploration Way being directly opposite the Whitby Shopping Centre. Discovery Drive is a major public transport route, so the site is quite conveniently located to all local amenities.

Porirua Shopping Centre, Railway Station and a number of schools are all within a short 15 minute drive away and can also be accessed via public transport from Discovery Drive.

2.2 SURROUNDING ENVIRONMENT

Site setting

Although the site is quite large and more reminiscent of a rural lifestyle block it is tucked behind a built up residential area. To the west above the site is a reservoir and because of its location a major water trunk line runs through the property, as does a sewer main, these mains are both covered by easements in gross. To the north is another residential property also sharing the right of way which is of a similar size. To the west are smaller residential lots which front Exploration Way. To the south is a large residential block accessed directly from Exploration Way.

3.0 Proposal

3.1 OVERVIEW

It is proposed to subdivide the existing property into 5 fee simple lots of at least 1600m² or larger. The access will be via a reciprocal right of way which will, with the additional users, not meet the technical standards of part H of the district plan. We will also be creating a lot which will require extensive earthworks to create access and a building platform to be carried out at building consent stage.

3.2 SUBDIVISION

Proposed Lots

Proposed Lot	Total Area m²	Net Area m²
1	2939	2939
2	2954	2954
3	15803	14685
4	1680	1644
5	1842	1644
TOTAL	25218	23866

Services

The existing dwelling is fully serviced, the proposed newly created lots will be fully serviced. Details of servicing will be confirmed at engineering approval stage.

Water

We have confirmed with Wellington Water that the rider main in the existing right of way has capacity to service the 4 new lots being created by this subdivision. It is intended to provide each new lot with a single 20mm water lead to the boundary area of each new lot.

Wastewater

Conveniently a sewer main runs through the site. A connection to this main will be made for each of the new lots.

Stormwater

Given the ponding on this site it is intended that the new lots be stormwater neutral. We would volunteer that each of the newly created lots install detention tanks to account for the additional runoff created by developing each of the sites. Detention tanks should be deferred until building consent stage so that the design and location is appropriate. This can be covered by a consent notice to be registered on the titles of lots 1, 2, 4 & 5.

It is further proposed that the overflow will be piped to the stream. The design for the outlet will be provided at engineering consent stage with the intent that it will meet GWRC standards and therefore not require consent from GWRC. The outlet/s will be installed as part of the subdivision.

Access and Parking

Access from Exploration Way will be via an existing 7m wide right of way. The carriageway is only 5m wide and as such does not meet the requirements for 10 users, [insert details of neighbour consultation]

From the existing right of way it is proposed to create a further right of way to serve all other users created by this subdivision, a turning head is proposed at the end of the shared area of right of way. It is not the intended to widen the right of way but to create a passing bay and to widen the corner entering the open area of the site to allow for safe traffic movements.

Any additional earthworks required to create access and parking to each of the lots can be decided at building consent stage and should any further consents be required then these will need to be sought at that stage.

3.3 EARTHWORKS

Although there will be some earthworks carried out to widen the corner for the right of way it will be within the permitted activity standards in that cut will be no more than 1m in height, the area is less than 100m^2 and the slope does not exceed 45°.

Earthworks consents required for access and construction, particularly in relation to Lot 1 will need to be addressed at building consent stage. It is not appropriate to do so at this stage as it would be speculative and not based on any actual design. We have however demonstrated what might be carried out on the cleared area of the site.

4.0 Consents being sought

4.1 SUBDIVISION

- A Resource consent is being sought for a 5 lot fee simple subdivision, which does not comply with access standards under part H of the District Plan.

5.0 Encumbrances

5.1 EASEMENTS

There are major water trunks running through the site and as such there are easements in gross to protect this major service. A 6.71m wide easement covers the water mains through this site and a 3m wide easement covers the sewer main which also runs through the site. On the eastern boundary of the site there is an electricity easement. All of these easements will remain and will be brought down on to the titles of the new lots.

6.0 Planning Analysis

6.1 ASSESSMENT AGAINST THE RULES AND STANDARDS

D3.1 Suburban Zone Rules	
D3.1.2 Controlled Activities	**COMPLIANCE ACHIEVED - NO**
(ii) Subdivision where:	
(a) Public roads are available *to serve the subdivision. In respect of public roads, the term "available" means available at a standard not less than the recommended carriageway width shown in Table 3 or Table 4, Part H 'Carparking Vehicle Movements and Roads',*	
COMPLIANT – Exploration Way has a width of over 17m which meets the standards for a long cul-de-sac serving more than 20 dwellings.	
(b) ***Public water supply systems, sanitary drainage systems and stormwater drainage systems are available*** *to serve the subdivision,*	
COMPLIANT – this site can be fully serviced	
(c) All the ***controlled activity standards for subdivision*** *are complied with.*	
COMPLIANT – subdivision of this site complies with the controlled activity standards for subdivision.	
NOT COMPLIANT – it is the intention of the applicant to create a Lot which will require further land use consent when the site is developed.	

D3.2 Suburban Zone Standards	
D3.2.1 Permitted Activity Standards	**COMPLIANCE ACHIEVED - NO**

(xiii) Private ways and driveways

The access to any dwelling on any site shall meet the technical standards for private ways and driveways in Part H of the Plan (including the requirements of Table 4 of Part H).

The existing reciprocal right of way has a legal width of between 7 – 8m however the carriageway with is 5m. As such it does not meet the technical standards for a private way serving 10 lots (6 existing + 4 newly created lots).

