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Variation to Land Use Consent 2190181-RMALUC for Canopy Extension, Packaging Extension & Sign

Seeka Limited
153 Waipapa Road, Kerikeri

June 2025

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Report Approval Details				
Client	Seeka Limited		Job No.	638080
Report Title	Variation to Land Use Consent 2190181-RMALUC for Canopy Extension, Packaging Extension & Sign		Revision	1
	Prepared By	Position	Signature	Date
Author	Shae Crossan	Director Planner		16.06.2025
Reviewer	Rebecca Bray	Senior Planner		16.06.2025

Document Control					
Revision	Description	Date	Author	Reviewer	Approver
1	Final	16.06.2025	SMC	RB	SMC

Distribution				
Revision	No. of Copies	Format	Distributed to	Date
1	1	PDF	Far North District Council	16.06.2025

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To	Far North District Council
Applicant	Seeka Limited
Location & Legal Description	153 Waipapa Road, Kerikeri (Lot 3 DP 196433)
Proposal	Variation to Land Use Consent 2190181-RMALUC for Canopy Extension, Packaging Extension & Sign
Zoning	Horticultural Processing & Rural Living (Far North District Plan)
Activity Status	Discretionary Activity to change conditions of land use consent R2190181-RMALUC pursuant to Section 127 RMA.
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2 Introduction

Pursuant to Section 88 of the Resource Management Act 1991 (the Act), Stratum Consultants Limited applies to the Far North District Council for a variation to the conditions of R2190181-RMALUC to add an additional canopy and packaging extension to the packhouse building consented and constructed under R2190181-RMALUC.

The canopy will provide additional area for all weather bin storage and unloading/loading of fruit into the existing packhouse and will be constructed over an existing concrete slab loading area. The packaging area will be added to the southern side of the existing packhouse.

No additional throughput, traffic, staff or parking over and above the existing consent is necessary, As above, the canopy and packaging extensions are only to provide cover over and existing loading/storage area and additional space for packaging.

In addition, a sign is proposed at the northern front of the site related to the applicants' operations on site.

This variation application is made pursuant to Sections 88 and 127 of the Resource Management Act 1991 and incorporates all information required by Form 9 and Schedule 4 of the Act.

If you have queries relating to this application, please do not hesitate to contact the writer on (07) 571 4500.

3 Site Description

3.1 Legal Description

The applicant company owns the subject property, which is legally described as Lot 3 DP 196433 held in Record of Title (RT) NA124C/509, with of a total area of 6.8752ha. A copy of the RT is attached at Appendix A.

3.2 Relevant Background

The horticultural processing and storage facilities at the subject site have been operating on site for a number of years. The site has been developed to maximise the horticultural processing activity undertaken at the subject site. Resource consents for additions to the facility and earthworks (2190181-RMALUC) & (2190096-RMALUC) were approved in 2018 in order to expand the existing processing and storage facilities to meet increasing demand of fruit supply. A further resource consent (2200059-RMACOM) was issued in 2019 for bulk and location infringements and earthworks for alterations and additions to the site.

A copy of the existing resource consent subject to this application is attached at Appendix C.

3.3 Physical Description

The subject site ("the site") is located at 153 Waipapa Road, Kerikeri and is comprised of two spatial Zones under the Operative District Plan, as shown in figures 2 and 3 below. The majority of the site is comprised of Horticultural Processing Zoned land, with the remainder of the site being comprised of Rural Living Zoned land.

The topography of the site is flat to gently undulating.

The site gains access to Waipapa Road via an existing concrete vehicle entrance and an internal concrete drive at the centre of the site frontage. Traffic from the site also exits onto Waipapa Road via an existing vehicle entrance which is located at the western frontage of the subject site.

The site contains an existing packhouse and cool storage facilities as well as canopies, office space and load out areas which have been developed from 1981 to present.

The site is surrounded by Rural Living Zoned properties on all external boundaries, with the exception of the northwestern boundary, where the adjoining site is zoned Rural Production.

There are no designations or other special features depicted on or near the site according to Councils Operative District Plan Maps.

It should however be noted that although there are no natural hazards shown on the Operative online maps, the Regional Council Flood Maps (along with the PDP maps) show the southern portion of the site to be subject to River Flood Hazards Zones, as shown in Figure 3 below. The south end of the proposed canopy will encroach into this area, however as it is an open-ended structure for storage/loading there will be no effects from flooding and no flood displacement will be created.

Figure 1: Aerial Photograph of the Subject Site (Source: GRIP, 2025)

