



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.

Have you met with a council Resource	Consent representative to discuss this application prior
to lodgement? Yes No	
2. Type of Consent being applied for	
(more than one circle can be ticked):	
√ Land Use	Discharge
Fast Track Land Use*	Change of Consent Notice (s.221(3))
Subdivision	Extension of time (s.125)
Consent under National Environm (e.g. Assessing and Managing Contar	
Other (please specify)	
* The fast track is for simple land use cons	ents and is restricted to consents with a controlled activity st
*The fast track is for simple land use cons	ents and is restricted to consents with a controlled activity st
*The fast track is for simple land use cons	ents and is restricted to consents with a controlled activity s
3. Would you like to opt out of the F	
	ents and is restricted to consents with a controlled activity st
3. Would you like to opt out of the F	
3. Would you like to opt out of the F Ves No	
3. Would you like to opt out of the F	Fast Track Process?
3. Would you like to opt out of the F Yes No 4. Consultation Have you consulted with lwi/Hapū?	Fast Track Process?
3. Would you like to opt out of the F Yes No 4. Consultation Have you consulted with lwi/Hapū? If yes, which groups have	Fast Track Process?
3. Would you like to opt out of the F Yes No 4. Consultation	Fast Track Process?
3. Would you like to opt out of the F Yes No 4. Consultation Have you consulted with lwi/Hapū? If yes, which groups have you consulted with? Who else have you consulted with?	Fast Track Process?

Name/s:	A and S Hopkins
Email:	
Phone number:	
Postal address: (or alternative method of service under section 352 of the act)	
5. Address for Corresp	ondence
Name and address for s	ervice and correspondence (if using an Agent write their details here)
Name/s:	Bay of Island Planning
Email:	
Phone number:	
Postal address: (or alternative method of	
service under section 352 of the act)	
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
service under section 352 of the act) * All correspondence will alternative means of com	be sent by email in the first instance. Please advise us if you would prefer an
service under section 352 of the act) * All correspondence will alternative means of com 7. Details of Property (Name and Address of the	be sent by email in the first instance. Please advise us if you would prefer an munication.
service under section 352 of the act) All correspondence will alternative means of com Details of Property (Name and Address of the where there are multiple)	be sent by email in the first instance. Please advise us if you would prefer an munication. Dwner/s and Occupier/s e Owner/Occupiers of the land to which this application relates
service under section 352 of the act) All correspondence will alternative means of com T. Details of Property (Name and Address of the where there are multiple)	be sent by email in the first instance. Please advise us if you would prefer an munication. Dwner/s and Occupier/s e Owner/Occupiers of the land to which this application relates le owners or occupiers please list on a separate sheet if required)

Location and/or prope					
Name/s:	A and S Hopkins				
Site Address/	27 Blue Penguin Drive				
Location:	Kerikeri				
	- Donton de				
	Postcode				
Legal Description:	Lot 17 DP 494309 Val Number:				
Certificate of title:	723034				
	ch a copy of your Certificate of Title to ncumbrances (search copy must be le				
ite visit requirement	ts:				
there a locked gate	or security system restricting a	ccess by Council	staff? Yes No		
there a dog on the	property? Yes No				
ealtri and safety, care	etaker's details. This is importai	nt to avoid a was	sted trip and having to re-		
errange a second visit	site visit	nt to avoid a was	sted trip and having to re-		
errange a second visit	site visit	nt to avoid a was	sted trip and having to re-		
Call 021 726040 prior to so Description of the Please enter a brief de	site visit	Please refer to 0	Chapter 4 of the District Plan,		
Call 021 726040 prior to some of the Please enter a brief de	e Proposal: escription of the proposal here.	Please refer to 0	Chapter 4 of the District Plan,		
Call 021 726040 prior to so the Please enter a brief de and Guidance Notes, for A 81m2 shed	e Proposal: escription of the proposal here.	Please refer to on requirements.	Chapter 4 of the District Plan,		

(more than one circle can be ticked):
Building Consent EBC=2025#476/0if known)
Regional Council Consent (ref # if known) Ref # here (if known)
National Environmental Standard consent Consent here (if known)
Other (please specify) Specify 'other' here
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 new 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 knov
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 Vo Don't know
Subdividing land Disturbing, removing or sampling soil
Changing the use of a piece of land Removing or replacing a fuel storage systems.
13. Assessment of Environmental Effects:
13. Assessment of Environmental Effects: Every application for resource consent must be accompanied by an Assessment of Environmental Effect (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 a Written Approvals from adjoining property owners, or affected parties.
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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)

Email:

Phone number:

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

A & S Hopkins

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)

Signature:
(signature of bill payer

MANDATORY

Date /- 4-23

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. 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 supp	lied with this application is true and complete to the	e best of my knowledge.
Name: (please write in full)	Andrew McPhee	
Signature:		Date 13/06/2025
	A signature is not required if the application is made by electronic means	
Checklist (please tick if i	nformation is provided)	
Payment (cheques paya	able to Far North District Council)	
A current Certificate of	Title (Search Copy not more than 6 months old)	
O Details of your consulta	ation with lwi and hapū	
Copies of any listed enc	umbrances, easements and/or consent notices rele	evant to the application
Applicant / Agent / Prop	perty Owner / Bill Payer details provided	
Location of property ar	nd description of proposal	
Assessment of Environi	mental Effects	
Written Approvals / cor	respondence from consulted parties	
Reports from technical	experts (if required)	
Copies of other relevan	t consents associated with this application	
Location and Site plans	(land use) AND/OR	
Location and Scheme P	lan (subdivision)	
Elevations / Floor plans		
Topographical / contou	r plans	
with an application. Please	f the District Plan for details of the information the also refer to the RC Checklist available on the Couhints as to what information needs to be shown or	ıncil's website.



BAY OF ISLANDS PLANNING (2022) LIMITED

Kerikeri House Suite 3, 88 Kerikeri Road Kerikeri

Email - office@bayplan.co.nz Website - www.bayplan.co.nz

13 June 2025

Dear Team Leaders

Re: Application for Resource Consent (Land use) – Proposed Shed at 27 Blue Penguin Drive, Kerikeri

Please find a land use consent application to construct a shed on our client's property. The proposed development is on a site which is zoned Coastal Living within the Operative District Plan (**ODP**). The site is zoned Rural Lifestyle under the Proposed District Plan (**PDP**). The application requires resource consent relating to the following matters:

- Visual Amenity.
- Stormwater Management.

Overall, the application is a **Discretionary Activity.**

The application is supported by the following documents:

- Assessment of Environmental Effects [Bay of Islands Planning Ltd]
- Appendix A Record of Title;
- Appendix B Site Plan [Total Span BOI & Hokianga]
- Appendix C Stormwater Mitigation Report [Wilton Joubert]

Should you require any further information please do not hesitate to contact me.

Andrew McPhee Consultant Planner



INTRODUCTION

The applicant seeks resource consent to construct a shed on their property at 27 Blue Penguin Drive, Kerikeri. The site is legally described as Lot 17 DP 494309, which comprises a total land area of 8,349m². A copy of the Record of Title is attached at **Appendix A**.

The application is supported by a Site Plan produced by Totalspan, attached at **Appendix B** and a Stormwater Mitigation Report prepared by Wilton Joubert in **Appendix C**.

This Assessment of Effects on the Environment (AEE) is prepared in accordance with Schedule 4 of the Resource Management Act (RMA). The AEE concludes that any potential adverse effects on the environment will be less than minor.

SITE DESCRIPTION



Figure 1 - Site (Source: Prover)





Figure 2 – Site Aerial (Source: PDP Maps)

DESCRIPTION OF THE SITE AND SURROUNDS

The site currently accommodates a dwelling and a garage with a concrete driveway accessed from Blue Penguin Drive. The building platform for the shed is north of the existing garage and included within the building envelope identified for the site. The northern portion of the site contains extensive vegetation.

The topography of the site is generally flat in the location of the dwelling and then falls to the north.

There is extensive screening in the form of vegetation on the western boundary of the site, along with internal vegetation west of the garage.



The property is surrounded by the Coastal Living zone on all boundaries. Despite the Coastal Living zoning, the site has limited influence from the Coastal Environment.



Figure 3 - Zoning (Source: Far North Maps)

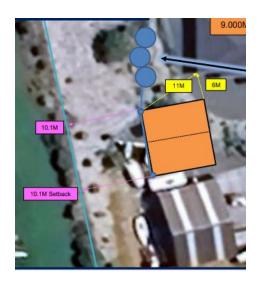
RECORD OF TITLE (INSTRUMENTS)

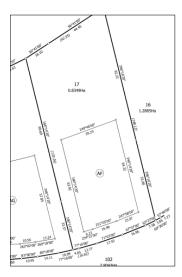
The site Record of Title is attached at **Appendix A**. A consent notice is registered on the title CN10388614.2. The following matters are relevant:

 All buildings including water tanks and ancillary buildings shall be located within the approved building envelope as detailed within the survey plan.

The proposed shed will be located between the existing garage and the dwelling. This area is contained within the approved building envelope (Refer Figures 4 and 5 below).







Figures 4 and 5 – Development relative to approved building envelope for lot 17

 In conjunction with the construction of any building the applicant shall submit for Council approval as part of the building consent application a report prepared by a suitably qualified engineer for the design of stormwater management system in accordance with the recommendations relevant to that particular lot contained in the approved addendum to the subdivision suitability report prepared by Cook Costello and dated 29 October 2014.

While not required for resource consent, a Stormwater Mitigation Report has been prepared by Wilton Joubert (**Appendix C**), with the proposed methodology achieving 1% AEP across the existing / proposed impermeable surfaces over the permitted activity threshold.

DESCRIPTION OF THE PROPOSAL

The proposal is for an 81m^2 shed. The shed is $9\text{m} \times 9\text{m}$ and contains 3 bays. The proposed height of the shed is ~4.8m. Earthworks are required to scrape topsoil only and will be less than 20m^3 . Please refer to **Appendix B**.



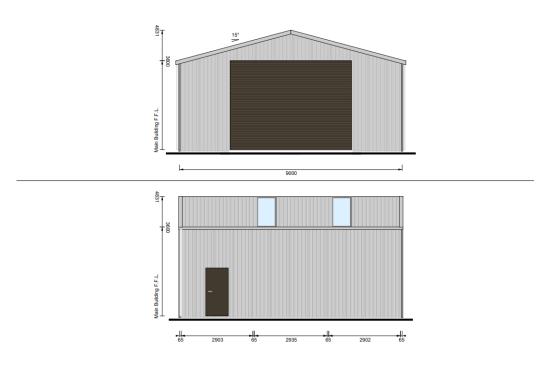


Figure 6 - Proposed shed

REASONS FOR CONSENT

The ODP zones the site **Coastal Living**. The site is Rural Lifestyle under the PDP and is not identified as being within the Coastal Environment. The site is not implicated by any resource features. Soils are Class 5.

Table 1 below provides an assessment against the applicable ODP performance standards (rules) and identifies the reasons for resource consent.

Table 1 - Relevant Rules ODP

Rule #		Assessment
Rule 10.7.5.1.1	Permitted Activity:	The proposed shed is 81m² and
Visual Amenity	(a) any new building(s), provided that	is located within an approved
	the gross floor area of any new	building envelope.



	building(s) permitted under this	
	rule does not exceed 50m².	Controlled Activity
Rule 10.7.5.2.2	Controlled Activity:	
Visual Amenity	Any new building(s) or	
	alteration/additions to an existing	
	building that does not meet the	
	permitted activity standards in Rule	
	10.7.5.1.1 are a controlled activity	
	where the new building or building	
	alteration/addition is located entirely	
	within a building envelope that has	
	been approved under a resource	
	consent	
Rule 10.7.5.1.2	Permitted Activity:	The proposal is for a shed that
Residential	Residential development shall be	will not be used for residential
Intensity	limited to one unit per 4ha of land. In	purposes.
	all cases the land shall be developed	
	in such a way that each unit shall	Complies
	have at least 3,000m ² for its exclusive	
	use surrounding the unit plus a	
	minimum of 3.7ha elsewhere on the	
	property.	
Rule 10.7.5.1.3	Not applicable	Proposal is associated with the
Scale of		existing residential activity on
Activities		site.
Rule 10.7.5.1.4	Permitted Standard:	Proposed maximum height of
Building Height	Maximum Height = 8m	the shed = ~4.8m



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		Complies	
Rule 10.7.5.1.5	Permitted Standard:	Proposed shed does not	
Sunlight	No part of any building to project	breach the sunlight recession	
	beyond 45-degree recession plan as	plane from any of the property	
	measured inwards from any point 2m	boundaries.	
	vertically above the ground on any site		
	boundary	Complies	
Rule 10.7.5.1.6	Permitted Standard:	Proposed total impermeable	
Stormwater	Maximum proportion of the gross site	surfaces coverage 1,303m²	
Management	area covered by buildings is 10% or	[15.6%].	
	600m² whichever is the lesser.		
		Discretionary Activity	
Rule 10.7.5.3.8	Restricted Discretionary Standard:		
	The maximum proportion or amount		
	of the gross site area covered by		
	buildings and other impermeable		
	surfaces shall be 15% or 1,500m²,		
	whichever is the lesser.		
Rule 10.7.5.1.7		The shed is proposed to be	
Setback from	Permitted Standard:	10.1 metres from the western	
Boundaries	Minimum setback is 10m from all	boundary. The site is larger	
	boundaries except on any site less	than 5,000m².	
	than 5,000m² the setback if 3m.		
		Complies	
Rule 10.7.5.1.8		Proposal is associated with the	
Screening for		existing residential activity on	
Neighbours Non-	Not applicable	site.	
Residential			
Hoolachtiat			



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		No parking, traffic or access	
Del. 40.7.5.4.0		arrangements change as a	
Rule 10.7.5.1.9		result of the proposal.	
Transportation			
		Complies	
Rule 10.7.5.1.10		Proposal is associated with the	
Hours of		existing residential activity on	
Operation Non-		site.	
residential			
Activities		Complies	
Rule 10.7.5.1.11			
Keeping of	Not applicable	Not applicable	
Animals			
		Proposal is associated with the	
Rule 10.7.5.1.12		existing residential activity on	
Noise		site.	
NOISE			
		Complies	
Rule 10.7.5.1.13			
Helicopter	Not applicable	Not applicable	
Landing			
12.1 Landscapes			
& Natural	Not applicable	Not applicable	
Features			
		No vegetation clearance	
12.2 Indigenous		required. Site is located within	
Flora and Fauna		a kiwi present area and a	
		consent notice applies.	