The proposed right of way has a nominal width at the start of the site of 4m which also does not meet the technical standards for a private way serving 5 lots.

All other permitted activity standards have been met.

D3.2 Suburban Zone Standards	
D3.2.2 – Controlled Activities	**COMPLIANCE ACHIEVED - NO**

Subdivision where:

(a) For every allotment where there is an ***existing building/s*** *there shall be no increase in the degree of non-conformity with the permitted activity standards, except that where subdivision is proposed between dwellings that share a party wall, the height recession plane and other yard permitted activity standards shall not apply along the length of party wall.*

The subdivision does not create any degree of non-conformity or breach of the permitted activity standards in regard to the existing dwelling.

(b) For every allotment where there is ***no existing dwelling, or for which no existing land use consent for a dwelling has been granted, or is being concurrently granted*** *(in the case of joint land use and subdivision applications), it shall be practicable to construct on all allotments, as a permitted activity, a dwelling which does not contravene any permitted activity standard.*

All lots with the exception of Lot 1 can be built on without any requirement for additional land use consents. It is likely that a dwelling on Lot 1 will require earthworks, the extent of the required earthworks is not known until a house design is chosen for the site.

6.2 ACTIVITY STATUS

Because it is the intention of this proposal to create a Lot that will require further land use consents for earthworks at development stage subdivision of this site will be discretionary under rule D3.1.4(i). Furthermore, after subdivision of this site permitted activity standard D3.2.1 (xiii) cannot be met.

Section 88A of the RMA 1991 requires that the activity status of the proposed subdivision be fixed at the time the application is lodged. After the above analysis, the overall proposal is **Discretionary**.

6.3 OBJECTIVES AND POLICIES

Based on the above analysis, the following objectives and policies of the operative plan are relevant to the assessment of this application. There are no plan changes that are relevant to this proposal.

Operative District Plan

Part C of the operative Plan sets out the issues, objectives and policies for Subdivision in Porirua. The Plan seeks to manage activities to ensure that the character is retained and amenity values are maintained and enhanced in all environmental zones. The relevant objectives and policies of the Plan in respect to the assessment of this application are set out below:

Suburban Zone

- Objective C3.1 – To encourage suburban activities to utilise land most suitable for that purpose.
    - Policy C3.1.1 – To define a Suburban Zone which provides for the present and future suburban development needs of Porirua City.
    - C3.1.2 Policy To encourage the maximum utilisation of the existing infrastructure and resources by encouraging suburban activities in areas which are already serviced.

- Objective C3.2 – To encourage an environment which continues to sustain Porirua City's suburban zone as an attractive, healthy and safe place in which to live.
    - Policy C3.2.1 – To protect and enhance the amenity and character of the residential resource by defining standards for the bulk and location of buildings, the provision of open space, and the nature and scale of activities.
    - Policy C3.2.5 – To enable the creation of a range of residential development types and densities to reflect the diversity of needs and housing choices in the community.

Subdivision

- Objective C6.1 – To promote a pattern of land ownership which enhances the opportunities for the sustainable management of resources.
    - Policy C6.1.3 – To promote the creation of new allotments in the Suburban Zone which are capable of accommodating a complying dwelling.
    - Policy C6.1.4 – To ensure continuity of transport, road links, open space, walkways, cycle routes, sewer lines, watermains and other infrastructure services through proposed new areas of development and subdivisions.
    - Policy C6.1.7 – To ensure that opportunity is provided in the Suburban Zone for a wide range of residential allotment sizes without compromising the future development potential of the land.

Transport

- Objective C7.1 – to achieve a safe and efficient transportation network that enables the people of the city and the wider community to provide for their social and economic well-being without creating significant adverse environmental effects.
    - Policy C7.1.3 – To avoid, remedy or mitigate the adverse environmental effects of the transportation network on the environment.
    - Policy C7.1.8 – To actively encourage the provision of public transport and its use throughout the City, and between the City and adjacent locations.
    - Policy C7.1.9 – To ensure that all activities provide adequate on-site visitor parking.

The above objectives and policies seek to minimise the adverse effects of subdivision in the Suburban Zone. The proposal is broadly consistent with these objectives and policies and the overall strategy of the Plan and it is considered adverse environmental effects will be no more than minor.
The proposed subdivision does however result in a lot that can not be immediately built on prior to obtaining further earthworks consent, however it would not be appropriate to create a building platform on this site until a house design and curtilage area is decided on for this site.
All of these sites are large enough that all sites could provide visitor parking and onsite manoeuvring to exit in a forward direction.

The reasons to support this are discussed in the following assessment of environmental effects.

7.0 Resource Management Act

7.1 PART II

Section 5 of the RMA specifies the purpose of the Act as being:

"...to promote the sustainable management of natural and physical resources."

'Sustainable management' is thereafter defined as:
"In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while—
(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
(b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
(c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment."

Considering the proposed development against section 5 of the Act, it is assessed that the proposal achieves the purpose of the Act. The proposed development utilizes the applicant site to its full potential without compromising any natural or physical resources.

Sections 6, 7 and 8 identify 'matters of national importance', 'other matters' and Treaty of Waitangi' respectively.

Section 6 requires that all persons exercising functions and powers in achieving the purpose of the RMA shall 'recognise and provide for' the matters listed in (a) to (g). Of those matters, there is not considered to be any matters of national importance associated with this proposal.

Section 7 lists the matters that all persons exercising functions and powers under the Act shall have particular regard to. Of those matters, the following are considered to be relevant to the assessment of this proposal:

(aa) the ethic of stewardship:
The proposed subdivision has been designed in a way to ensure that the land is not overdeveloped.