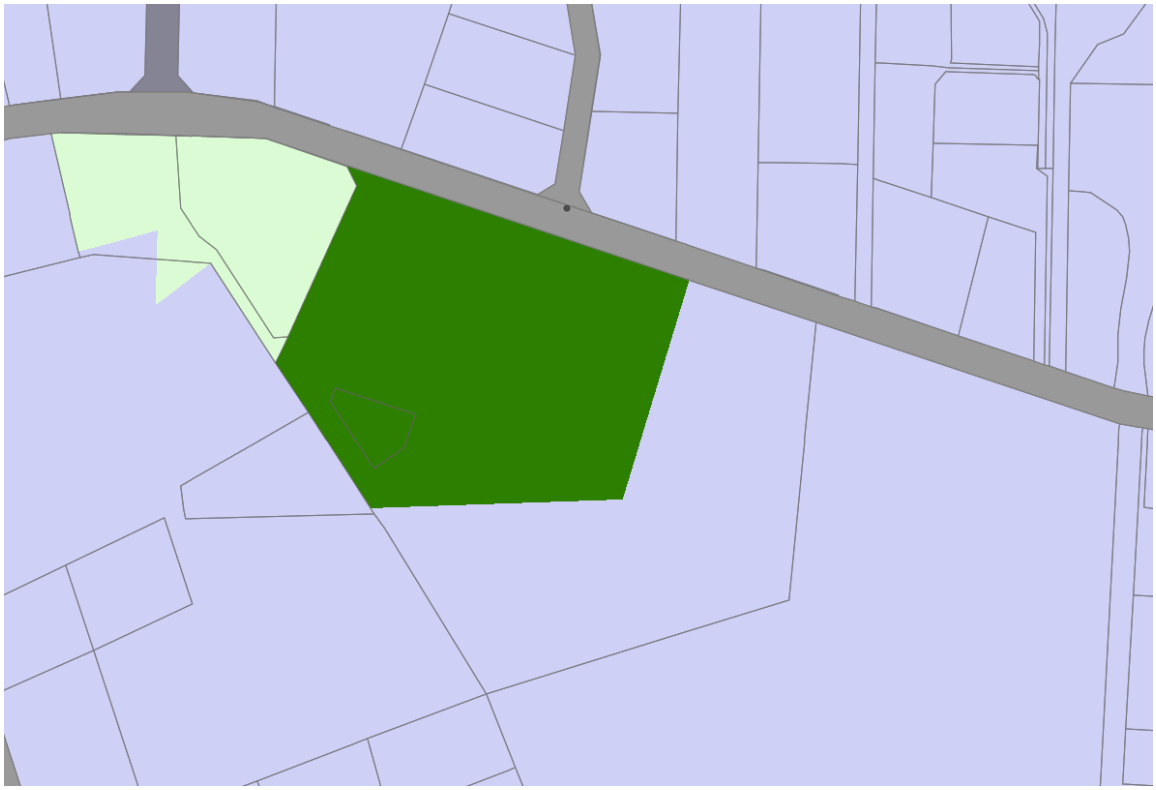


Figure 2: Sites Zones (Far North ODP Maps, 2025)

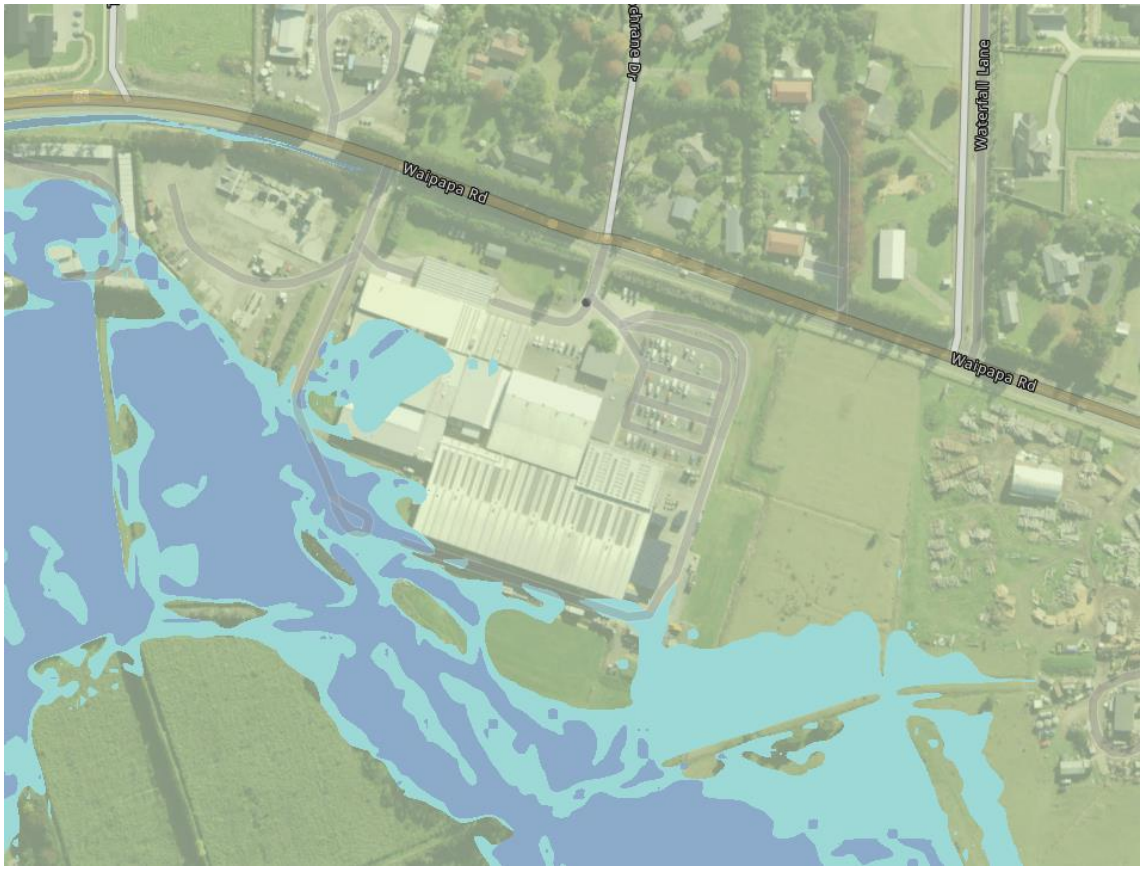


Figure 3: Northland Regional Council River Flood Hazards Map

4 Proposal Description

It is proposed to vary the conditions of R2190181-RMALUC to provide for a new canopy to be constructed on the eastern side of the existing packhouse building consented and constructed under R2190181-RMALUC.

The canopy will provide additional area for all weather bin storage and unloading/loading of fruit into the existing packhouse and will be constructed over an existing concrete slab loading area.

No additional throughput, traffic, staff or parking over and above the existing consent is necessary as above, given the canopy is only to provide cover over and existing loading area.

The proposed canopy will have a roof area of 1430m² (20m wide x 71.5m long) and a maximum height of 10.213m above the existing concrete slab level.

As shown on the architectural plans the canopy will be open ended on the northern, eastern and southern side and will adjoin the eastern side of the existing packhouse.

The proposed packaging extension will have a roof area of approximately 400m², with a height of 4m. The extension is to be full enclosed with a roller door on the southern facade.

There will be no change to the maximum throughput of the site, staff numbers or the consented traffic generation.

In terms of stormwater from the roof area, whilst the area is already hard surfaced, water collected from the new canopy area is to be piped to additional attenuation tanks in the location of the existing stormwater attenuation tanks in the south of the site and as such there will be no increased stormwater runoff.