		Complies
	Permitted Standard:	200mm site scrape of topsoil
	(a) it does not exceed 300m³ in any 12	only, and less than 2m³. All soil
12.3 Soils &	month period per site; and	to remain on site.
Minerals	(b) it does not involve a cut or filled	
Millerats	face exceeding 1.5m in height i.e. the	Complies
	maximum permitted cut and fill height	
	may be 3m.	
12.4 Natural		No hazards present.
Hazards		
		Complies
12.5 Heritage	Not applicable	Not applicable
		The site is setback sufficiently
12.7 Setbacks		from waterways.
from Waterways		
		Complies

The application is a **Discretionary Activity** under the ODP.

Table 2 - Relevant Rules PDP

Proposed District Plan				
Matter	Rule/Std Ref	Relevance	Compliance	Evidence
Hazardous	Rule HS-R2 has	N/A		Not relevant as no
Substances	immediate legal			such substances
Majority of rules	effect but only for			proposed.
relates to	a new significant			
development within	hazardous facility			
a site that has	located within a			
heritage or cultural	scheduled site			
items scheduled	and area of			
and mapped	significance to			
however Rule HS-R6	Māori, significant			
applies to any	natural area or a			
development within	scheduled			



			T	
an SNA – which is	heritage resource			
not mapped				
	HS-R5, HS-R6,			
	HS-R9			
Heritage Area	All rules have	N/A		Not indicated on
Overlays	immediate legal			Far North
(Property specific)	effect (HA-R1 to			Proposed District
This chapter applies	HA-R14)			Plan
only to properties	All standards			
within identified	have immediate			
heritage area	legal effect (HA-			
overlays (e.g. in the	S1 to HA-S3)			
operative plan they				
are called precincts				
for example)				
Historic Heritage	All rules have	N/A		Not indicated on
(Property specific	immediate legal			Far North
and applies to	effect (HH-R1 to			Proposed District
adjoining sites (if	HH-R10)			Plan
the boundary is	Schedule 2 has			
within 20m of an	immediate legal			
identified heritage	effect			
item)).				
Rule HH-R5				
Earthworks within				
20m of a scheduled				
heritage resource.				
Heritage resources				
are shown as a				
historic item on the				
maps)				
This chapter applies				
to scheduled				
heritage resources –				
which are called				
heritage items in the				
map legend				
Notable Trees	All rules have	N/A		Not indicated on
(Property specific)	immediate legal			Far North
Applied when a	effect (NT-R1 to			Proposed District
property is showing	NT-R9)			Plan
a scheduled notable	All standards			
tree in the map	have legal effect			
	(NT-S1 to NT-S2)			



	Schedule 1 has			
	immediate legal			
	effect			
Sites and Areas of	All rules have	N/A		Not indicated on
Significance to	immediate legal			Far North
Māori	effect (SASM-R1			Proposed District
(Property specific)	to SASM-R7)			Plan
Applied when a	Schedule 3 has			
property is showing	immediate legal			
a site / area of	effect			
significance to				
Maori in the map or				
within the Te				
Oneroa-a Tohe				
Beach Management				
Area (in the				
operative plan they				
are called site of				
cultural significance				
to Maori)				
Ecosystems and	All rules have	N/A		Not indicated on
Indigenous	immediate legal			Far North
Biodiversity	effect (IB-R1 to			Proposed District
SNA are not	IB-R5)			Plan. No
mapped – will need	,			vegetation
to determine if				clearance
indigenous				proposed.
vegetation on the				
site for example				
Activities on the	All rules have	N/A		Not indicated on
Surface of Water	immediate legal			Far North
	effect (ASW-R1 to			Proposed District
	ASW-R4)			Plan
Earthworks	The following	Yes	Complies	Proposed
all earthworks (refer	rules have			earthworks will be
to new definition)	immediate legal			in accordance
need to comply with	effect:			with the relevant
this	EW-R12, EW-R13			standards
	The following			including GD-05
	standards have			and will have an
	immediate legal			ADP applied.
	effect:			
	EW-S3, EW-S5			
Signs	The following	N/A		Not indicated on



(Duanautu	mula a la acce		Can Namble
(Property specific)	rules have		Far North
as rules only relate	immediate legal		Proposed District
to situations where	effect:		Plan
a sign is on a	SIGN-R9, SIGN-		
scheduled heritage	R10		
resource (heritage	All standards		
item), or within the	have immediate		
Kororareka Russell	legal effect but		
or Kerikeri Heritage	only for signs on		
Areas	or attached to a		
	scheduled		
	heritage resource		
	or heritage area		
Orongo Bay Zone	Rule OBZ-R14	N/A	Not indicated on
(Property specific as	has partial		Far North
rule relates to a	immediate legal		Proposed District
zone only)	effect because		Plan
	RD-1(5) relates to		
	water		

No consents are required under the PDP.

Having considered the proposal against the Proposed Regional Plan, no regional council consents are required.

STATUTORY CONSIDERATIONS

Section 104B governs the determination of applications for Discretionary Activities.

104B Determination of applications for discretionary or non-complying activities

After considering an application for a resource consent for a discretionary activity or non-complying activity, a consent authority—

- (a) may grant or refuse the application; and
- (b) if it grants the application, may impose conditions under section 108.

With respect to Discretionary activities, a consent authority may grant or refuse the application, and may impose conditions under section 108 of the RMA.

Section 104 of the RMA sets out matters to be considered when assessing an application for a



resource consent,

104 Consideration of applications

- When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2 and section 77M, have regard to—
 - (a) any actual and potential effects on the environment of allowing the activity; and
 - (ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity; and
 - (b) any relevant provisions of—
 - (i) a national environmental standard:
 - (ii) other regulations:
 - (iii) a national policy statement:
 - (iv) a New Zealand coastal policy statement:
 - (v) a regional policy statement or proposed regional policy statement:
 - (vi) a plan or proposed plan; and
 - (c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.

For this application, the following relevant RMA plans, policy statements and national environmental standard have been considered:

- National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, 2011
- The Northland Regional Policy Statement
- Operative Far North District Plan 2009
- Proposed Far North District Plan 2022

As part of this application and Assessment of Effects, the relevant matters relevant to visual amenity and stormwater management breaches in the ODP have been considered.

The following assessment addresses all of the relevant considerations under s104 of the RMA.

Assessment of Effects on The Environment (AEE)

The RMA (section 3) meaning of effect includes:



3 Meaning of effect

In this Act, unless the context otherwise requires, the term effect includes—

- (a) any positive or adverse effect; and
- (b) any temporary or permanent effect; and
- (c) any past, present, or future effect; and
- (d) any cumulative effect which arises over time or in combination with other effects—regardless of the scale, intensity, duration, or frequency of the effect, and also includes—
- (e) any potential effect of high probability; and
- (f) any potential effect of low probability which has a high potential impact.

Section 104(2) of the RMA states that:

"when forming an opinion for the purposes of subsection (1)(a), a consent authority may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect."

This is referred to as the "permitted baseline", which is based on the permitted performance standards and development controls that form part of a district plan. For an effects-based plan such as the Far North District Plan where specified activities are not regulated, determining the permitted baseline is a useful tool for determining a threshold of effects that are enabled by the zone. In this instance, an application for a building over 50m^2 in size requires resource consent. Further, the maximum quantum of impermeable surface permitted on the site is 10% of the site or 600m^2 .

The focus of this AEE is on addressing the effects of the proposed shed on visual amenity and stormwater management.

Visual Amenity

(i) the size, bulk, and height of the building or utility services in relation to ridgelines and natural features;



It is considered that the visual amenity considerations are limited in this scenario. The site is not within the Coastal Environment as mapped by the Regional Policy Statement for Northland (**RPS**). The site has no influence on, or from, the coastal environment. The site cannot visually see the coastline and vice versa. Therefore, the site is rural lifestyle in character.

There are no natural features or ridgelines that influence or are affected by the proposed shed.

The location of the shed is between the existing garage and the dwelling. From the street the shed will read like an extension to the existing garage.

Given the sites disassociation with the coastal environment, the natural character provisions and assessment criteria below are largely irrelevant. A shed is not out of place in the rural environment.

(ii) the colour and reflectivity of the building;

The shed colour is Karaka Maxam, however this is not considered relevant given the disassociation with the coastal environment (as above).

(iii) the extent to which planting can mitigate visual effects;

The western boundary is well vegetated and there is internal planting between the existing garage and the house, however this is not considered relevant given the disassociation with the coastal environment (as above).

(iv) any earthworks and/or vegetation clearance associated with the building:

Minimal earthworks are required, being limited to scrapping of topsoil for the building platform.

(v) the location and design of associated vehicle access, manoeuvring and parking areas:



No additional vehicle access is proposed for the shed, access can be gained from the existing driveway.

(vi) the extent to which the building will be visually obtrusive;

The location of the shed is between the existing garage and the dwelling. From the street the shed will read like as extension to the existing garage.

(vii) the cumulative visual effects of all the buildings on the site;

Built development is grouped on the subject site. The existing garage will be ~3 metres of the proposed shed, and the dwelling is approximately six metres away. In other words, built development is not sprawling across the site, it is concentrated in one area of the site.

(viii) the degree to which the landscape will retain the qualities that give it its naturalness, visual and amenity values;

As above, built development is concentrated in one area, there is boundary planting on the western extent coupled with internal planting. Accessory buildings (sheds) are a common occurrence in a rural lifestyle environment. The coastal consideration of amenity is not considered relevant given the disassociation with the coastal environment.

(ix) the extent to which private open space can be provided for future uses;

As above, development is concentrated in one portion of the site. There is ample open space provided on the remainder of the site.

(x) the extent to which the siting, setback and design of building(s) avoid visual dominance on landscapes, adjacent sites and the surrounding environment;



The siting of buildings has been considered as part of the subdivision consent. The proposed shed is located within the identified building envelope.

(xi) the extent to which non-compliance affects the privacy, outlook and enjoyment of private open spaces on adjacent sites.

There are not considered to be any effects associated with privacy, outlook and enjoyment from the adjacent site. The shed reads as an extension to the existing garage. The garage and proposed shed are located ~ 30 metres from the neighbouring dwelling at 25 Blue Penguin Drive.

Overall, it is considered that the effects on visual amenity are less than minor and no mitigation is required.

Stormwater Management

Any new building that does not meet the restricted discretionary activity standards in Rule 10.7.5.3.8 is a discretionary activity where maximum proportion or amount of the gross site area covered by buildings and other impermeable surfaces exceeds 15% or 1,500m², whichever is the lesser.

This application takes the impermeable surface on the site to $1,303\text{m}^2$ (15.6% of site coverage), which will be considered as a discretionary activity. The stormwater accumulated from the addition of the shed is proposed to be collected via the roof and reticulated into the existing 3 x 25,000 litre water tank and overflow system.

The Stormwater Mitigation Report in **Appendix C** provides an assessment in accordance with the criteria in Section 11.3 of the ODP. There is no need to repeat that assessment here.