(b) the efficient use and development of natural and physical resources:
It has been designed to not only make land available for residential purposes but also so that earthworks and clearing of vegetation is minimized.

(c) the maintenance and enhancement of amenity values:
The amenity value of the surrounding area will be maintained in that the proposed subdivision looks to create large sections so that it is in keeping with the properties immediately north and south of the site.

Section 8 of the Act requires that all persons exercising functions and powers shall take into account the principles of the Treaty of Waitangi.

There is nothing in this application which will have an impact on the Treaty.

Summary of Part II Assessment

Overall it is assessed that the proposed development is consistent with Part II of the Act. It achieves the purpose of the Act by providing for the sustainable management of natural and physical resources and the matters that the Council must have regard to in Sections 6, 7 and 8 are all addressed by the proposal.

7.2 SECTION 106 ASSESSMENT

Under Section 106 of the Resource Management Act a consent authority may refuse subdivision consent in certain circumstances

(1) A consent authority may refuse to grant a subdivision consent, or may grant a subdivision consent subject to conditions, if it considers that—

(a) the land in respect of which a consent is sought, or any structure on the land, is or is likely to be subject to material damage by erosion, falling debris, subsidence, slippage, or inundation from any source; or
(b) any subsequent use that is likely to be made of the land is likely to accelerate, worsen, or result in material damage to the land, other land, or structure by erosion, falling debris, subsidence, slippage, or inundation from any source; or
(c) sufficient provision has not been made for legal and physical access to each allotment to be created by the subdivision.

(2) Conditions under subsection (1) must be—
(a) for the purposes of avoiding, remedying, or mitigating the effects referred to in subsection (1); and
(b) of a type that could be imposed under section 108.

As this site has been identified as containing several ponding areas and overland flow paths it was important to assess where these areas were and where it might be appropriate to provide building areas. The assessment has been used to design the layout in such a way to avoid any areas that might be susceptible to ponding or flow paths creating erosion, inundation or slippage. This report has been included with this application.

The proposed activity is consistent with the principles of the RMA.

8.0 Other matters for consideration

8.1 NATIONAL ENVIRONMENT STANDARDS

Regulation 6 (Methods) of the NES for assessing and managing contaminants in soil to protect human health (2011)

Using information that is the most up-to-date about the area where the piece of land is located that the territorial authority

(a) holds on it's dangerous goods files, property files, or resource consent database or relevant registers; or
(b) has available to it from the regional council.

We have confirmed that there are no files held by Porirua City Council that would indicate that the subject site has been involved in any activity which might be listed on the HAIL. Furthermore, we have confirmed that this property is not listed on Greater Wellington Regional Council's SLUR.

8.2 RELEVANT NATIONAL POLICY STATEMENT PROVISIONS

There are no national policy statements that are considered applicable to the proposed development.

8.3 RELEVANT REGIONAL COUNCIL STATEMENT

There are no objectives or policies in the Greater Wellington Regional Council Statement that were not already considered when making an assessment against the Porirua City Council District Plan.

8.4 CONSULTATION

Porirua City Council – Stuart Smith and Phil Rhodes

After discussions with Porirua City Council officer Stuart Smith and Phil Rhodes, their only concern was the width of the right of way. While it can be concluded that safe traffic movement can be made on the right of way, the width of the right of way means that it does not meet the technical standards of part H of the District plan and therefore limited notification would be required at the very least if affected party consents were not obtained prior to an application being made.

Neighbours

On the advice of Porirua City Council (above) the applicant has discussed the proposal with the property owners of those users of the existing right of way. [insert details of neighbour consultation]

8.5 DEVELOPMENT CONTRIBUTIONS

This site is subject to Recreation and Civic Development contributions (part E of the District Plan) and development contributions (PCC Development Contributions Policy) for the creation of four additional lots. It is understood that these contributions will be payable before the issue of a Section 224 certificate.

9.0 Assessment of Effects on the Environment

Section 88 of the Resource Management Act 1991 requires that an application for resource consent include an assessment of any actual or potential effects that the activity may have on the environment, and ways in which any adverse effects may be mitigated.

In particular the matters in Schedule 4, Assessment of Effects on The Environment, of the Resource Management Act 1991 (RMA) which are relevant to consider for this proposal are:

- *(a) any effect on those in the neighbourhood and, where relevant, the wider community including any socio-economic and cultural effects;*
- *(b) any physical effect on the locality, including any landscape and visual effects;*
- *(c) Any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity;*
- *(d) Any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural, or other special value for present or future generations; and*
- *(e) Any discharge of contaminants into the environment, including any unreasonable emission of noise and options for the treatments and disposal of contaminants.*

The Plan seeks to protect and enhance the amenity and character of the residential area. The Resource Management Act defines amenity values as:

"those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes".

9.1 SUBDIVISION

The proposed subdivision seeks to create 5 fee simple lots.

In the creation of the subdivision possible relevant matters to consider are;

- Lot size
- Residential character and amenity values;
- Vehicle access and parking; and
- Servicing.

Lot Size

While there is not a minimum lot size to be respectful of in the suburban area of the Porirua District it was important to create large lots in this area to maintain a sense of space currently enjoyed by the

current owners of the site. Given the access width for the right of way to be created already makes the proposal discretionary it's unlikely that further development of this site would be feasible.

Residential character and amenity values

Building areas associated with this subdivision will not be visible from Exploration Way and so the views to the hilltops and vegetation will be maintained. Also, again because of the lot sizes the sense of separation will be maintained.