The proposed sign will be located at the northern frontage of the site adjacent to Waipapa Road as shown on the attached site plans. The sign is a "v" shaped sign primarily for staff attraction and advertising associated with site activities and will have two printed panels 3m high by 6m wide with a maximum height of 5m above ground level as shown on the plans attached at Appendix B.

4.1 Change to Conditions

The proposed changes to the conditions are detailed in the following section (deletions shown as a ~~strikethrough~~ and insertions in **bold and underlined**).

1. *The proposal is to be carried out and completed generally in accordance with the information that forms the application prepared by Stratum Consultants Limited*

dated September 2018, inclusive of Appendices A – J, and the following additional information received:

- *Plans prepared by Stratum Consultants Limited entitled 'Drawing Set for Resource Consent' Sheets 00-21, where Sheets 00-19 are marked as 'Issued for Engineering Approval' dated 11 September 2018, and Sheets 20-21 are marked as 'Issued for Resource Consent' dated 5 September 2018;*
- *Memorandum prepared by Stratum Consultants Ltd dated 24th September 2018 received by the Council on the 9th October 2018;*

And the variation application prepared by Stratum Consultants Limited dated June 2025, inclusive of Appendices A – E; and

- ***Plans Prepared by BCD Group entitled "Seeka Stage 1B – Packhouse Canopy Extension, 153 Waipapa Road, Kerikeri: Job number 25-0030***
  - ***Sheet 000, Rev 4***
  - ***Sheet A-100, Rev 6***
  - ***Sheet A-101, Rev 4***
  - ***Sheet A-150, Rev 3***
  - ***Sheet A-200, Rev 4***
  - ***Sheet A-200a, Rev 1***
  - ***Sheet A-205, Rev 4***
  - ***Sheet A-206, Rev 5***
- ***Signage Plan x 1 V Shaped Billboard, x 2 changeable printed canvass sign panels @ 3000mm x 6000mm, Total Height 5m ground toi top of sign panel***
- ***Stormwater Memorandum prepared by Stratum Consultants Limited, entitled Additional Canopy Extension – Stormwater mitigation, dated 11 June 2025 and referenced 638080-CLV-SW Memo***
- ***Geotechnical Plan Review prepared by Stratum Consultants Limited, entitled Geotechnical Plan Review of Proposed Stage 1B Canopy Extension and Packaging Lean-to 153 Waipapa Road, Kerikeri, dated 12 June 2025 and referenced 638080—GEO-C002***

subject to the following conditions.

Comment: Condition 1 is proposed to be updated to reflect this variation application and the relevant plans and information associated with the canopy and packaging extension and sign.

No other changes are considered necessary or required.

5 District Plan

Having reviewed the Proposed District Plan there are no proposed rules/provisions that would have immediate legal effect in respect of the proposed canopy and packaging extensions on the subject site.

Under the Operative District Plan, the proposed canopy would comply with the permitted height of the Horticultural Processing Zone, however the corner that encroaches through the Rural Living Zone will exceed the maximum 9m height limit.

Furthermore, the proposed canopy will infringe the set back and landscaping requirements under Rules 18.4.6.1.2 a) b) & c), whereby the proposed development will overlap the zone boundary resulting in development located within both the Horticultural Processing Zone and Rural Living Zone portions of the title.

We note that as the area of the canopy is already surfaced in concrete, no further impermeable surface will be created.

The proposed packaging extension remains well within the permitted height limit and clear of external boundaries.

There will be no increase in traffic intensity as a result of the proposed canopy and packaging extension.

Overall, if consent for the canopy was sought on a standalone basis consent would be required as a Discretionary Activity under the Operative District Plan.

The proposed sign would require consent as a Restricted Discretionary Activity under Rule 16.6.2, as the proposed sign coupled with the existing site signage will exceed 3m² in area as permitted by 16.6.1.3.

Given a s127 application as proposed triggers a Discretionary Activity status, it is considered that a variation to conditions of consent is appropriate given that the proposed canopy and signage are an extension to the previously consented site development, and the effects of the extension and an assessment of the relevant objectives and policies is included within this application.

6 Objectives and Policies

6.1 Operative District Plan

6.1.1 Horticultural Processing Zone

18.4.3 Objectives

- *To provide for the needs of the horticultural processing industry, while protecting the character and amenity of the surrounding area.*
- *To avoid, remedy or mitigate adverse effects of new or additional horticultural processing facilities in the zone.*
- *To avoid, remedy or mitigate adverse environmental effects of activities on adjoining land.*

18.4.4 Policies

- *That the effects of activities that could compromise the character and amenity values of the area be avoided, remedied or mitigated.*
- *That standards be applied that protect visual and environmental amenity within the zone, and the amenity of adjacent zones.*
- *That all activities should provide for a stormwater disposal system incorporating Low Impact Design principles.*

Comment: The varied proposal is considered to be in keeping with the objectives and policies above.

The proposal is for alterations of a well-established horticultural processing and storage facility at the subject site to improve efficiencies for packaging, bin storage and loading.

The Horticultural Processing zone was created specifically for the subject site, to enable horticultural processing developments.

The proposed canopy and packaging additions will not result in significant visual dominance effects on adjoining sites and the immediate surrounding area given the separation retained from adjoining properties.

The dual zoned subject site is owned by the applicant company; therefore, the applicants authorise the development and any associated effects on their Rural Living portion of the subject site. It is considered there is sufficient buffer between the proposed development and adjoining properties.

As previously stated, as the proposal is to remain generally within the existing hard stand area, no increase in stormwater discharges from the completed development is proposed.

In light of the above assessment, it is considered that the varied proposal remains consistent with the relevant objectives and policies of the natural and physical resource, minerals and soils, signs and Horticultural Processing Zone of the Far North District Council Operative District Plan.

6.1.3 Signs

16.3 OBJECTIVES

16.3.1 To maintain and enhance amenity and heritage values whilst providing for a wide range of sign and lighting activities in a number of locations.
16.3.2 To ensure that the safe and efficient operation of the road transport and pedestrian network and other infrastructure will not be adversely compromised by sign and lighting activities.
16.3.3 To minimise the clutter of signs.