The report concludes that provided that the recommendations within the report are adhered to, the effects of stormwater runoff are considered to have <u>less than minor effects</u> on the receiving



environment, equivalent to conditions that would result from development proposals falling within the Permitted Activity coverage threshold. Further:

- The Type IA storm profile was utilised for stormwater attenuation calculations in accordance with TR-55.
- HydroCAD® software has been utilised in design for a 1% AEP rainfall value of 292mm with a 24-hour duration utilised for calculations.
- Rainfall data was obtained from HIRDS and increased by 20% to account for climate change.

National Policy Statements & National Environmental Standards

When considering this activity, it is noted that:

- The site is not within the Coastal Environment. Therefore, the New Zealand Coastal Policy Statement is not relevant.
- The site has class 5 soils. Therefore, the National Policy Statement for Highly Productive Land is not relevant.
- The use of the site remains residential. The site is not known to be HAIL. Therefore, the National Environmental Standard for Soil Contamination is not relevant.
- The site is not urban. The National Policy Statement for Urban Development is not relevant.
- There are no known wetlands that affect the proposal. The National Environment Standard for Freshwater Management is not relevant.

Regional Policy Statement for Northland (RPS)

The role of the RPS is to promote sustainable management of Northland's natural and physical resources by providing an overview of the regions resource management issues and setting out policies and methods to achieve integrated management of Northlands natural and physical resources. The subject site is not located within the coastal environment as identified in the RPS. A shed does not impact the aims and intents of the RPS.



The Proposed Far North District Plan (PDP)

The PDP was notified in July 2022. The subject site is zone Rural Lifestyle in the PDP. While the rules in the PDP do not apply to this application until decisions have been released, consideration of the objectives and policies are relevant.

Little weighting can be given to the relevant objectives and policies that relate to this application at the hearing of submissions is in process and a decision is yet to be made.

In terms of the objectives and policies in the Rural Lifestyle zone:

- The site is being used for a low density residential activity, consisting of a dwelling and a garage, as well as areas of vegetation. It is consistent with the scale and character anticipated by the Rural Lifestyle environment.
- The activity proposed will not compromise the character and amenity of the zone or any rural production activities. The location, scale and design of the shed is sympathetic within the context of the site and wider environs.

It is considered that the application is consistent with the relevant objectives and policies in the PDP.

Operative Far North District Plan (ODP) - Coastal Living Zone

Section 104(1)(b)(vi) requires consideration of the relevant objectives and policies contained in any operative and proposed district plan. The relevant provisions contained in the ODP are contained within the Coastal Living Zone chapter.

Objective 10.7.3.1 To provide for the well being of people by enabling low density residential development to locate in coastal areas where any adverse effects on the environment of such development are able to be avoided, remedied or mitigated.



It is considered that the intention of the Coastal Living zone is for residential use, which also anticipates buildings ancillary to residential use. The shed provides a facility for the landowner to store gear and machinery. The density of the site does not change.

Objective 10.7.3.2 To preserve the overall natural character of the coastal environment by providing for an appropriate level of subdivision and development in this zone.

The subject site was created with the intention of a dwelling being located on the site, which is existing. Buildings ancillary to the residential use are also anticipated where they are located within the identified building envelope.

The shed provides a facility for the landowner to store gear and machinery, is consistent with the surrounding development and is considered not have any adverse effects on the natural character of the coastal environment. It is noted that the site is no longer considered to be within the coastal environment in accordance with the RPS and the PDP.

Policy 10.7.4.1 That the adverse effects of subdivision, use, and development on the coastal environment are avoided, remedied or mitigated.

The proposal is for a shed ancillary to the existing dwelling on the site. It is considered that the intention of the Coastal Living zone is for residential use, which also anticipates buildings ancillary to residential use. The site is no longer considered to be within the coastal environment in accordance with the RPS and the PDP.

Policy 10.7.4.2 That standards be set to ensure that subdivision, use or development provides adequate infrastructure and services and maintains and enhances amenity values and the quality of the environment.

The application is for a shed and does not require additional infrastructure or services except for power, which is available on the site. Rainwater collected form the roof will be reticulated into the existing $3 \times 25,000$ litre rain water tank and overflow system. Stormwater management will be addressed in accordance with the Stormwater Mitigation Report in **Appendix C**.



Policy 10.7.4.3 Subdivision, use and development shall preserve and where possible enhance, restore and rehabilitate the character of the zone in regards to s6 matters, and shall avoid adverse effects as far as practicable by using techniques including:...

...b) minimising the visual impact of buildings, development, and associated vegetation clearance and earthworks, particularly as seen from public land and the coastal marine area;...

The site is no longer considered to be within the coastal environment in accordance with the RPS and the PDP. No earthworks other than those required for scraping to prepare the building footprint is required.

Summary

The relevant objectives and policies of the ODP are those related to the Coastal Living Zone. The proposal, which consists of a shed ancillary to the existing residential use on the site, is considered to be consistent with the rural character of the surrounding area and is considered to have negligible effects on the coastal amenity value of the area (it is no longer considered to be within the coastal environment in accordance with the RPS and the PDP). The proposal is considered to be consistent with the objectives and policies of the ODP.

Section 104(1)(c) states that consideration must be given to any other matters that the consent authority considers relevant and reasonably necessary to determine the application. There are no other matters relevant to this application.

PUBLIC NOTIFICATION AND LIMITED NOTIFICATION OF APPLICATIONS

Public Notification

Section 95A of the RMA specifies the steps to be taken to determine whether to publicly notify an application.

Step 1: Mandatory public notification in certain circumstances

- The applicant has requested public notification
- Public notification is required under section 95C



• The application is made jointly with an application to exchange recreation reserve land.

The applicant does not request public notification, and it is assumed that the latter two points will not apply.

Step 2: If not required by step 1, public notification precluded in certain circumstances:

- A national environmental standard precludes public notification.
- The application is for a resource consent for 1 or more of the following, but no other, activities:
- a controlled activity:
- a restricted discretionary, discretionary, or non-complying activity, but only if the activity is a boundary activity:

None of the above apply to the activity.

Step 3: If not precluded by step 2, public notification required in certain circumstances
The criteria for step 3 ore as follows:

- the application is for a resource consent for 1 or more activities, and any of those activities is subject to a rule or national environmental standard that requires public notification:
- the consent authority decides, in accordance with section 95D, that the activity will have or is likely to have adverse effects on the environment that are more than minor.

As demonstrated through this assessment, the adverse effects are considered to be less than minor.

Step 4: Public notification in special circumstances

• Determine whether special circumstances exist in relation to the application that warrant the application being publicly notified

No special circumstances have been identified to warrant public notification. The proposal for a shed is not considered to be controversial or of significant public interest, particularly given that it is private land, and the site already developed with a dwelling and garage, which is considered neither exceptional nor unusual.



Limited Notification

Section 95B of the RMA specifies the steps to be taken to determine whether to limited notify an application.

Step 1: Certain affected groups and affected persons must be notified

- Determine whether there are any affected protected customary rights groups or affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity).
- Determine whether the proposed activity is on or adjacent to, or may affect, land that is the subject of a statutory acknowledgement made in accordance with an RMA specified in Schedule 11; and whether the person to whom the statutory acknowledgement is mode is an affected person under section 95E.

It is considered that there are no affected protected customary rights groups or affected customary marine title groups, and the proposal will not affect any land subject to a statutory acknowledgment.

Step 2: If not required by step 1, limited notification precluded in certain circumstances The criteria for step 2 are as follows:

- the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes limited notification:
- the application is for a controlled activity (but no other activities) that requires a resource consent under a district plan (other than a subdivision of land).

None of the above apply to the activity

Step 3: If not precluded by step 2, certain other affected persons must be notified

Determine whether, in accordance with section 95E the following persons are affected persons:

in the case of a boundary activity, an owner of an allotment with an infringed boundary;
 and



- In the case of any other activity, determine whether a person is an affected person in accordance with section 95E.
- Notify each affected person identified above of the application.

There are no boundary infringements applying to the application.

With respect to section 95B(8) and section 95E, the Coastal Living zone anticipates a dwelling and buildings ancillary to a residential use, in this case a shed to store gear and machinery. It is concluded therefore that any adverse effects in relation to adjacent properties will be less than minor, and accordingly that no persons are adversely affected.

Step 4: Further notification in special circumstances

Determine whether special circumstances exist in relation to the application that warrant
notification of the application to any other persons not already determined to be eligible
for limited notification under this section (excluding persons assessed under section 95E
as not being affected persons).

No special circumstances have been identified to warrant limited notification.

Based upon the above it is considered that there is no requirement for Council to notify the application.

PART 2 OF THE RMA

Part 2 of the RMA sets out the purpose and principles including matters of national importance. The purpose of the RMA as outlined in section 5(1) is to promote the sustainable management of natural and physical resources. The proposal will sustain the potential of natural and physical resource whilst meeting the foreseeable needs of future generations as the site is being used for its intended use. In addition, the proposal will avoid adverse effects on the environment and will maintain the natural character of the site and surrounding environment.



Section 6 of the RMA lists seven matters of national importance that must be recognised and provided for in the decision on this application. The natural character of the coastal environment is relevant and has been recognised and provided for within the application:

- A shed is anticipated on the subject site and the natural character and amenity values of the coastal environment have been considered, assessed and concluded that there will no more than minor effects.
- The proposal is not located within an identified outstanding natural feature, landscape,
 area containing significant indigenous vegetation or habitat of indigenous fauna.

In terms of section 7, the RMA lists eleven matters that Council must have particular regard to, including the maintenance and enhancement of amenity values. The proposal maintains amenity values in the area as the proposal is in keeping with the existing character of the surrounding environment.

Section 8 of the RMA requires that all persons exercising functions and powers under the RMA take into account the principles of the Treaty of Waitangi in managing the use, development and protection of natural and physical resources. It is considered that the proposal raises no Treaty issues. The subject site is not located within an area of significance to Māori. The proposal has taken into account the principals of the Treaty of Waitangi and is not considered to be contrary to these principals.

Overall, the application is considered to be consistent with the relevant provisions of Part 2 of the RMA, as expressed through the objectives, policies and rules reviewed in earlier sections of this application.

Given that consistency, it is concluded that the proposal achieves the purposes of sustainable management set out by section 5 of the RMA.

CONCLUSION

The proposed shed is suitable in the context of the site and surrounding environment.



Overall, it is considered that the proposal will result in no more than minor effects on the environment.

While not necessary, the relevant provisions within Part 2 of the RMA have been addressed as part of this application. The overall conclusion is that the proposal is consistent with the sustainable management purpose of the RMA.

It is considered appropriate for the proposal to be granted on a non-notified basis.

We look forward to receiving acknowledgment of the application and please advise if any additional information is required.

Andrew McPhee Consultant Planner

Oonsultaner tanno



RECORD OF TITLE UNDER LAND TRANSFER ACT 2017 FREEHOLD



Guaranteed Search Copy issued under Section 60 of the Land Transfer Act 2017

R.W. Muir Registrar-General of Land

Identifier 723034

Land Registration District North Auckland

Date Issued 10 August 2016

Prior References NA97B/194

Estate Fee Simple

Area 8349 square metres more or less
Legal Description Lot 17 Deposited Plan 494309

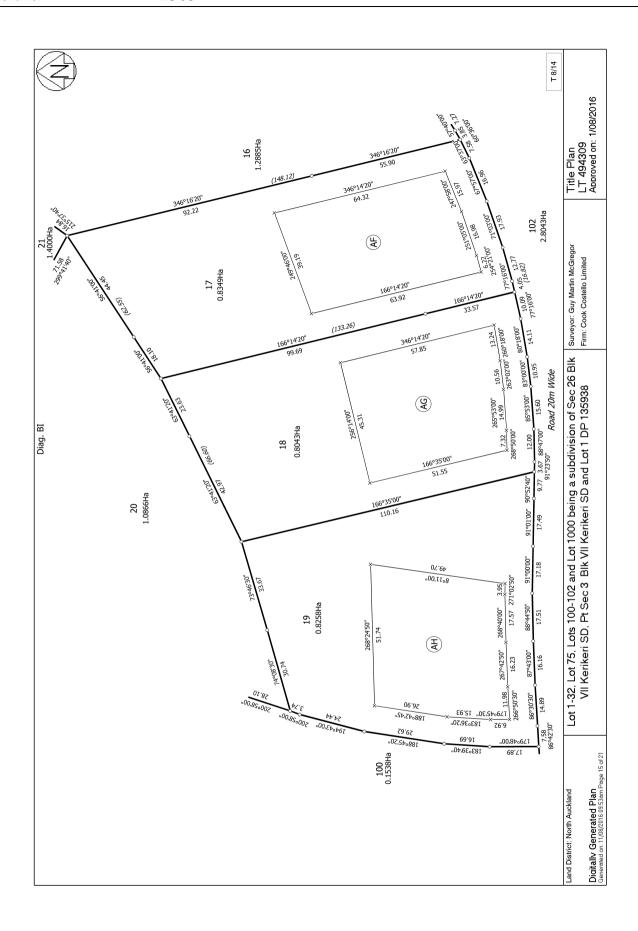
Registered Owners

Alan Brett Hopkins, Suzanne Joy Hopkins and David Dillon

Interests

10388614.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 10.8.2016 at 2:54 pm Land Covenant in Transfer 10388614.8 - 10.8.2016 at 2:54 pm (Limited as to duration)

Fencing Covenant in Transfer 10854270.1 - 25.7.2017 at 2:45 pm



View Instrument Details



Instrument No Status Date & Time Lodged Lodged By

Registered 10 August 2016 14:54 Wallace, Anne Michele

10388614.2



Instrument Type Consent Notice under s221(4)(a) Resource Management Act 1991

Affected Computer Registers Land District
NA28A/800 North Auckland
NA80A/723 North Auckland
NA97B/194 North Auckland

Annexure Schedule: Contains 3 Pages.