Vehicle access and parking

Vehicle access on the existing right of way to the site is feasible and wide enough to maintain safe traffic movement. The newly created right of way will be widened at key locations to also ensure that safe traffic movements can be achieved.

Servicing

The existing dwelling is serviced and the newly created lots can also be serviced in the same way with the exception of the stormwater disposal. A suitable stormwater disposal method for the newly created lots will comply with the Regional Standards for Water Services now used for the 3 waters in the Wellington Region.

The majority of the site works will be contained within the site, although there will be some trenching in the right of way to provide the new lots with underground power and fibre services and water services. The affected neighbours will be notified of when this work will happen and any disruption will be temporary and the effects no more than minor.

9.2 SUMMARY OF ASSESSMENT

The proposed subdivision is for the most part in line with the policies and objectives set out in the Porirua District plan with the exception of the width of the rights of way. Although a technical breach those potentially affected have been asked to provide their consent for the subdivision. Any effects created by the construction stage will be temporary and no more than minor.

10.0 Notification

It is noted that in accordance with s95A of the *RMA*, an application for any type of activity must, under normal circumstances, be publicly notified if:

- the consent authority decides that the activity will have or is likely to have adverse effects on the environment that are more than minor; or
- the applicant requests it; or
- a rule or national environmental standard requires public notification.

In evaluating the above, it is concluded that the assessment in this application demonstrates the overall effects of the breaches are no more than minor. On the advice of Porirua City Council, we have sought affected party consents, but only from the neighbour who will be directly affected by the construction of the proposed dwelling, that property and property owner/s being:

34 Exploration Way – John David Justice & Kirsten Alexandra Justice
36 Exploration Way – Ronald Michael Scaife & Theresa Ellen Savory
38 Exploration Way – Sandra Olivia Eileen Morgan & Tristan Ronald Morgan
40 Exploration Way – Anthony Leonard West, Carol Victoria Kelly & Thomas Aidan Kelly
42 Exploration Way – Diane Stuart & Robert Malcolm Stuart

We believe that we have demonstrated that no other parties are affected by the proposal. PCC may still publicly notify the application at its discretion, but we are aware of no circumstances or reasons that make that notification necessary.

11.0 Conclusion

The proposed subdivision is a discretionary activity. The assessment of the application against the relevant activity standards concludes that the effects of that rule which makes this application non-complying are no more than minor.

We have sought and obtained affected party consent those affected neighbours which share the existing right of way to ensure that they are aware of the subdivision and additional users and are consenting with a full understanding of the proposal and outcomes.

The proposed activity will have no adverse effects on the overall area or the environment which are more than minor.

Based on this assessment I recommend that the application be **granted** by the Porirua City Council under the District Plan.

ROBYNE LEACH
THE SURVEYING COMPANY (WELLINGTON) LTD

PROJECT MANAGER

Three Waters Ltd

44 Exploration Way, Preliminary Stormwater Assessment

DRAFT - June 2017

For

Linda Southwood of 44 Exploration Way

Three Waters Limited
www.3wl.co.nz

Revision History

Revision	Description	Author(s)	Authorised	Date
DRAFT0	For client comment	R Jack	R Jack	June 2017

Executive Summary

This report examines the general hydrology and ponding areas at 44 Exploration Way.

The scope of the investigation was to:

- Identify overland flow paths through the site
- Identify areas of potential ponding on the site due to storm flows
- Outline general hydrology

The design is limited to:

1. A desktop stormwater analysis using publicly available GIS information.

The investigation concluded that:

1. The increase in runoff due to the proposed development is likely to be less than 1% of the overall run-off through the site (including upstream catchment).
2. Expected ponding in the area has been estimated based on land forms and expected flow through the site. It is approximate only and building platforms should be a minimum of 750 mm above any adjacent ponding boundary.
3. Minor drainage paths have been identified. These can be built over, but the path should be managed around the building platform through either channels, pipes or elevated building platform.

Table of Contents

1 Introduction

This report examines the general hydrology and ponding areas at 44 Exploration Way.

The scope of the investigation was to:

- Identify overland flow paths through the site
- Identify areas of potential ponding on the site due to storm flows
- Outline general hydrology

The design is limited to:

2. A desktop stormwater analysis using publicly available GIS information.

1.1 Performance Objectives

The stormwater network is in a residential area. The Regional Standard for Water Services (Nov 2012), requires:

- The primary network (pipes and drains) to provide a general 10% AEP level of protection; and
- Secondary flowpaths to provide a 1% AEP level of protection.

The building code requires habitable dwellings to be clear of flooding in a 2% (1 in 50) year event.

2 Stormwater Analysis

2.1 Catchment and Networks

There is no publicly owned network within the subdivision.

There are three catchments which should be considered that contribute to flow through the subdivision. These are outlined in Figure 1.

The three catchments have natural channels which run through the site. They are mostly undeveloped with only a few dwellings within the boundaries.