16.4 POLICIES
16.4.1 That the adverse effects of signs in the District be limited through size, type, duration, number and location controls.
16.4.2 That the consolidation of signs be encouraged to reduce the cumulative effects of sign proliferation and clutter.
16.4.3 That the adverse effects of outdoor lighting in the District be limited through intensity, location, and duration controls.
16.4.4 That sign and lighting activities located on scheduled historic sites, buildings and objects shall be compatible with the heritage values being protected.

Comment: The proposed sign is well setback from the road carriageway and fully within the site boundaries. The sign is not illuminated or will not flash be affecting vehicle safety on the adjacent road network.

The sign is directly related to the applicant's activity and ownership of the site.

Given the size of the site and operations, other than one existing freestanding sign there will be no cluttering of signs.

There are no known heritage features that would be impacted by the sign as proposed.

6.2 Proposed District Plan

Whilst the rules in the Proposed District plan relating to the activity do not have legal effect., as required by the Act an assessment of the relevant objectives and policies of the Proposed District Plan is included below.

6.2.1 Horticultural Processing Zone

Objectives

HPFZ-O1 Horticulture processing facilities are recognised for their contribution to the social and economic wellbeing of the District and are managed to ensure their long-term protection.

HPFZ-O2 The Horticulture Processing Facilities zone enables the storage, processing, packing and distribution of produce including ancillary facilities, while containing adverse effects onsite; addressing the adverse effects on the supporting roading network.

HPFZ-O3 Land use and subdivision in the Horticulture Processing Facilities zone is supported by appropriate infrastructure.

HPFZ-O4 Land use and subdivision in the Horticulture Processing Facilities zone avoids any reverse sensitivity issues that may occur within the zone and at the zone interface.

Policies

HPFZ-P1 Enable buildings, structures and activities associated with the horticulture processing facilities where any adverse effects are managed to protect the surrounding character and amenity values.

HPFZ-P2 Manage land use and any associated stormwater runoff by:

a. *utilising the principles of low impact design;*
b. *determining the impacts on Councils reticulated networks; and*
c. *addressing the impacts on existing flood hazards, overland flows paths and the surrounding catchments.*

HPFZ-P3 Manage land use that compromises the purpose and function of the Horticulture Processing Facilities zone.

HPFZ-P4 Manage land use to ensure that the Horticulture Processing Facilities zone is appropriately serviced by infrastructure through:

a. *requiring connections to be provided where reticulated services are available; and*
b. *requiring onsite infrastructure to be provided where reticulated services are not available.*

HPFZ-P5 Provide for the removal of a screening shelterbelt planting if it can be demonstrated that:

a. *it is not required to screen the activities occurring on the site;*
b. *it is not required to mitigate noise or light spill effects; and*
c. *the removal will not create an adverse effect on the surrounding character and amenity values of the area.*

HPFZ-P6 Manage land use and subdivision to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application:

a. *the bulk and scale of buildings, structures, outdoor storage;*
b. *parking and loading requirements;*
c. *number of people on site and visitors, including seasonal peaks;*
d. *level of noise emissions and light spill;*
e. *hours and days of operation, including seasonal peaks;*
f. *character and amenity of the surrounding environment;*
g. *appropriate roading and access, including the type and volume of traffic;*
h. *stormwater effects, including impacts on Council's reticulated network, overland flow paths and surrounding catchments;*
i. *stormwater, wastewater and water supply management, including firefighting supply;*
j. *any provision of low impact design principles*
k. *the temporary or permanent nature of any adverse effects;*
l. *whether the purpose and function of the horticulture processing facility is compromised;*
m. *the management of trade waste; and*
n. *any natural hazards.*

Comment: The proposal is considered to be in keeping with the objectives and policies above for the horticultural processing zone ion the PDP.

The proposal is for alterations of a well-established horticultural processing and storage facility at the subject site to improve weather protection and provide for bin storage and loading.

The Horticultural Processing zone was created specifically for the subject site, to enable horticultural processing developments.

No additional traffic will be generated by the proposed canopy, which will simply cover an existing loading area.

The proposed additions are internal to the site and will not result in significant visual dominance effects on adjoining sites and the immediate surrounding area given the setback distances.

No landuse or subdivision is proposed as part of this application that would create any reverse sensitivity effects.

The dual zoned subject site is owned by the applicant company; therefore, the applicants authorise the development and any associated effects on their Rural Living portion of the subject site. It is considered there is sufficient buffer between the proposed development and adjoining properties.

As previously stated, as the canopy and packaging areas will cover and existing concrete hardstand area, no additional stormwater will be generated from that which exists across the site at present. Provision is made for capture and attenuation of the new roof collected stormwater as detailed in the stormwater assessment attached.

In light of the above assessment, it is considered that the proposal is consistent with the relevant objectives and policies of Horticultural Processing Zone of the Far North District Council Proposed District Plan.

6.2.2 Signs

Objectives

SIGN-O1 Signs are consistent with the natural character, amenity, cultural and heritage values of the zone and receiving environment.

SIGN-O2 Signs promote health and safety and do not adversely affect infrastructure, particularly the transport network.

SIGN-O3
Signs contribute to the social, cultural and economic wellbeing of the community.

Policies

SIGN-P1
Allow the use of signs of a scale, size and intensity across a range of zones while avoiding, remedying or mitigating adverse effects on:

a. *character and amenity values;*
b. *cultural and heritage values;*

c. *the legibility and function of a place; and*
d. *the safety and efficiency of the transport network.*

SIGN-P2
Protect historic heritage and cultural values by requiring signs to be consistent with any identified and understood values by:

a. *restricting unnecessary, unsympathetic and large-scale signage; and*
b. *avoiding signage that will dominate, obscure or detract from these identified values.*

SIGN-P3
Ensure that signs do not compromise the safe and efficient use of the transport network by managing:

a. *the type, scale, design, location and direction of signs having regard to the road type and speed environment;*
b. *distraction or confusion for users through the control of proliferation, illumination, flashing and moving images and digital signage:*
c. *any obstruction caused by signs projecting over the road boundary; and*
d. *signage that does not relate to the activity on-site.*

SIGN--P4
Enable the use of signs to ensure the health and safety of the community and facilitates the navigation and legibility of a place.