Signature

Signed by Anthea Mary Coombes as Territorial Authority Representative on 24/08/2016 03:06 PM

*** End of Report ***

Annexure Schedule: Page:1 of 3



Firede 3og 752, Alemoids Ave Kokole 044C, Alem Zeobord Freephone: 0800 920 029 Fanos: (09) 401 5260 For: (09) 401 2337 Innol: cskus@finks gortus Websiks www.fnck.gortusz

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THE RESOURCE MANAGEMENT ACT 1991

SECTION 221: CONSENT NOTICE

REGARDING RC 2160062
Being the Subdivision of Section 26 BLK VII Kerikeri SD,
Pt Sec 3 BLK VII Kerikeri SD (SO1130) and Lot 1 DP 135938
North Auckland Registry

<u>PURSUANT</u> to Section 221 and for the purpose of Section 224 (c) (ii) of the Resource Management Act 1991, this Consent Notice is issued by the **FAR NORTH DISTRICT COUNCIL** to the effect that conditions described in the schedule below are to be complied with on a continuing basis by the subdividing owner and the subsequent owners after the deposit of the survey plan, and these are to be registered on the titles of the allotments specified below.

SCHEDULE

Lots 1- 32 - DP 494309

- All buildings including water tanks and ancillary buildings shall be located within the approved building envelope as detailed within the survey plan.
- ii) In the event that the site remains undeveloped and that the landuse consent component of this decision lapses then the future development of the site (including any resource consent applications that may be required) shall be undertaken in general compliance with the design and development guidelines within the lapsed landuse decision (RC 2160062 issued by the Far North District Council dated 19th February 2016. This resource consent supercedes RC 2130171).
- iii) Pest and weed eradication measures established under the Bullding Development Landscape Plan and condition 11 of the landuse decision shall be implemented prior to and following the development of the site. The programme shall be maintained for the duration of the consent by the landowner.
- iv) In conjunction with the construction of any dwelling, and in addition to a potable water supply, a water collection system with sufficient supply for fire fighting purposes is to be provided by way of tank or other approved means and to be positioned so that it is safely accessible for this purpose.

Annexure Schedule: Page: 2 of 3



Printle Bog 752, Headwild Are Kokche 0440, New Zeoland Freephane: 0800 920 029 Phone: (09) 401 5209 For: (09) 401 2137 Email: ssk.u/SE/hck.govt.nz Website: www.finds.govt.nz

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These provisions will be in accordance with the New Zealand Fire Fighting Water Supply Code of Practice SNZ PAS 4509.

- v) When the vehicle crossing to the lot is finalized the lot owner/ developer shall apply to Council for a Vehicle Crossing Permit. The crossing is to be completed in accordance with the applicable Council Standards.
- vi) In conjunction with the construction of any building which includes a wastewater treatment and effluent disposal system the applicant shall submit for Council approval a site specific TP58 report prepared by a Chartered Professional Engineer or an approved TP58 report writer. The report shall be prepared generally in accordance with the onsite wastewater management section of the Engineers report prepared by Cook Costello Consulting Engineers (RC 2130171 and which is adopted into RC 2160062). The report shall identify a suitable method of wastewater treatment for the proposed development along with an identified effluent disposal area plus a 100% reserve disposal area. The report shall confirm that all of the treatment and disposal system can be fully contained within the lot boundary and that it complies with the Regional Water and Soil Plan Permitted Activity Standards.
- vii) In conjunction with the construction of any building the applicant shall submit for Council approval as part of the Building Consent application a report prepared by a suitably qualified engineer for the design of the stormwater management system in accordance with the recommendations relevant to that particular lot contained in the approved Addendum to the Subdivision Suitability Report prepared by Cook Costello and dated 29 October 2014.

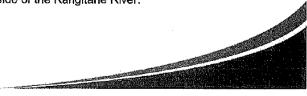
Lots 1-12, 17-20 & 22-32 - DP 494309

viii) The lot is located within an area noted as having Kiwi present. Dogs within the lot shall remain under control at all times with cats kept inside in the evenings. It is also recommended that dogs within the lot should undertake Kiwi aversion training.

Lots 13-16, & 21 - DP 494309

ix) No owners or occupiers of or visitors to any of the lots shall keep or introduce onto the land any carnivorous animal (such as cats, dogs, or mustelids) which have the potential to be Kiwi predators. This prohibition includes the bringing of any such animals onto the site by visitors and contractors.

Note: This requirement has been imposed as these allotments adjoin the Crown Grant Road and are immediately adjacent to high density kiwl populations located on the norther side of the Rangitane River.



Annexure Schedule: Page:3 of 3



Private Bog 752, Memortol Ave Kitholis 0440, New Zeclond Frequinone: 0800 920 029 Phone: (09) 401 5200 Fox: (69) 401 2137 Small: osk us@fask.govt nz Website: www.fask.govt nz

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Lots 3, 4, 21, 25 & 26 - DP 494309

x) For the purposes of the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health these allotments are HAIL Sites. Prior to the commencement of any soil disturbance appropriate DSI Reports shall be completed and any required remediation and revalidation testing undertaken. An application to Council under the NES Regulations will be required where the Permitted thresholds of the NES Regulations are not met.

Lot 1000 only - DP 494309

xi) Any site identified as a deposition area for material removed from Control Areas 1, 2 & 3 as required by condition 2(e) and which includes fill received from Control Areas 1, 2 & 3 is a HAIL site for the purposes of the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health and is therefore not suitable for residential development. The soil contaminants are to be tested and confirmed as being at or below levels considered suitable for recreational purposes.

SIGNED:

Mr Patrick John Killalea

By the FAR NORTH DISTRICT COUNCIL

Under delegated authority:

PRINCIPAL PLANNER - RESOURCE MANAGEMENT

DATED at KERIKERI this 27 day of July 2016





SITEPLAN

WHO CAN? TOTALSPAN!

Tunner.

District Plan Zoning: Coastal Living

Corrosion Zone:

Shed Colour: Karaka Maxam

Wind Zone as per AS/NZS 1170.2: 40.41 m/s
Site Area: 8349 m2
Existing Buildings & Driveways: 1202.00 m2
Proposed Building M2: 81.00 m2
Total Site Coverage: 1283.00 m2
Impermeable Surfaces %: 15.37% m2 of 10%

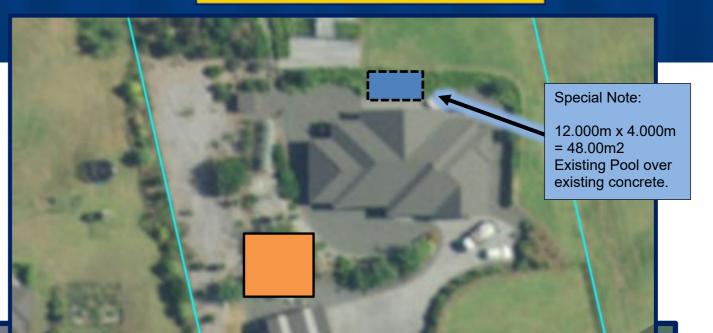
Allowance **Building Use:**Storage/Garage

Earthworks:

200mm site scrape of topsoil only, of less than 20 cubic meters. All soil to remain on site.

Stormwater:

To be directed through 80mm \emptyset PVC DPs and led to existing 3 x 25,000Ltr tank & overflow system as shown.



Proposed Totalspan Shed

9.000M Length x 9.000M Width x 3.600M Knee Height



Big BOI Sheds Ltd T/A Totalspan Bay of Islands & Hokianga

1235B State Highway 10, R.D.3, Kerikeri 0293,New Zealand. Phone: 09 407 7875

Email: Julia.Edwards@Totalspan.co.nz

Building Proposed For:

Alan Hopkins

Clients Site Address:

27 Blue Penguin Drive, Kerikeri 0294

Date: 5th May 2025

DRAWINGS NOT TO SCALE

ALL DIMENSIONS IN METRES UNLESS SPECIFIED OTHERWISE



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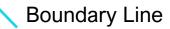
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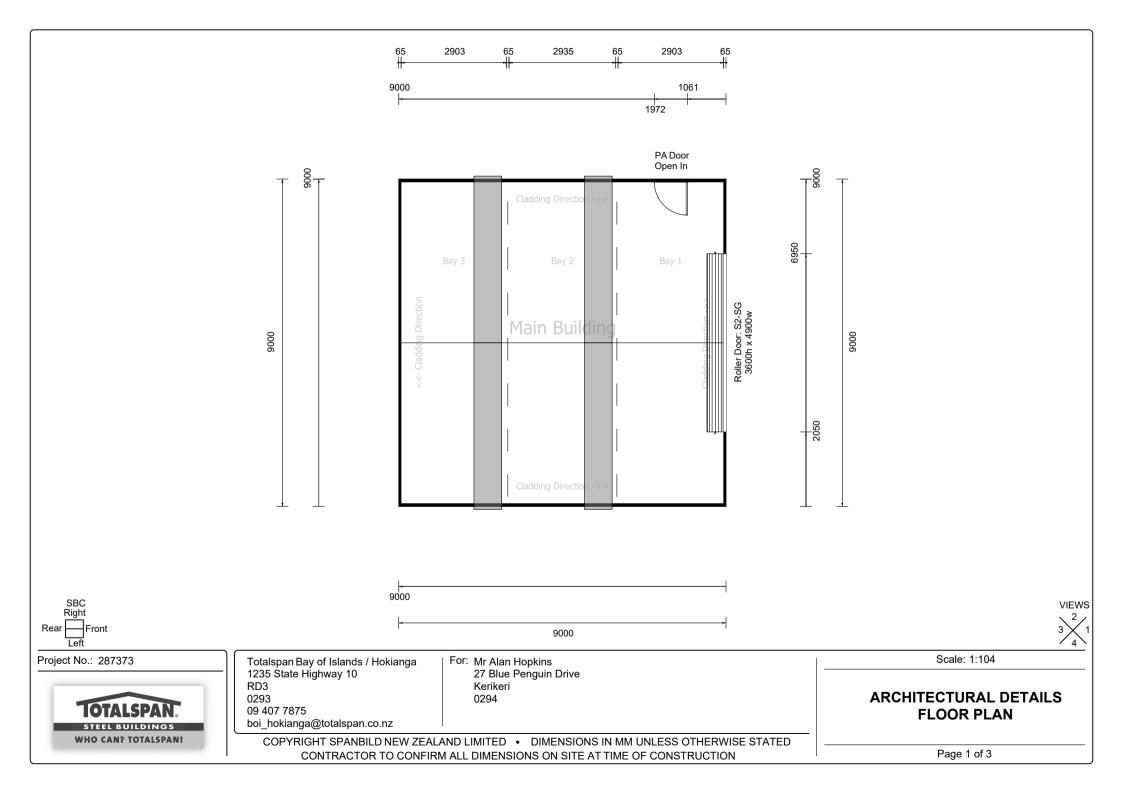


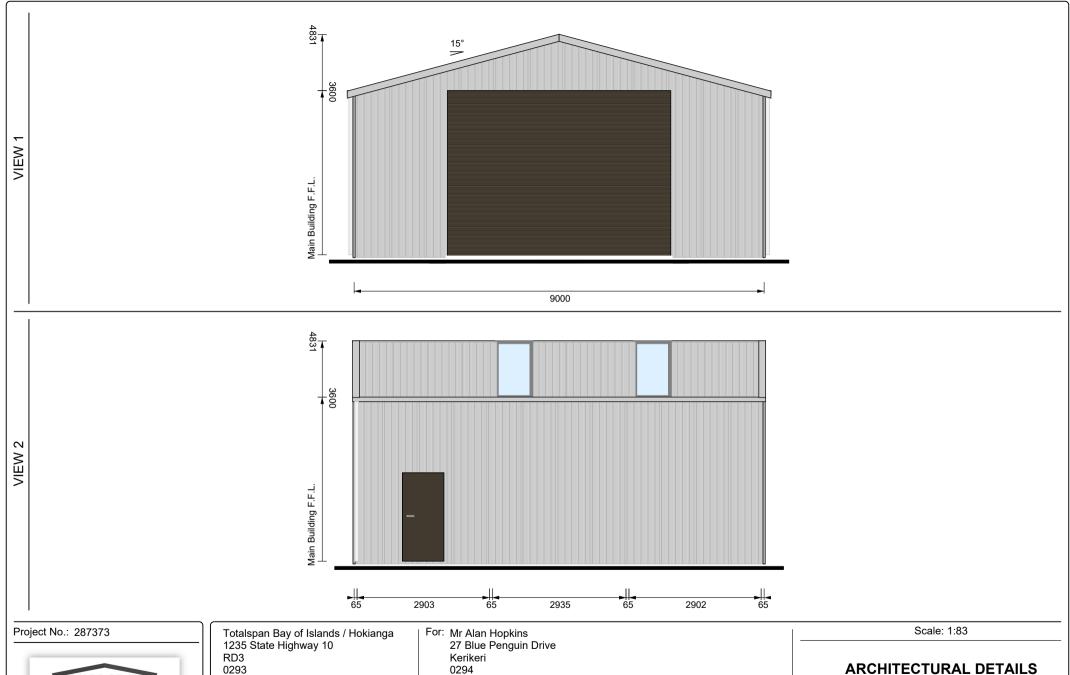




Survey / Boundary Pegs







TOTALSPAN.