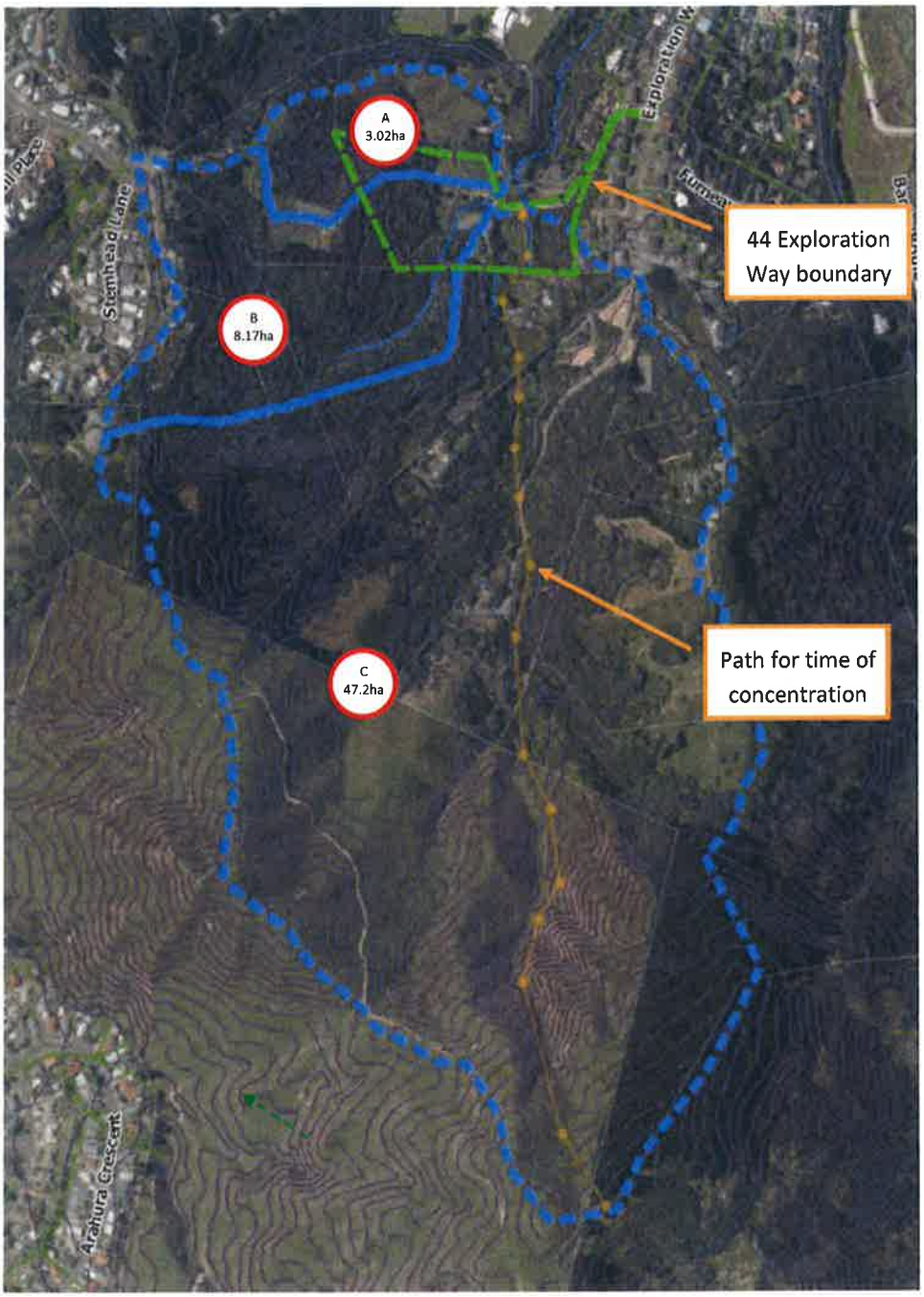

Figure 1 – Catchment boundaries

2.2 Hydrology

The flow from each catchment was calculated using the Rational Method as described in the Regional Standard for Water Services.

The detailed calculations can be found in Appendix A, and are summarised in Table 1 below

The estimated flows are approximate in nature due to the coarse nature of the assessment. A T_c of 35 mins was used.

It is assumed all development is within Catchment B which exhibits an increase in flow due to development of between 22 and 35 L/s for the 10% and 1% AEP events respectively. This is less than a 1% increase in the expected stormwater flows running through the site.

Table 1 – Summary of existing and proposed flows

	Pre-development (L/s)			Post-development (L/s)		
	10%	2%	1%	10%	2%	1%
Catchment A	138.9	196.5	228.2	138.9	196.5	228.2
Catchment B	375.7	531.5	617.3	397.2	561.8	652.6
Catchment C	2169.8	3069.1	3565.0	2169.8	3069.1	3565
Total	2684.4	3797.1	4410.5	2705.9	3827.4	4445.8

3 Likely ponding areas

Figure 2 outlines the general areas that would be expected to pond during peak rainfall events.