SIGN-P5
Allow signs that provide for community, social and cultural wellbeing where they display:

a. *the location information about public or community facilities;*
b. *place names, historic, cultural or spiritual information of significance; and*
c. *does not result in adverse effects, including cumulative effects, on the character and amenity of the zone and receiving environment.*

SIGN-P6
Manage signs, to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application:

a. *bulk, scale, size and design;*
b. *number, location and orientation;*
c. *type, including whether they are, illuminated, flashing or three-dimensional;*

d. duration, whether the sign is temporary or permanent;
e. proliferation of signs and visual clutter;
f. ensuring signs are of a scale and are consistent with the amenity values of a zone and the receiving environment; and
g. cumulative adverse effects on character and amenity of a zone or receiving environment.

Comment: As with the assessment of the ODP objectives and policies, the proposed sign is well setback from the road carriageway and fully within the site boundaries. The sign is not illuminated or will not flash or have moving images affecting vehicle safety on the adjacent road network.

There will be no infrastructure affected by the proposed signage.

The sign is directly related to the applicant's activity and ownership of the site and is not large and will not be overly dominant in the existing environment.

Given the size of the site and operations, other than one existing freestanding sign and the signed on the building, there will be no cluttering of signs.

There are no known heritage features that would be impacted by the sign as proposed.

Overall, it is considered that the proposed signage is consistent with the intentions of the objectives and policies and appropriate fort the site and locale.

7 Assessment of Environmental Effects

In accordance with Section 88(2)(b) of the Resource Management Act 1991 and Clause 1(d) of the Fourth Schedule to the Act, this assessment of the actual or potential effects on the environment of the proposed activity has been prepared in such detail as corresponds with the scale and significance of the effects that the proposed activity may have on the environment.

7.1 Amenity & Character Effects

The proposed additional canopy will provide for all weather vehicle loading and bin storage over an existing loading and storage area and the packaging area additional packaging storage and space, maximising efficiency of the existing post-harvest operation on site.

As there will be no change to the maximum throughput of the site, there will be no change in the expected traffic generation or increased traffic effects on the adjacent road network. There will be no alterations to the existing vehicle access locations to the site.

Likewise, there will be no change to operational hours or change to noise sources through the proposed addition of the canopy and packaging area.

Whilst the canopy does not meet the setback or height requirements between/for the rural living zoned portion of the site, this is an internal effect to the site only noting this zone boundary is internal. The proposed canopy continues to comply with the required yard setbacks to all external boundaries.

The proposed signage is minimal in the context of the overall site development and is well setback from the boundary. The signage will not be illuminated or flashing affecting traffic or neighbours opposite the site.

Overall, it is considered that any effects of the varied proposal will be less than minor and no greater than those envisaged by the original consent decision.

7.2 Stormwater Effects

Whilst the canopy and packaging area will result in additional roof area on site, the area to be covered is already formed in concrete slab and as such there is already hard surfacing in this location and no additional runoff will be generated into the downstream catchment from the global site.

Stormwater management measures are proposed including attenuation tanks to collect and store the runoff from the new canopy and packaging area roofs.

Based on the above, it is considered that any stormwater effects from the varied proposal will be no greater than the original consent and therefore less than minor.

7.3 Summary

The assessment of environmental effects presented above is guided by the provisions of Act and the assessment criteria of the District Plan. Overall, this assessment shows that the actual and potential effects of the varied proposal on the environment will be less than minor and consistent with the original decision.

8 Statutory Assessments

Sec 127 Resource Management Act

Section 127 of the RMA allows for variation to conditions of consent as described below:

s.127
(1) The holder of a resource consent may apply to a consent authority for a change or cancellation of a condition of the consent, subject to the following:
(a) The holder of a subdivision consent must apply under this section for a change or cancellation of the consent before the deposit of the survey plan (and must apply under section 221 for a variation or cancellation of a consent notice after the deposit of the survey plan); and
(b) no holder of any consent may apply for a change or cancellation of a condition on the duration of the consent.
(3)Sections 88 to 121 apply, with all necessary modifications, as if –
(a) the application were an application for a resource consent for a discretionary activity; and
(b) the references to a resource consent and to the activity were references only to the change or cancellation of a condition and the effect of the change or cancellation respectively.
(4) For the purposes of determining who is adversely affected by the change or cancellation, the local authority must consider, in particular every person who –
(a) made a submission on the original application; and
(b) may be affected by the change or cancellation.

Assessment Requirements

Section 127 of the RMA allows for a consent holder to apply to a consent authority to change any condition of resource consent provided the change does not involve a condition with respect to the duration of that consent. In determining the application for change of consent conditions, the consent authority shall apply Sections 88 to 121 of the RMA as if the application was for resource consent for a Discretionary Activity, therefore the consent authority may grant or refuse the application, and if it grants the application may impose conditions under section 108 RMA.

The consent authority must, however, only consider the effects of the proposed change with reference to the specific consent conditions to be varied. In determining who may be adversely affected by the change, the consent authority must consider every person who made a submission on the original application and may be affected by the change.

In the case of the original application, no party made a submission to the application and the application was approved under non-notified delegated authority.

In determining affected parties, it is important to note that it is the effects of the change (not the activity itself) which are relevant. The proposed variation retains the essential elements of the activity and as previously noted any effects are considered minimal in terms of the scale of the development.

All other conditions of the original consent are still considered appropriate, and we do not expect that there will be any change to the original conditions except those described previously. No departure from the intent of these conditions will result from the granting of this variation application.

9 Assessment Requirements of the Resource Management Act 1991

When considering an application for Resource Consent, the consent authority must, subject to Part II, have regard to:

• Any actual and potential effects on the environment of allowing the activity; and
• Any relevant provisions of the Regional Policy Statement, Regional Plans and any other matters the consent authority considers relevant to determine the application.

The subsequent sections of this report set out relevant matters pertaining to effects of the proposal as well as statutory regional planning documents and provide commentary with respect to consideration of the proposal against these assessment requirements of the Resource Management Act 1991.