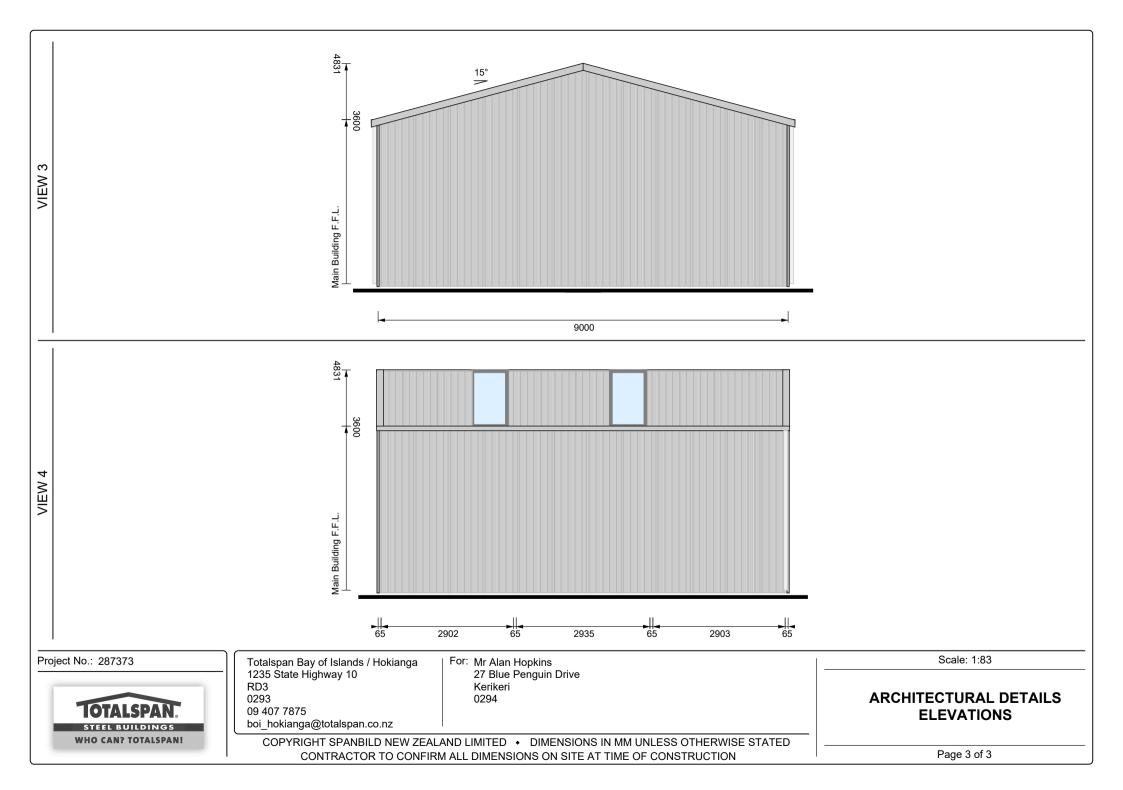
STEEL BUILDINGS

WHO CAN? TOTALSPAN!

09 407 7875 boi_hokianga@totalspan.co.nz ARCHITECTURAL DETAILS
ELEVATIONS

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Page 2 of 3





Wilton Joubert Limited 09 527 0196 PO BOX 11-381 Ellerslie Auckland 1524

SITE 27 Blue Penguin Drive, Kerikeri

LEGAL DESCRIPTION Lot 17 DP 494309

PROJECT Proposed Shed

CLIENT Big BOI Sheds Ltd

REFERENCE NO. 140113

DOCUMENT Stormwater Mitigation Report

STATUS/REVISION No. 01

DATE OF ISSUE 9th May 2025

Report Prepared For	Email
Big BOI Sheds Ltd	boioffice@totalspan.co.nz

Authored by	G.Brant (<i>BE(Hons) Civil)</i>	Civil Engineer	Gustavo@wjl.co.nz	gustaw
Reviewed by	P. McSweeney (BE(Hons) Civil)	Civil Engineer	Patrick@wjl.co.nz	20
Approved by	B. Steenkamp (CPEng, BEng Civil, CMEngNZ, BSc (Geology))	Senior Civil Engineer	BenS@wjl.co.nz	Padaye



1. EXECUTIVE SUMMARY

The following table is intended to be a concise summary which must be read in conjunction with the relevant report sections as referenced herein.

Legal Description:	Lot 17 DP 494309	
Site Area:	8,349m²	
Development Type:	Proposed Shed	
Development Proposals Supplied:	Site Plan prepared by Totalspan (dated: 05.05.2025)	
District Plan Zone:	Coastal Living	
Permitted Activity Coverage:	800m² - RC 2160062	
	Post-Development Impermeable Areas	
Impermeable Coverage:	Total Roof Area $607m^2$ Total Hardstand $696m^2$ Total impermeable area = 1,303 m^2 or 15.6% of the site area Total increase = $20m^2$	
Activity Status:	Discretionary Activity	
Roof Attenuation:	Attenuation is to be provided in accordance with the requirements outlined in Section 5 via the existing dual-purpose rainwater tanks. Existing Tank – 3 x 25,000 litre Rainwater Tanks (or similar) Dimensions – 3600mmØ x 2600mm high (or greater) 1% AEP Control Orifice – 65mmØ orifice; located >440mm below the overflow outlet Overflow – 100mmØ at the top of the tank	
Point of Discharge:	Discharge to be directed to existing aboveground spreader bar to the north of the existing dwelling. The existing dispersal device and drainage line are to be checked to comply with the requirements outlined in Section 6 of this report.	



2. SCOPE OF WORK

Wilton Joubert Ltd. (WJL) was engaged by the client, **Big BOI Sheds Ltd**, to produce an on-site stormwater management assessment at the above site for the proposed shed.

At the time of report writing, we have been supplied the following documents:

• Site Plan provided by Totalspan (dated: 05.05.2025)

Should any changes be made to the provided plans with stormwater management implications, WJL must be contacted for review.

3. SITE DESCRIPTION

The 8,349m² property is legally described as Lot 17 DP 494309 and is located off the northern side of Blue Penguin Drive, Kerikeri. The lot is accessed via an existing concrete driveway directly off Blue Penguin Drive along the lot's southern boundary.

Built development within the southern half of the site consists of multiples structures, a driveway and a pool area. The undeveloped land within the northern half of the site consists predominantly of trees/shrubs. Topographically speaking, the property generally falls to the north at gentle to moderate grades.

The Far North District Council (FNDC) GIS Water Services Map indicates that the property is serviced by a public stormwater connection, although this is not currently utilised. The property is not serviced by public wastewater or potable water reticulation.



Figure 1: Aerial Snip from FNDC Maps Showing Parent Site Boundaries (cyan) and Public Stormwater (green & orange)

4. DEVELOPMENT PROPOSALS

The development proposal, obtained from the client, is to construct a shed on-site, as depicted in the site plan provided by Totalspan (dated: 05.05.2025).

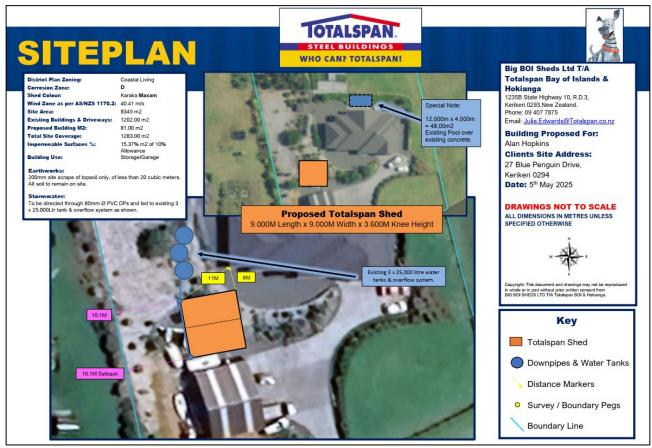


Figure 2: Snip of Proposed Site Plan Provided by Totalspan (dated: 05.05.2025)

The principal objective of this assessment is to provide an indicative stormwater disposal design which will manage runoff generated from the proposed impermeable areas resulting from the proposed development.

5. ASSESSMENT CRITERIA

Impermeable Areas

The calculations for the stormwater system for the development are based on a gross site area of 8,349m² and the below areas *extracted from the supplied plans*:

	Pre-Development	Post-Development	Total Change
Total Roof Area	526 m²	607 m²	81 m²
Existing Dwelling*	~386 m²	~386 m²	
Existing Large Shed*	~125 m²	~125 m²	
Existing Small Sheds*	~15 m²	~15 m²	
Proposed Shed	0 m ²	81 m²	
Total Hardstand Areas	757 m²	696 m²	-61 m ²
Existing Concrete Hardstand*	~330 m²	~330 m²	
Existing Metal Hardstand*	~280 m²	~219 m²	
Existing Pool Area*	~147 m²	~147 m²	
Pervious	7,066 m ²	7,046 m²	-20 m ²

^{*}Existing impermeable areas estimated using FNDC GIS Aerial Imagery combined with Drone Photos and is indicative only.



Ref: 140113 9th May 2025

The total amount of impermeable area on site, post-development, equates to 1,303m² or 15.6% of the site area. The total increase in impermeable area post-development equates to 20m². Should any changes be made to the current proposal, the on-site stormwater mitigation design must be reviewed.

Consent Conditions / District Plan Rules

The site is under the jurisdiction of the Far North District Council. The design has been completed in accordance with the recommendations and requirements contained within the Far North District Council Engineering Standards and the following consent conditions pertaining to RC 2160062:

ADVICE NOTES

1. Resource consent has been granted for the construction of a dwelling and associated facilities with a maximum of 800m² mpermeable surfaces (on Lots 1-32) and 600m³ of earthworks on Lots 1-2, 5-24, & 27-32 subject to the conditions detailed in the consent RC 2130171. These conditions include requirements for the owner to demonstrate compliance with specified matters and to present an amenity landscaping plan for the Building Envelope at the time of seeking building consent. Should the owner of one of those lots wish to undertake development which does not comply with the conditions of that land use consent, a discretionary resource consent application to vary the relevant condition(s) must be made to Council.

The site is zoned Coastal Living. The following rules apply under the FNDC District Plan & the above Resource Consent condition:

Consent Condition – **Permitted Activities – Stormwater Management** - The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 800m².

10.7.5.3.8 — **Restricted Discretionary Activities — Stormwater Management** - The maximum proportion or amount of the gross site area covered by buildings and other impermeable surfaces shall be 15% or 1,500m², whichever is the lesser.

The total proposed impermeable area exceeds 15% of the site area and does not comply with the maximum permitted impermeable area threshold per RC 2160062, nor Restricted Discretionary Activity Rule (10.7.5.3.8). Therefore, the proposal is considered a <u>Discretionary Activity</u>. Additional considerations for stormwater management as outlined in the FNDC District Plan Section 11.3 are required. A District Plan Assessment has been included in Section 8 of this report.

Design Requirements

The site is under the jurisdiction of the Far North District Council. The design has been completed in accordance with the recommendations and requirements contained within the Far North District Council Engineering Standards, the Far North District Council District Plan and Clause E1 of the New Zealand Building Code.

The total impermeable area in exceedance of the maximum permitted impermeable area threshold is 503m². Stormwater attenuation for 1% AEP storm event, with an adjustment for climate change must therefore be provided for this excess impermeable area.

Provided that the recommendations within this report are adhered to, the effects of stormwater runoff resulting from the unattenuated proposed / existing impermeable areas (800m² total) are considered to have less than minor effects on the receiving environment, equivalent to conditions that would result from development proposals falling within the Permitted Activity coverage threshold.