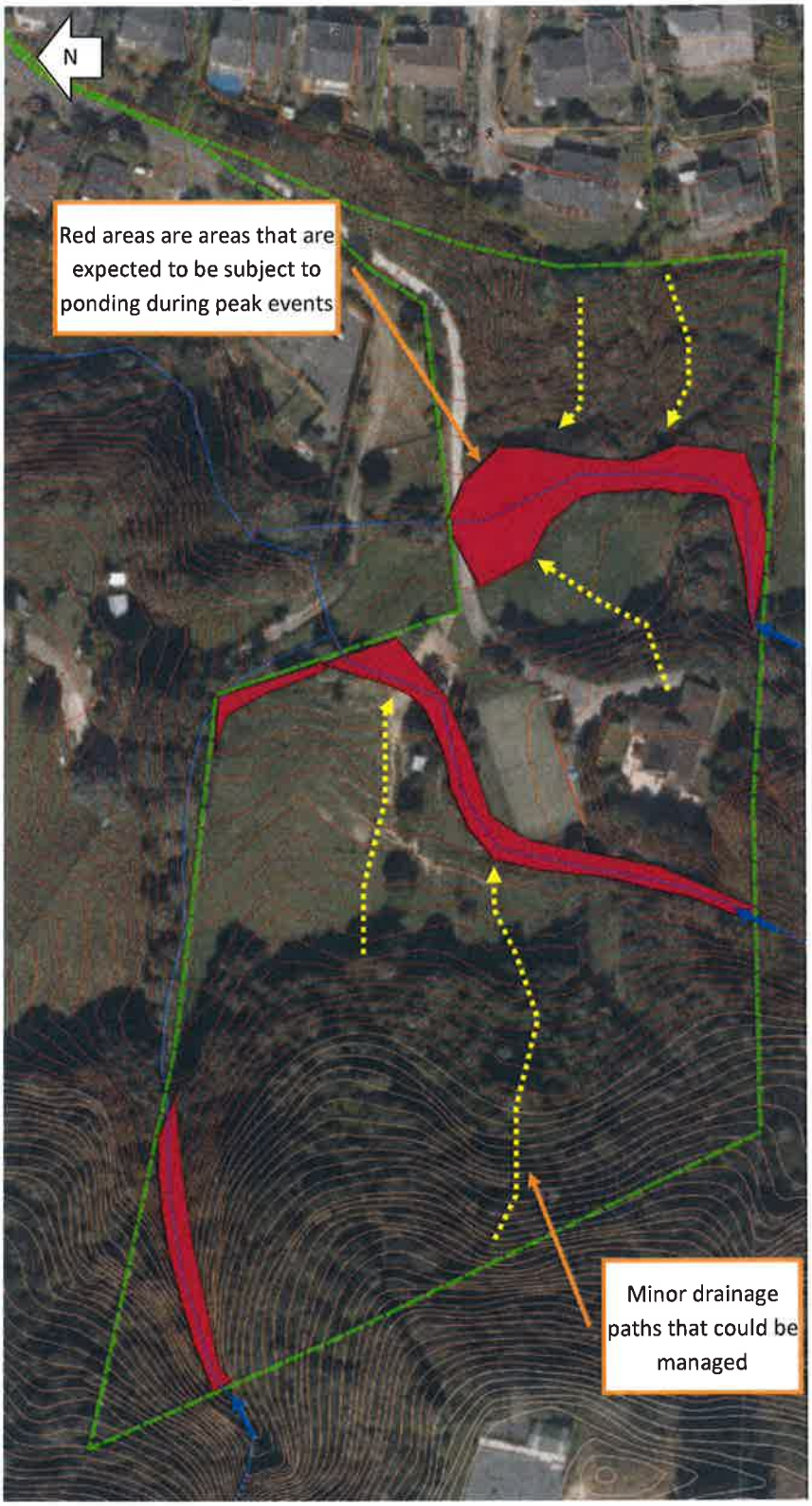

Figure 2 – Potential ponding areas and overland flow paths.

Figure 2 outlines two types of overland flow paths: ponding areas which should not be built on without significant infrastructure; and minor drainage paths which could be built over, but some local management of the path would be required to divert overland flow around building platforms. The local management might be in the form of channels or raised building platforms.

It should be noted that this assessment is a desktop assessment and should be taken into consideration along with other on-site evidence. Building floor levels should be at least 750 mm above any of the relevant ponding outline set here.

4 Conclusions

It is concluded that:

4. The increase in runoff due to the proposed development is likely to be less than 1% of the overall run-off through the site (including upstream catchment).
5. Expected ponding in the area has been estimated based on land forms and expected flow through the site. It is approximate only and building platforms should be a minimum of 750 mm above any adjacent ponding boundary.
6. Minor drainage paths have been identified. These can be built over, but the path should be managed around the building platform through either channels, pipes or elevated building platform.

Appendix A Hydrology calculations

Peak flow calcs
Rational Method

Project/Date	*170009 - 44 Exploration Way*	14/06/2017
By:	*Rob Jack*	

Use for small urban catchments (typically < 1km long)

Whole catchment
10% AEP (1 in 10 Year)

Level of service

	Ret Period	AEP	applies?	AEP
General Attenuation	10 yr	10%	y	10%
Dwelling floor	100 yr	5%	N	
Secondary arterial	20 yr	5%	N	
NZBC flow req.	50 yr	2%	n	
State highway flooded	100yr	1%	N	
Level of protection for study				***10%***

Time for concentration

$T_c = T_o + T_g + T_f$

T_o = overland flow

roughness	*n*	0.06		T_g = gutter flow		
Length of o'land flow (metres)	*L*	1130.0		Length of gutter (metres)	*L*	0.0001
Highest elev	*m*	215.0		Highest elev	*m*	5
Lowest elev	*m*	50.0		Lowest elev	*m*	4.9
Slope (integer %)	*S*	14.60 %		Slope (integer %)	*S*	100000.00
	T_o =	36.5 mins			T_g =	0.0

$T_e = T_o + T_g$ (minimum 5 mins)

T_e = 36.5

T_f = pipe flow

Length		1
Highest elev	*m*	1
Lowest elev	*m*	0
Slope (1 in ...)		1
Diameter	mm	750
Velocity	*m/s*	2 < from Fig 3 Clause E1 NZBC
	T_f =	0.0 mins

Time to Concentration T_c = ***36.5 mins (minimum 10 mins, or 20 mins for attenuation)***