10 Part II RMA Assessment

10.1 Section 5

The proposal has regard to the purpose of the Act in that natural and physical resources are being managed in a sustainable manner.

The proposal does not detrimentally affect the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations, nor the life supporting capacity of water, soil, air and ecosystems within the locale.

10.2 Section 6

Whilst the site contains areas identified as floodable, the proposal does not result in any filling or displacement of floodwaters and the proposed canopy is an open structure which will not be affected by flooding. There are no other Section 6 matters that require any further consideration.

10.3 Section 7

Regard has been given to:

- The efficient use and development of natural and physical resources;
- The maintenance and enhancement of amenity values; and
- Maintenance and enhancement of the quality of the environment.

The proposal is seen as an efficient use of the natural resources on site and the physical resources. There will be no change to amenity values or the quality of the environment.

10.4 Section 8

Regard has been given to the Principles of the Treaty. It is not considered that there are any Treaty implications.

10.5 Section 95 Assessment

10.5.1 Public Notification

Section 95A of the Act sets out the circumstances where an application for resource consent must or should be publicly notified through consideration of a number of steps.

In terms of mandatory public notification, as detailed by Step 1 the applicant has not requested public notification, the proposal is not for an exchange of reserve land under the reserves act, and public notification is not required under Sec 95(c).

Regarding Step 2, public notification is not precluded as there is no applicable NES precluding public notification, the application is not a controlled activity or boundary activity.

Regarding Step 3, there is no applicable NES that requires public notification, and adverse effects are considered to be minor overall.

In terms of Step 4, we do not consider that there are any special circumstances that require public notification, and that the application therefore does not require public notification under Section 95A (9)(b).

Accordingly, we consider that the application need not be publicly notified.

10.5.2 Limited Notification

Section 95B of the Act, in conjunction with Sections 95E & 95F detail the process where limited notification of the consent application may be undertaken.

In terms of Step 1, there are no applicable protected customary rights groups or customary marine title groups. The site is not subject to (or adjacent to) a statutory acknowledgement area.

Regarding Step 2, limited notification is not precluded by an NES and the application is not a controlled activity or a prescribed activity.

In the case of Step 3, the application is not for an infringed boundary activity and again is not a relevant prescribed activity excluding notification.

In terms of Section 95E, it is our opinion that there are no affected parties given the nature and scale of the change. The proposed canopy meets the required setback from external boundaries and the varied proposal will not result in any increase in vehicle movements. The consented maximum throughput will be retained.

In terms of Step 4, we consider that no special circumstances exist that would require notice to be served on any other party and as such it is considered that the application can be processed on a non-notified basis.

11 Conclusion

The proposal seeks to change the conditions of R2190181-RMALUC as described in the application to add an additional canopy over an existing loading and storage areas, a packaging extension and for an additional sign.

As required by the Act, the proposed varied development has been assessed in terms of the Operative Far North District Plan, and the actual and potential effects of the activity on the environment.

With regard to the assessment of environmental effects contained in Section 7.0 of this application, it was concluded that any adverse effects of the proposed changes to the development on the environment will be less than minor.

The varied proposal remains consistent with the relevant objectives and policies of the District Plan. The proposal is also consistent with the intentions of the objectives and policies for the zone under the Proposed District Plan.

Following thorough consideration of the preceding information provided within this application, it is requested that FNDC approves the varied proposal on the following grounds:

• Any potential adverse environmental effects resulting from the proposal will be less than minor and consistent with the existing consent.

• The proposal is consistent with all relevant matters contained within Part II of the Resource Management Act 1991;

Accordingly, we seek that Council take a positive approach to this application and support it through the non-notified resource consent process.

Shae Crossan
Stratum Consultants Ltd
16 June 2025
Date

Appendix A

Record of Title

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **NA124C/509**

Land Registration District **North Auckland**

Date Issued 09 February 2000

Prior References
NA48A/1264

Estate Fee Simple

Area 6.8752 hectares more or less

Legal Description Lot 3 Deposited Plan 196433

Registered Owners
Seeka Limited

Interests

Appurtenant hereto is a water right specified in Easement Certificate 608613.4 - 2.4.1976 at 10.51 am

Subject to a right of way and rights to transmit electricity and telecommunications and convey water over parts marked A & B and a right to drain water over parts marked B & C on DP 196433 specified in Easement Certificate D477115.7 - 9.2.2000 at 2.25 pm