The Type IA storm profile was utilised for stormwater attenuation calculations in accordance with TR-55. HydroCAD® software has been utilised in design for a 1% AEP rainfall value of 292mm with a 24-hour duration utilised for calculations. Rainfall data was obtained from HIRDS and increased by 20% to account for climate change.



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6. STORMWATER MITIGATION ASSESSMENT

To meet the requirements outlined in Section 5, the following must be provided:

Potable Water Supply & Detention Volume

It is our understanding that 3 x 25,000L partially buried rainwater tanks provide the existing dwelling with a potable water supply and provides attenuation for the existing development on-site.

Page 6 of 9

It is recommended that a proprietary guttering system collect roof runoff from the proposed shed and direct runoff to the existing rainwater tanks via sealed pipes that are separate to the existing inlet drainage lines directing runoff to the existing tanks.

It is prosed to utilise the existing rainwater tanks to attenuate the existing / proposed impermeable areas in exceedance of the permitted activity threshold for the 1% AEP storm event, adjusted for climate change.

As per the attached design calculations, to achieve the above requirements, the existing orifice configuration must be modified as per the following:

Existing Tank 3 x 25,000 litre Rainwater Tanks (or similar)

Tank dimensions 3600mm∅ (or greater) x 2600mm high (or greater)

Outlet Orifice (1% AEP Control) 65mm diameter orifice; located >440mm below the

overflow outlet

- 434mm water elevation

- 13.3m³ Storage

Overflow Outlet **100mm diameter**; located at the top of the tank

The drainlayer must inspect the current tank drainage configuration and adjust to work as described above. If this is not achievable, then WJL must be contacted for review and advise.

Discharge from the potable water / detention tanks must be transported via sealed pipes to the existing drainage line draining to the existing aboveground spreader bar to the north of the existing dwelling.

The existing drainage line from the tank to the dispersal device must be confirmed to be at least a 100mmØ draining at a >2% grade upslope from any joint with hardstand drainage lines. Downslope of this, the drainage line must be checked to be draining at a >7% grade. Refer to the appended Site Plan (140113-C200), Tank Detail (140113-C201) and calculation set for clarification.



7. STORMWATER RUNOFF SUMMARY

Refer to the appended HydroCAD Calculation output.

Pre-Development Scenario – 1% AEP Storm Event + CCF

Surface	Area	Runoff CN	1% AEP Peak Flow Rate
Greenfields Impermeable Areas Exceeding Permitted	503 m²	74	7.38 l /s
Activity Threshold			

Post-Development Scenario – 1% AEP Storm Events + CCF

Surface	Area	Runoff CN	1% AEP Peak Flow Rate
Post-Development Existing /			
Proposed Roof Areas via	503 m ²	98	5.59ℓ/s
Detention Tank			

Given the design parameters, stormwater neutrality will be achieved for the 1% AEP storm events across the existing / proposed impermeable surfaces over the permitted activity threshold.

8. <u>DISTRICT PLAN ASSESSMENT</u>

As the proposed development is not compliant with the maximum permitted impermeable area threshold per the consent conditions pertaining to RC 2160062, nor Restricted Discretionary Activity Rule 10.7.5.3.8, it is therefore regarded as a <u>Discretionary Activity</u>.

In assessing an application under this provision, the Council will exercise its discretion to review the following matters below, (a) through (m) of FNDCDP Section 11.3.

In respect of matters (a) through (m), we provide the following comments:

(a) the extent to which building site coverage and Impermeable Surfaces contribute to total catchment impermeability and the provisions of any catchment or drainage plan for that catchment;	Impermeable surfaces resulting from the development increase site impermeability by 20m². Through tank attenuation, runoff is to be attenuated to predevelopment conditions for the proposed impermeable coverage exceeding the maximum permitted impermeable area threshold per RC 2160062.
(b) the extent to which Low Impact Design principles have been used to reduce site impermeability;	The impermeable areas in exceedance of the maximum permitted impermeable area threshold per RC 2160062 will be attenuated back to pre-development flow rates for the 1% AEP storm event, adjusted for climate change.
(c) any cumulative effects on total catchment impermeability;	Impervious coverage will increase by 20m².
(d) the extent to which building site coverage and Impermeable Surfaces will alter the natural contour or drainage patterns of the site or disturb the ground and alter its ability to absorb water;	Runoff from the existing / proposed impermeable areas is to be collected and directed to the dispersal device via sealed pipes.
	Ponding is not anticipated to occur provided the recommendations within this report are adhered to, mitigating interference with natural water absorption.
(e) the physical qualities of the soil type;	Kerikeri Volcanic Group – moderate drainage
(f) any adverse effects on the life supporting capacity of soils;	Stormwater runoff from the existing / proposed impermeable areas is to be collected and directed to



	stormwater management devices via sealed pipes, mitigating the potential for contamination of surrounding soils and harm to the life supporting capacity of soils.
(g) the availability of land for the disposal of effluent and stormwater on the site without adverse effects on the water quantity and water quality of water bodies (including groundwater and aquifers) or on adjacent sites;	Runoff resulting from the existing / proposed impermeable areas is to be collected and directed to the dispersal device via sealed pipes, mitigating the potential for runoff to pass over / saturate surrounding soils.
	The site is large enough for on-site stormwater and effluent disposal (i.e. setbacks between water sources and effluent disposal comply with Table 9 of the PRPN).
(h) the extent to which paved, Impermeable Surfaces are necessary for the proposed activity;	Hardstand areas are reduced post-development.
(i) the extent to which land scaping and vegetation may reduce adverse effects of run-off;	Existing vegetation and any plantings introduced by the owner during occupancy will aid in reducing surface water velocity and providing treatment. No specific landscaping scheme is proposed as part of the stormwater management system described herein.
(j) any recognised standards promulgated by industry groups;	Not applicable.
k) the means and effectiveness of mitigating stormwater runoff to that expected by permitted activity threshold;	The impermeable areas in exceedance of the maximum permitted impermeable area threshold per RC 2160062 have been attenuated back to pre-development flow rates for the 1% AEP storm event, adjusted for climate change.
(I) the extent to which the proposal has considered and provided for climate change;	Rainfall data was obtained from HIRDS and increased by 20% to account for climate change.
(m) the extent to which stormwater detention ponds and other engineering solutions are used to mitigate any adverse effects.	The impermeable areas in exceedance of the maximum permitted impermeable area threshold per RC 2160062 have been attenuated back to pre-development flow rates for the 1% AEP storm event, adjusted for climate change.

9. NOTES

If any of the design specifications mentioned in the previous sections are altered or found to be different than what is described in this report, Wilton Joubert Ltd will be required to review this report. Indicative system details have been provided in the appendices of this report (140113-C200 & 140113-C201).

Care should be taken when constructing the discharge point to avoid any siphon or backflow effect within the stormwater system.

Subsequent to construction, a programme of regular inspection / maintenance of the system should be initiated by the Owner to ensure the continuance of effective function, and if necessary, the instigation of any maintenance required.

Wilton Joubert Ltd recommends that all contractors keep a photographic record of their work.



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10. LIMITATIONS

The recommendations and opinions contained in this report are based on information received and available from the client at the time of report writing.

This assignment only considers the primary stormwater system. The secondary stormwater system, Overland Flow Paths (OLFP), vehicular access and the consideration of road/street water flooding is all assumed to be undertaken by a third party.

All drainage design is up to the connection point for each building face of any new structures/slabs; no internal building plumbing or layouts have been undertaken.

During construction, an engineer competent to judge whether the conditions are compatible with the assumptions made in this report should examine the site. In all circumstances, if variations occur which differ from that described or that are assumed to exist, then the matter should be referred to a suitably qualified and experienced engineer.

The performance behaviour outlined by this report is dependent on the construction activity and actions of the builder/contractor. Inappropriate actions during the construction phase may cause behaviour outside the limits given in this report.

This report has been prepared for the particular project described to us and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose.

Wilton Joubert Ltd.

Gustavo Brant Civil Engineer BE(Hons)

REPORT ATTACHMENTS

- Site Plan C200 (1 sheet)
- Tank Detail C201 (1 sheet)
- Calculation Set







DEGIGINED BY:	ISSUE / REVISION		
GMB	DATE BY DESCRIPTION	DATE BY	lo.
DRAWN BY:	MAY '25 GMB STORMWATER MITIGATION REPORT	MAY '25 GMB)1
GMB			
CHECKED BY:			
BGS			_
SURVEYED BY:			
N/A			
IN/A			

INED BY:	SERVICES NOTE
GMB	WHERE EXISTING SERVICES ARE SHOWN, THEY ARE INDICATIVE ONLY MAY NOT INCLUDE ALL SITE SERVICES. WILTON JOUBERT LTD DOES
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GMB	SERVICES PRIOR TO AND FOR THE DURATION OF THE CONTRACT WO
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BGS	BUILDING CONSENT
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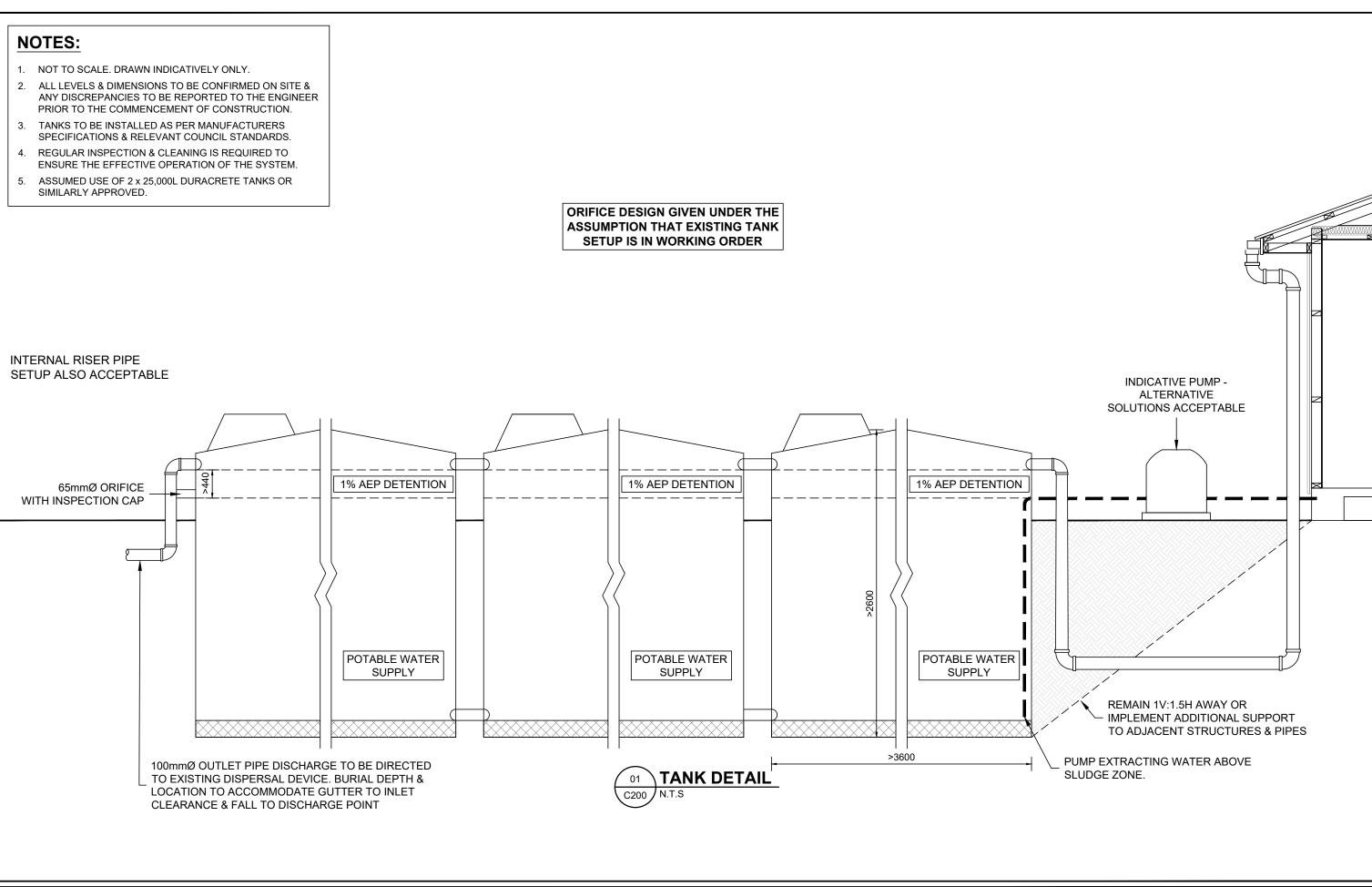
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NTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING
RVICES PRIOR TO AND FOR THE DURATION OF THE CONTRACT WORKS.
BUILDING CONSENT

	SITE PLAN
ROJECT DESCRIPTION:	