Project/Date	*170009 - 44 Exploration Way*	14/06/2017
By:	*Rob Jack*	

Intensity

Duration =	35.0	mins	For attenuation?	Yes
Event =	10%	AEP		
Intensity =	34.0	mm/hr (from RSWS chart below)		
Allowance for climate change =	16%	0% if already included, otherwise 16%		
Geography factor =	1.20	where provided for by council, otherwise 1		
Design rainfall intensity =	47.3	mm/hr		

Porirua City (rainfall intensity in mm/hour)

NZTM Coordinates 1754392E 5444631N (Cobham Court)

		Duration									
ARI (y)	AEP	10m	20m	30m	60m	2h	6h	12h	24h	48h	72h
1.58	63%	39.0	27.3	22.2	15.5	10.5	5.6	3.8	2.5	1.5	1.1
2	50%	42.6	29.7	24.0	16.8	11.3	6.0	4.0	2.7	1.6	1.2
5	20%	54.0	37.5	30.6	21.3	14.2	7.5	5.0	3.3	1.9	1.4
10	10%	63.0	44.1	35.8	24.9	16.6	8.7	5.8	3.8	2.2	1.6
20	5%	73.8	51.3	41.6	29.1	19.3	10.0	6.6	4.4	2.6	1.9
30	3.3%	80.4	56.1	45.4	31.7	21.0	10.9	7.2	4.7	2.8	2.0
40	2.5%	85.2	59.7	48.4	33.7	22.3	11.5	7.6	5.0	2.9	2.1
50	2%	89.4	62.4	50.6	35.4	23.3	12.0	7.9	5.2	3.0	2.2
60	1.7%	93.0	65.1	52.6	36.8	24.2	12.5	8.2	5.4	3.1	2.3
80	1.2%	99.0	69.0	56.0	39.1	25.7	13.2	8.7	5.7	3.3	2.4
100	1%	103.8	72.6	58.8	41.0	26.9	13.8	9.0	5.9	3.4	2.5

Peak flow

PRE-Development Catchment Characteristics

	A	B	C				
Catchment Area A (ha)	3.0200	8.1700	47.1800			**58.3700**	ha
Coeffcient (C)	0.35	0.35	0.35				
Flow (CAi/360 = L/s)	138.89	375.74	2169.84	0.00	0.00	**2684.482**	L/s

POST-Development Catchment Characteristics

	A	B	C	0	0	Total	
Catchment Area (ha)	3.0200	8.1700	47.1800			**58.3700**	ha
Coeffcient (C)	0.35	0.37	0.35				
Flow (CAi/360 = L/s)	138.89	397.22	2169.84	0.00	0.00	**2705.953**	L/s

Peak flow calcs
Rational Method

Project/Date	*170009 - 44 Exploration Way*	14/06/2017
By:	*Rob Jack*	

Use for small urban catchments (typically < 1km long)

Whole catchment
2% AEP (1 in 50 Year)

Level of service

	Ret Period	AEP	applies?	AEP
General Attenuation	10 yr	10%	n	
Dwelling floor	100 yr	5%	N	
Secondary arterial	20 yr	5%	N	
NZBC flow req.	50 yr	2%	y	2%
State highway flooded	100yr	1%	N	
Level of protection for study				***2%***

Time for concentration

$T_c = T_o + T_g + T_f$

T_o = overland flow

roughness	*n*	0.06		T_g = gutter flow		
Length of o'land flow (metres)	*L*	1130.0		Length of gutter (metres)	*L*	0.0001
Highest elev	*m*	215.0		Highest elev	*m*	5
Lowest elev	*m*	50.0		Lowest elev	*m*	4.9
Slope (integer %)	*S*	14.60 %		Slope (integer %)	*S*	100000.00
	T_o =	36.5 mins			T_g =	0.0

$T_e = T_o + T_g$ (minimum 5 mins)

T_e = 36.5

T_f = pipe flow

Length		1	
Highest elev	*m*	1	
Lowest elev	*m*	0	
Slope (1 in ...)		1	
Diameter	mm	750	
Velocity	*m/s*	2	< from Fig 3 Clause E1 NZBC
	T_f =	0.0 mins	

Time to Concentration T_c = ***36.5 mins (minimum 10 mins, or 20 mins for attenuation)***

Project/Date	*170009 - 44 Exploration Way*	14/06/2017
By:	*Rob Jack*	

Intensity

Duration =	35.0	mins	For attenuation?	Yes
Event =	2%	AEP		
Intensity =	48.1	mm/hr (from RSWS chart below)		
Allowance for climate change =	16%	0% if already included, otherwise 16%		
Geography factor =	1.20	where provided for by council, otherwise 1		
Design rainfall intensity =	66.9	mm/hr		

Porirua City (rainfall intensity in mm/hour)

NZTM Coordinates 1754392E 5444631N (Cobham Court)

		Duration									
ARI (y)	AEP	10m	20m	30m	60m	2h	6h	12h	24h	48h	72h
1.58	63%	39.0	27.3	22.2	15.5	10.5	5.6	3.8	2.5	1.5	1.1
2	50%	42.6	29.7	24.0	16.8	11.3	6.0	4.0	2.7	1.6	1.2
5	20%	54.0	37.5	30.6	21.3	14.2	7.5	5.0	3.3	1.9	1.4
10	10%	63.0	44.1	35.8	24.9	16.6	8.7	5.8	3.8	2.2	1.6
20	5%	73.8	51.3	41.6	29.1	19.3	10.0	6.6	4.4	2.6	1.9
30	3.3%	80.4	56.1	45.4	31.7	21.0	10.9	7.2	4.7	2.8	2.0
40	2.5%	85.2	59.7	48.4	33.7	22.3	11.5	7.6	5.0	2.9	2.1
50	2%	89.4	62.4	50.6	35.4	23.3	12.0	7.9	5.2	3.0	2.2
60	1.7%	93.0	65.1	52.6	36.8	24.2	12.5	8.2	5.4	3.1	2.3
80	1.2%	99.0	69.0	56.0	39.1	25.7	13.2	8.7	5.7	3.3	2.4
100	1%	103.8	72.6	58.8	41.0	26.9	13.8	9.0	5.9	3.4	2.5