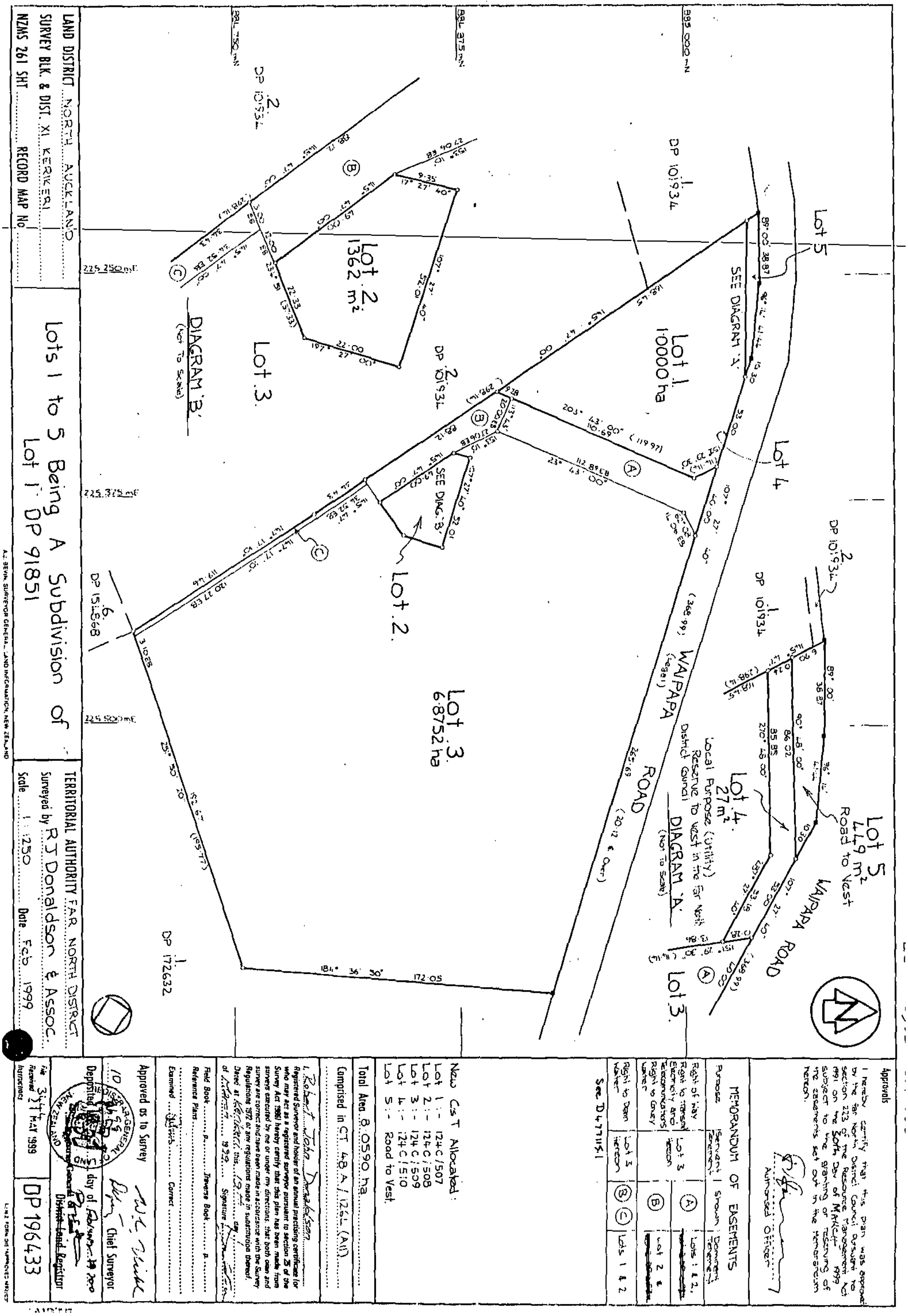
The easements specified in Easement Certificate D477115.7 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right of way over part marked A DP 196433 created by Transfer 5380338.3 - 23.10.2002 at 9:00 am

11100128.2 Mortgage to Westpac New Zealand Limited - 30.4.2018 at 4:50 pm

11289501.1 Notification that a building consent issued pursuant to Section 72 Building Act 2004 identifies Inundation as a natural hazard- 20.11.2018 at 7:00 am

12285500.9 Variation of Mortgage 11100128.2 - 10.11.2021 at 2:49 pm


LAND DISTRICT NORTH AUCKLAND
SURVEY BLK. & DIST. XI KERIKERI
NZMS 261 SHT ...... RECORD MAP No. ......
Lots 1 to 5 Being A Subdivision of Lot 1 DP 91851
TERRITORIAL AUTHORITY FAR NORTH DISTRICT
Surveyed by R J Donaldson & Assoc.
Scale 1:1250 Date Feb 1999
Lot 1 1.0000 ha
Lot 2 1362 m²
Lot 3 6.8752 ha
Lot 4 27 m² Local Purpose (Utility) Reserve to vest in the Far North District Council
Lot 5 449 m² Road to Vest
WAIPAPA ROAD
DIAGRAM 'A' (Not To Scale)
DIAGRAM 'B' (Not To Scale)
SEE DIAGRAM 'A'
SEE DIAG. 'B'
DP 101934
DP 151868
DP 172632
Approvals
MEMORANDUM OF EASEMENTS
Purpose | Shown | Servient Tenement | Dominant Tenement
Right of Way, Right to transmit Electricity and Telecommunications, Right to Convey Water | Lot 3 | (A) | Lots 1 & 2
Lot 3 | (B) | Lot 2
Right to Dam Water | Lot 3 | (B)(C) | Lots 1 & 2
See D471151
New C of T Allocated:
Lot 1 :- 124C/507
Lot 2 :- 124C/508
Lot 3 :- 124C/509
Lot 4 :- 124C/510
Lot 5 :- Road to Vest
Total Area 8.0590 ha
Comprised in CT 48A/1261 (All)
Approved as to Survey
Chief Surveyor
Deposited
District Land Registrar
DP 196433