STORMWATER MITIGATION REPORT

ORIGINAL DRAWING SIZE:	OFFICE:		
A3	OREWA		
DRAWING SCALE:	CO-ORDINATE SYSTE	M:	
1:250	NOT COORDINATED		
DRAWING NUMBER:	ISSUE:		
140113	01		

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MAY NOT INCLUDE ALL SITE SERVICES. WILTON JOUBERT LTD DOES NOT							
WARRANT THAT ALL, OR INDEED ANY SERVICES ARE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING							
SERVICES PRIOR TO AND FOR THE DURATION OF THE CONTRACT WORKS.							
BUILDING CONSENT	F						

	TANK DETAIL
ROJECT DESCRIPTION:	
	STORMWATER MITIGATION REPORT

LOT 17 DP 494309	DRAWI
27 BLUE PENGUIN DRIVE KERIKERI NORTHLAND	DRAWII

PROJECT TITLE

ORIGINAL DRAWING SIZE:	OFFICE:	
A3	ORE	NA
DRAWING SCALE:	CO-ORDINATE SYSTE	M:
N.T.S	NOT COOR	DINATED
DRAWING NUMBER:	ISSUE:	
140113	-C201	01

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Pre-Development



Pre-Development
Impermeable Areas
over Permitted Activity
Threshold



Pre-Development Flows









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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 24S: Pre-Development Runoff Area=503.0 m² 0.00% Impervious Runoff Depth>206 mm

Tc=10.0 min CN=74 Runoff=7.38 L/s 103.7 m³

Link 32L: Pre-Development Flows Inflow=7.38 L/s 103.7 m³
Primary=7.38 L/s 103.7 m³

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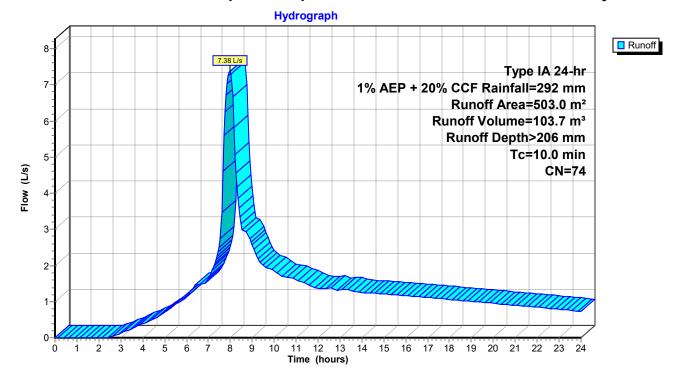
Summary for Subcatchment 24S: Pre-Development Impermeable Areas over Permitted Activity Threshold

Runoff = 7.38 L/s @ 7.98 hrs, Volume= 103.7 m³, Depth> 206 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type IA 24-hr 1% AEP + 20% CCF Rainfall=292 mm

_	Ar	rea (m²)	CN I	Description							
		503.0	74	>75% Grass cover, Good, HSG C							
		503.0		100.00% Pervious Area							
	Tc (min)	Length (meters)	Slope (m/m	,	Capacity (m³/s)	Description					
	10.0					Direct Entry,					

Subcatchment 24S: Pre-Development Impermeable Areas over Permitted Activity Threshold



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Summary for Link 32L: Pre-Development Flows

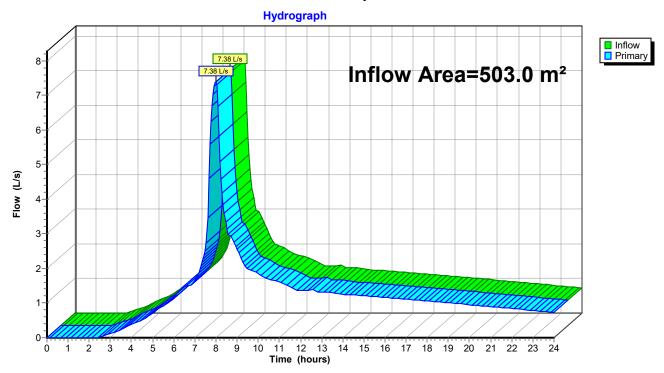
Inflow Area = 503.0 m^2 , 0.00% Impervious, Inflow Depth > 206 mm for 1% AEP + 20% CCF event

Inflow = 7.38 L/s @ 7.98 hrs, Volume= 103.7 m^3

Primary = 7.38 L/s @ 7.98 hrs, Volume= 103.7 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 32L: Pre-Development Flows



Post-Development Post-Development Roof Areas 3 x 25,000L Rainwater Tanks Post-Development Flows Link **Routing Diagram for 140113** Subcat Reach Prepared by Wilton Joubert Limited, Printed 8/05/2025 HydroCAD® 10.00-26 s/n 10413 © 2020 HydroCAD Software Solutions LLC

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 34S: Post-Development Runoff Area=503.0 m² 100.00% Impervious Runoff Depth>285 mm Tc=10.0 min CN=98 Runoff=9.68 L/s 143.4 m³

Pond 34P: 3 x 25,000L Rainwater Tanks Peak Elev=0.434 m Storage=13.3 m³ Inflow=9.68 L/s 143.4 m³

Outflow=5.59 L/s 142.2 m³

Link 35L: Post-Development Flows

Inflow=5.59 L/s 142.2 m³

Primary=5.59 L/s 142.2 m³

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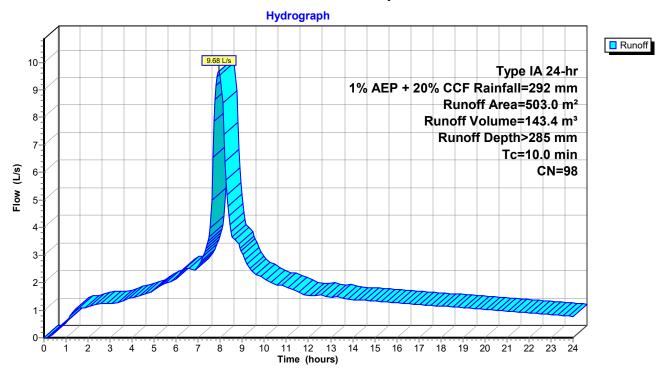
Summary for Subcatchment 34S: Post-Development Roof Areas

Runoff = 9.68 L/s @ 7.94 hrs, Volume= 143.4 m³, Depth> 285 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type IA 24-hr 1% AEP + 20% CCF Rainfall=292 mm

_	Aı	rea (m²)	CN	De	Description							
		503.0	98	R	oofs, HSG	С						
_		503.0		10	0.00% lm	pervious Ar	rea					
	Tc (min)	Length (meters)	Slo _l (m/ı		Velocity (m/sec)	Capacity (m³/s)	Description					
	10.0						Direct Entry,					

Subcatchment 34S: Post-Development Roof Areas



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Summary for Pond 34P: 3 x 25,000L Rainwater Tanks

Inflow Area = 503.0 m²,100.00% Impervious, Inflow Depth > 285 mm for 1% AEP + 20% CCF event

Inflow = 9.68 L/s @ 7.94 hrs, Volume= 143.4 m^3

Outflow = 5.59 L/s @ 8.26 hrs, Volume= 142.2 m³, Atten= 42%, Lag= 19.6 min

Primary = 5.59 L/s @ 8.26 hrs, Volume= 142.2 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Peak Elev= 0.434 m @ 8.26 hrs Surf.Area= 30.5 m² Storage= 13.3 m³

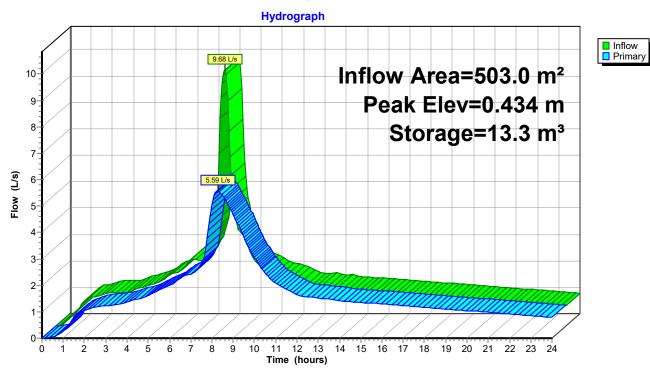
Plug-Flow detention time= 25.3 min calculated for 142.2 m³ (99% of inflow)

Center-of-Mass det. time= 18.8 min (663.3 - 644.5)

Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	79.4 m³	3.60 mD x 2.60 mH Vertical Cone/Cylinder × 3
Device	Routing	Invert Out	et Devices
#1	Primary	0.000 m 65 r	nm Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=5.59 L/s @ 8.26 hrs HW=0.434 m (Free Discharge) 1=Orifice/Grate (Orifice Controls 5.59 L/s @ 1.68 m/s)

Pond 34P: 3 x 25,000L Rainwater Tanks



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Summary for Link 35L: Post-Development Flows

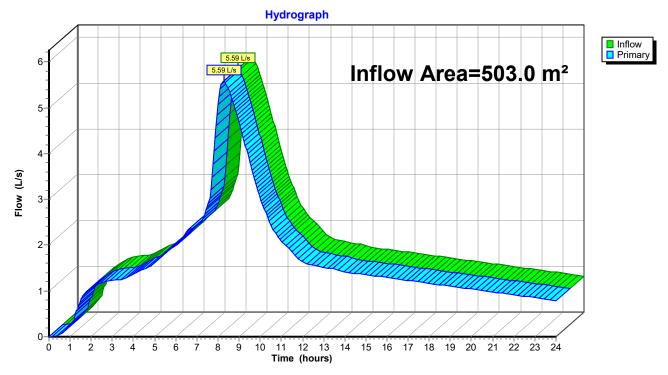
Inflow Area = 503.0 m²,100.00% Impervious, Inflow Depth > 283 mm for 1% AEP + 20% CCF event

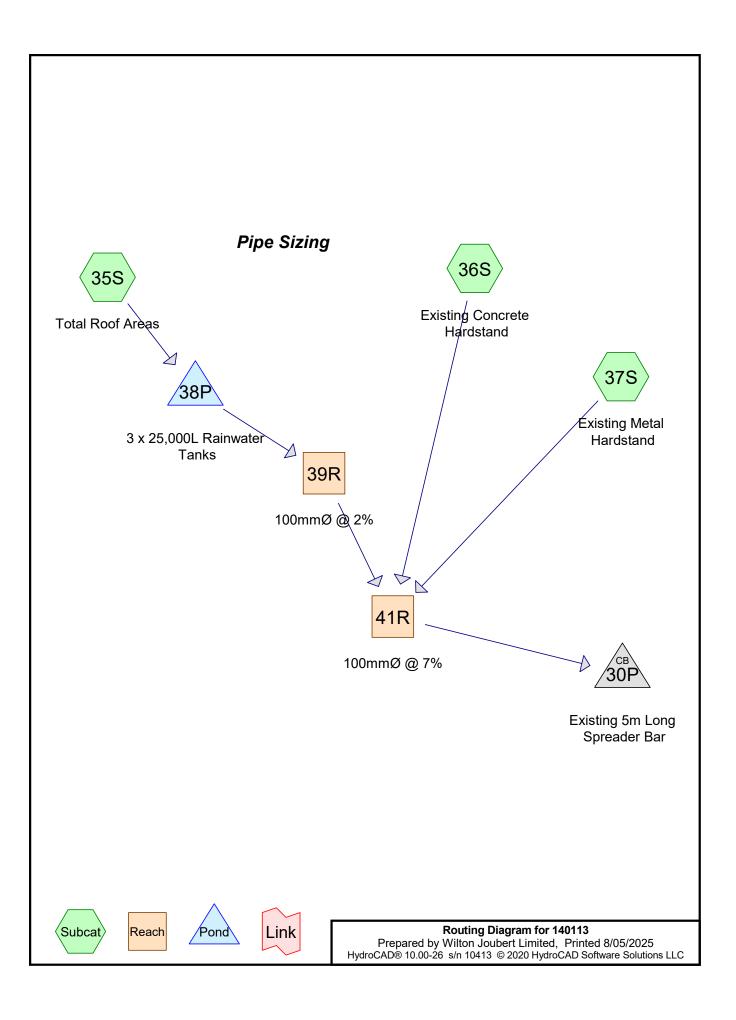
Inflow = 5.59 L/s @ 8.26 hrs, Volume= 142.2 m³

Primary = 5.59 L/s @ 8.26 hrs, Volume= 142.2 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 35L: Post-Development Flows





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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 35S: Total Roof Areas Runoff Area=607.0 m² 100.00% Impervious Runoff Depth>285 mm Tc=10.0 min CN=98 Runoff=11.69 L/s 173.1 m³

Subcatchment 36S: Existing Concrete Runoff Area=330.0 m² 100.00% Impervious Runoff Depth>285 mm
Tc=10.0 min CN=98 Runoff=6.35 L/s 94.1 m³