Peak flow

PRE-Development Catchment Characteristics

	A	B	C				
Catchment Area A (ha)	3.0200	8.1700	47.1800			**58.3700**	ha
Coeffcient (C)	0.35	0.35	0.35				
Flow (CAi/360 = L/s)	196.45	531.46	3069.07	0.00	0.00	**3796.981**	L/s

POST-Development Catchment Characteristics

	A	B	C	0	0	Total	
Catchment Area (ha)	3.0200	8.1700	47.1800			**58.3700**	ha
Coeffcient (C)	0.35	0.37	0.35				
Flow (CAi/360 = L/s)	196.45	561.83	3069.07	0.00	0.00	**3827.351**	L/s

Peak flow calcs
Rational Method

Project/Date	*170009 - 44 Exploration Way*	14/06/2017
By:	*Rob Jack*	

Use for small urban catchments (typically < 1km long)

Whole catchment
1% AEP (1 in 100 Year)

Level of service

	Ret Period	AEP	applies?	AEP
General Attenuation	10 yr	10%	n	
Dwelling floor	100 yr	5%	N	
Secondary arterial	20 yr	5%	N	
NZBC flow req.	50 yr	2%	n	
State highway flooded	100yr	1%	y	1%
Level of protection for study				***1%***

Time for concentration

$T_c = T_o + T_g + T_f$

T_o = overland flow

roughness	*n*	0.06		T_g = gutter flow		
Length of o'land flow (metres)	*L*	1130.0		Length of gutter (metres)	*L*	0.0001
Highest elev	*m*	215.0		Highest elev	*m*	5
Lowest elev	*m*	50.0		Lowest elev	*m*	4.9
Slope (integer %)	*S*	14.60 %		Slope (integer %)	*S*	100000.00
	T_o =	36.5 mins			T_g =	0.0

$T_e = T_o + T_g$ (minimum 5 mins)

T_e = 36.5

T_f = pipe flow

Length		1
Highest elev	*m*	1
Lowest elev	*m*	0
Slope (1 in ...)		1
Diameter	mm	750
Velocity	*m/s*	2 < from Fig 3 Clause E1 NZBC
	T_f =	0.0 mins

Time to Concentration T_c = ***36.5 mins (minimum 10 mins, or 20 mins for attenuation)***

Project/Date	*170009 - 44 Exploration Way*	14/06/2017
By:	*Rob Jack*	

Intensity

Duration =	35.0	mins	For attenuation?	Yes
Event =	1%	AEP		
Intensity =	55.8	mm/hr (from RSWS chart below)		
Allowance for climate change =	16%	0% if already included, otherwise 16%		
Geography factor =	1.20	where provided for by council, otherwise 1		
Design rainfall intensity =	77.7	mm/hr		

Porirua City (rainfall intensity in mm/hour)

NZTM Coordinates 1754392E 5444631N (Cobham Court)

		Duration									
ARI (y)	AEP	10m	20m	30m	60m	2h	6h	12h	24h	48h	72h
1.58	63%	39.0	27.3	22.2	15.5	10.5	5.6	3.8	2.5	1.5	1.1
2	50%	42.6	29.7	24.0	16.8	11.3	6.0	4.0	2.7	1.6	1.2
5	20%	54.0	37.5	30.6	21.3	14.2	7.5	5.0	3.3	1.9	1.4
10	10%	63.0	44.1	35.8	24.9	16.6	8.7	5.8	3.8	2.2	1.6
20	5%	73.8	51.3	41.6	29.1	19.3	10.0	6.6	4.4	2.6	1.9
30	3.3%	80.4	56.1	45.4	31.7	21.0	10.9	7.2	4.7	2.8	2.0
40	2.5%	85.2	59.7	48.4	33.7	22.3	11.5	7.6	5.0	2.9	2.1
50	2%	89.4	62.4	50.6	35.4	23.3	12.0	7.9	5.2	3.0	2.2
60	1.7%	93.0	65.1	52.6	36.8	24.2	12.5	8.2	5.4	3.1	2.3
80	1.2%	99.0	69.0	56.0	39.1	25.7	13.2	8.7	5.7	3.3	2.4
100	1%	103.8	72.6	58.8	41.0	26.9	13.8	9.0	5.9	3.4	2.5

Peak flow

PRE-Development Catchment Characteristics

	A	B	C				
Catchment Area A (ha)	3.0200	8.1700	47.1800			**58.3700**	ha
Coeffcient (C)	0.35	0.35	0.35				
Flow (CAi/360 = L/s)	228.19	617.33	3564.97	0.00	0.00	**4410.502**	L/s

POST-Development Catchment Characteristics

	A	B	C	0	0	Total	
Catchment Area (ha)	3.0200	8.1700	47.1800			**58.3700**	ha
Coeffcient (C)	0.35	0.37	0.35				
Flow (CAi/360 = L/s)	228.19	652.61	3564.97	0.00	0.00	**4445.778**	L/s