Subcatchment 37S: Existing Metal Runoff Area=280.0 m² 0.00% Impervious Runoff Depth>257 mm Tc=10.0 min CN=89 Runoff=5.11 L/s 71.9 m³

Reach 39R: 100mmØ @ 2% Avg. Flow Depth=0.09 m Max Vel=1.25 m/s Inflow=8.90 L/s 171.8 m³ 100 mm Round Pipe n=0.011 L=10.00 m S=0.0200 m/m Capacity=8.63 L/s Outflow=8.90 L/s 171.7 m³

Reach 41R: 100mmØ @ 7% Avg. Flow Depth=0.10 m Max Vel=2.34 m/s Inflow=18.69 L/s 337.7 m³ 100 mm Round Pipe n=0.011 L=10.00 m S=0.0700 m/m Capacity=16.15 L/s Outflow=17.64 L/s 337.7 m³

Pond 30P: Existing 5m Long Spreader Bar

Peak Elev=-0.163 m Inflow=17.64 L/s 337.7 m³

Outflow=17.64 L/s 337.7 m³

Pond 38P: 3 x 25,000L Rainwater Tanks Peak Elev=0.508 m Storage=15.5 m³ Inflow=11.69 L/s 173.1 m³ Outflow=8.90 L/s 171.8 m³

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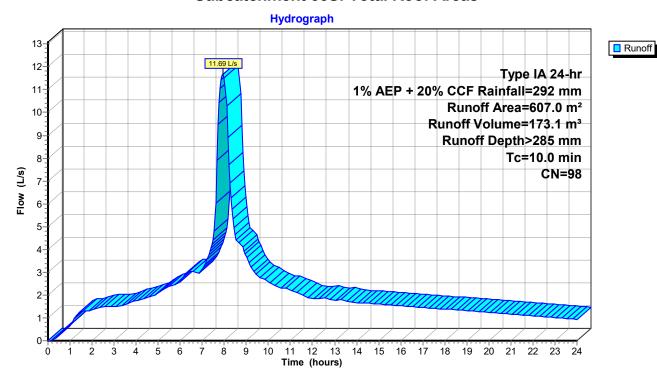
Summary for Subcatchment 35S: Total Roof Areas

Runoff = 11.69 L/s @ 7.94 hrs, Volume= 173.1 m³, Depth> 285 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type IA 24-hr 1% AEP + 20% CCF Rainfall=292 mm

Aı	rea (m²)	CN	De	escription		
	607.0	98	Ro	oofs, HSG	С	
	607.0		10	0.00% lm	pervious Ar	rea
Tc (min)	Length (meters)	Slo (m/		Velocity (m/sec)	Capacity (m³/s)	Description
10.0	•					Direct Entry,

Subcatchment 35S: Total Roof Areas



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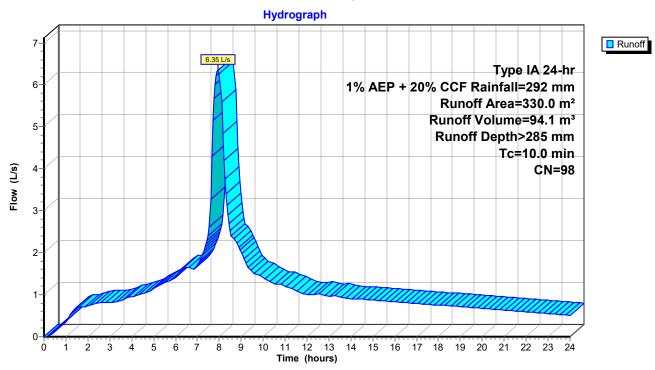
Summary for Subcatchment 36S: Existing Concrete Hardstand

Runoff = 6.35 L/s @ 7.94 hrs, Volume= 94.1 m³, Depth> 285 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type IA 24-hr 1% AEP + 20% CCF Rainfall=292 mm

_	Aı	rea (m²)	CN	De	Description						
		330.0	98	R	oofs, HSG	С					
_		330.0		10	0.00% lm	pervious Ar	rea				
	Tc (min)	Length (meters)	Slo (m/		Velocity (m/sec)	Capacity (m³/s)	Description				
	10.0						Direct Entry,				

Subcatchment 36S: Existing Concrete Hardstand



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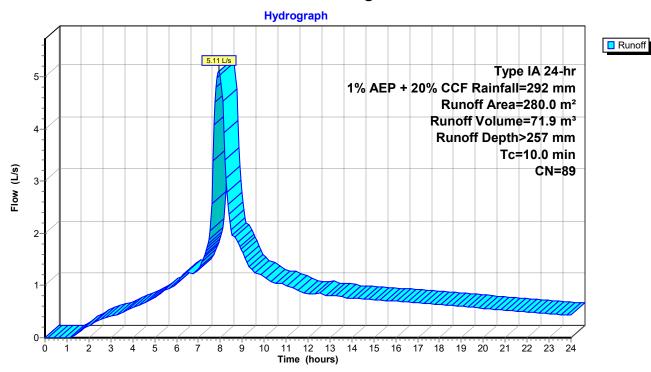
Summary for Subcatchment 37S: Existing Metal Hardstand

Runoff = 5.11 L/s @ 7.95 hrs, Volume= 71.9 m³, Depth> 257 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type IA 24-hr 1% AEP + 20% CCF Rainfall=292 mm

_	Ar	ea (m²)	CN	Description				
		280.0	89	9 Gravel roads, HSG C				
		280.0		100.00% Pervious Area				
_	Tc (min)	Length (meters)	Slop (m/m	,	Capacity (m³/s)	Description		
_	10.0					Direct Entry,		

Subcatchment 37S: Existing Metal Hardstand



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Summary for Reach 39R: 100mmØ @ 2%

Inflow Area = 607.0 m²,100.00% Impervious, Inflow Depth > 283 mm for 1% AEP + 20% CCF event

Inflow = $8.90 \text{ L/s} \ @, 8.16 \text{ hrs}, \text{ Volume} = 171.8 \text{ m}^3$

Outflow = 8.90 L/s @ 8.16 hrs, Volume= 171.7 m³, Atten= 0%, Lag= 0.2 min

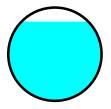
Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.25 m/s, Min. Travel Time= 0.1 min Avg. Velocity = 0.86 m/s, Avg. Travel Time= 0.2 min

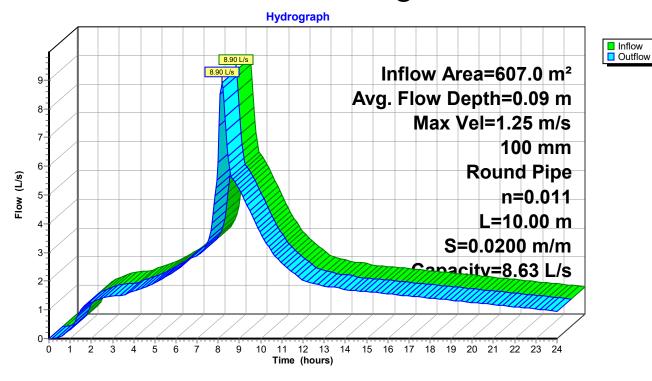
Peak Storage= 0.1 m³ @ 8.16 hrs Average Depth at Peak Storage= 0.09 m

Bank-Full Depth= 0.10 m Flow Area= 0.01 m², Capacity= 8.63 L/s

100 mm Round Pipe n= 0.011 PVC, smooth interior Length= 10.00 m Slope= 0.0200 m/m Inlet Invert= 0.000 m, Outlet Invert= -0.200 m



Reach 39R: 100mmØ @ 2%



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Summary for Reach 41R: 100mmØ @ 7%

Inflow Area = 1,217.0 m², 76.99% Impervious, Inflow Depth > 278 mm for 1% AEP + 20% CCF event

Inflow = 18.69 L/s @ 8.08 hrs, Volume= 337.7 m^3

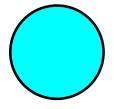
Outflow = 17.64 L/s @ 8.33 hrs, Volume= 337.7 m³, Atten= 6%, Lag= 15.1 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

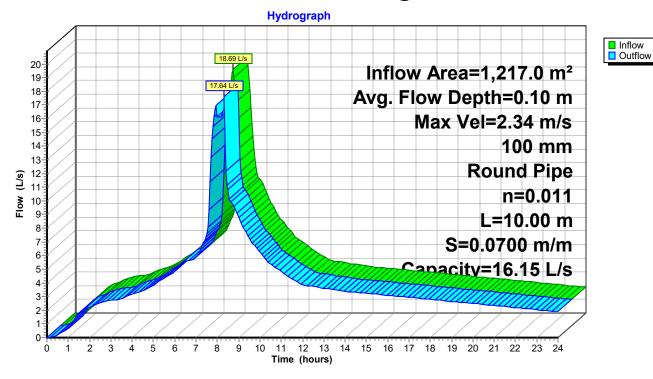
Max. Velocity= 2.34 m/s, Min. Travel Time= 0.1 min Avg. Velocity = 1.62 m/s, Avg. Travel Time= 0.1 min

Peak Storage= 0.1 m³ @ 8.00 hrs Average Depth at Peak Storage= 0.10 m Bank-Full Depth= 0.10 m Flow Area= 0.01 m², Capacity= 16.15 L/s

100 mm Round Pipe n= 0.011 PVC, smooth interior Length= 10.00 m Slope= 0.0700 m/m Inlet Invert= -0.200 m, Outlet Invert= -0.900 m



Reach 41R: 100mmØ @ 7%



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Summary for Pond 30P: Existing 5m Long Spreader Bar

277 mm for 1% AEP + 20% CCF event Inflow Area = 1,217.0 m², 76.99% Impervious, Inflow Depth >

Inflow 17.64 L/s @ 8.33 hrs, Volume= 337.7 m³

17.64 L/s @ 8.33 hrs, Volume= 337.7 m³, 17.64 L/s @ 8.33 hrs, Volume= 337.7 m³ Outflow 337.7 m³, Atten= 0%, Lag= 0.0 min

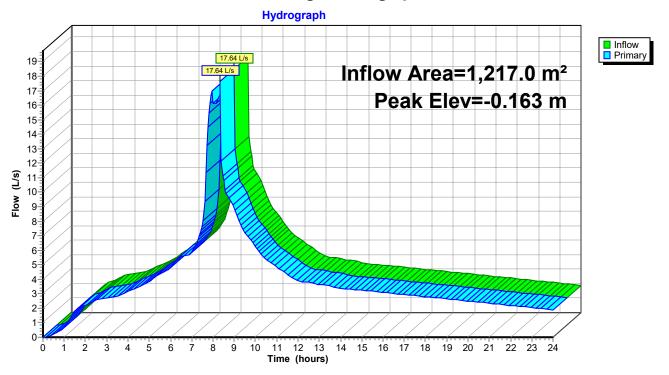
Primary

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Peak Elev= -0.163 m @ 8.34 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	-0 900 m	30 mm Vert. Orifice/Grate X 11.00 C= 0.600

Primary OutFlow Max=16.96 L/s @ 8.33 hrs HW=-0.211 m (Free Discharge) -1=Orifice/Grate (Orifice Controls 16.96 L/s @ 2.18 m/s)

Pond 30P: Existing 5m Long Spreader Bar



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Summary for Pond 38P: 3 x 25,000L Rainwater Tanks

Inflow Area = 607.0 m²,100.00% Impervious, Inflow Depth > 285 mm for 1% AEP + 20% CCF event

Inflow = 11.69 L/s @ 7.94 hrs, Volume= 173.1 m^3

Outflow = 8.90 L/s @ 8.16 hrs, Volume= 171.8 m³, Atten= 24%, Lag= 13.2 min

Primary = $8.90 \text{ L/s } @. 8.16 \text{ hrs, Volume} = 171.8 \text{ m}^3$

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Peak Elev= 0.508 m @ 8.16 hrs Surf.Area= 30.5 m² Storage= 15.5 m³

Plug-Flow detention time= 25.6 min calculated for 171.4 m³ (99% of inflow)

Center-of-Mass det. time= 19.5 min (663.9 - 644.5)

Volume	Invert	Avail.Storage Storage Description
#1	0.000 m	79.4 m ³ 3.60 mD x 2.60 mH Vertical Cone/Cylinder x 3
Device	Routing	Invert Outlet Devices
#1	Primary	0.000 m 65 mm Vert. Orifice/Grate C= 0.600
#2	Primary	0.440 m. 100 mm Vert Orifice/Grate

Primary OutFlow Max=8.86 L/s @ 8.16 hrs HW=0.508 m (Free Discharge)

1=Orifice/Grate (Orifice Controls 6.08 L/s @ 1.83 m/s)

—2=Orifice/Grate (Orifice Controls 2.78 L/s @ 0.49 m/s)

Pond 38P: 3 x 25,000L Rainwater Tanks