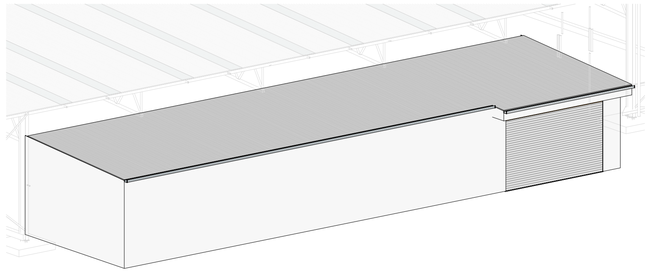
Appendix B

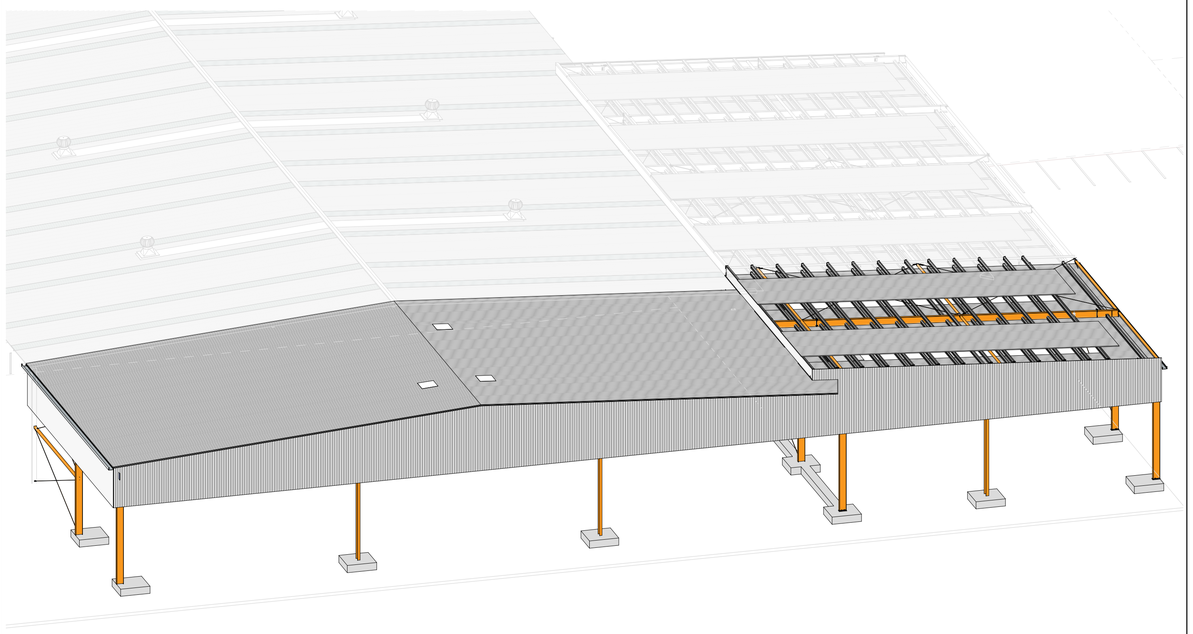
Architectural Plans

JOB NUMBER: 25-0030

SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION
153 WAIPAPA ROAD, KERIKERI

bcdgroup.nz





DRAWING LIST

SHEET NUMBER	SHEET NAME	CURRENT REVISION DATE	REVISION
000	INDEX & STANDARD NOTES	06-06-2025	4
A-100	PROPOSED SITE PLAN	06-06-2025	6
A-101	PROPOSED FLOOR PLAN	06-06-2025	4
A-150	ROOF PLAN	06-06-2025	3
A-200	EXTERIOR ELEVATIONS	06-06-2025	4
A-200a	EXTERIOR ELEVATIONS	06-06-2025	1
A-205	CROSS SECTIONS	06-06-2025	4
A-206	CROSS SECTIONS	06-06-2025	3

Notes

1. Drawings issued prior to the completion of Construction issue are for the purpose of enabling the client/contractor to prepare, submit and negotiate a cost competitive and compliant tender for the project only.
2. The client must act in good faith and use all reasonable endeavours to work on a regular basis with the consultant to minimise the risk of error to develop solutions that fulfil the project requirements and embrace the clients preferred construction methodologies and practices.
3. The building consent/tender documentation has been prepared such that a suitably competent contractor can prepare tender documentation. The documents are still subject to change as a result of structural peer review/ council RFI's and final pre-construction coordination between design disciplines and as such BCD recommend that the contractor allows suitable construction contingencies within their tender to satisfy the potential of design changes.

Standard Abbreviations

General Abbreviations

appr.	approved
bldg	building
CL	centre line
cnr	corner
COS	confirm on site
Ø	diameter
dim.	dimension
DTF	document transmittal form
ex.	existing
FFL	finish floor level
m	metre
max.	maximum
min.	minimum
misc.	miscellaneous
mm	millimetre
No.	number
NTS	not to scale
NZS	New Zealand Standard
OD	outside diameter
R	radius
ref.	reference
RL	reduced level
SK	sketch
spec.	specification
SQ	square
TBC	to be confirmed
typ.	typical

Structural Abbreviations

alt.	alternating
FSBW	full strength butt weld
CHS	circular hollow section
CJ	control joint
conc.	concrete
crs	centres
cvr	cover
D	deformed bars (grade 300E)
db	nominal bar diameter in mm
DT	drossbach tube
EA	equal angle
EF	each face
EJ	expansion joint
EW	each way
FF	far face
FP	full penetration
FT	flat
FWAR	fillet weld all round
G	grade
galv.	galvanised
HDG	hot dip galvanised
HD	deformed bars (grade 500E)
horiz.	horizontal
HR	round bars (grade 500E)
IF	inside face
MS	mild steel
NF	near face

Structural Abbreviations continued

OF	outside face
PC	precast concrete panel
PFC	parallel flange channel
PLY	plywood
R	round bars (grade 300E)
RB	reidbars
RC	reinforced concrete
RHS	rectangle hollow section
SHS	square hollow section
SOG	slab on grade
SP	splice
SS	stainless steel
SSL	structural slab level
TFB	tapered flange beam
TOS	top of steel
T&B	top and bottom
UA	unequal angle
UB	universal beam
UC	universal column
vert.	vertical
WB	welded beam

Architectural Abbreviations

BMT	base metal thickness
DPC	damp proof course
DPM	damp proof membrane

Civl & Plumbing Abbreviations

BC	base course
CP	catch pit
IC	inspection chamber
IL	invert level
LL	lid level
MH	manhole
ROW	right of way
SB	sub base
SG	sub grade
SS	sanitary sewer
SW	stormwater
WM/S	water main/supply
WW	waste water
dia.	diameter
DP	down pipe
FWG	floor waste gully
GT	gully trap
HT	hose tap
ID	inside diameter
OD	outside diameter
OF	over flow
OFO	over flow outlet
ORG	over flow relief gully
TV	terminal vent
WC	water closet
IJ	inspection junction
IB	inspection bend
AAV	air admittance valve

Sheet Setouts

C-001 series - civil drawings
A-100 series - architectural plans
A-200 series - architectural elevations & sections
A-300 series - architectural details
A-400 series - door & window schedule and details
A-450 series - joinery details
A-460 series - interior finishes schedules

S-500 series - structural ground floor and mid floor plans
S-550 series - foundation details
S-560 series - mid floor details
S-600 series - precast & masonry elevations & details
S-620 series - precast stairs & details
S-700 series - holding down bolt plans
S-705 series - structural roof framing plans
S-800 series - structural elevations and sections
S-900 series - structural details
S-1000 series - 3D views

Hamilton Auckland
Tauranga Napier
New Plymouth
Ph: 0508 BCD GROUP (223 47687) Website: bcdgroup.nz

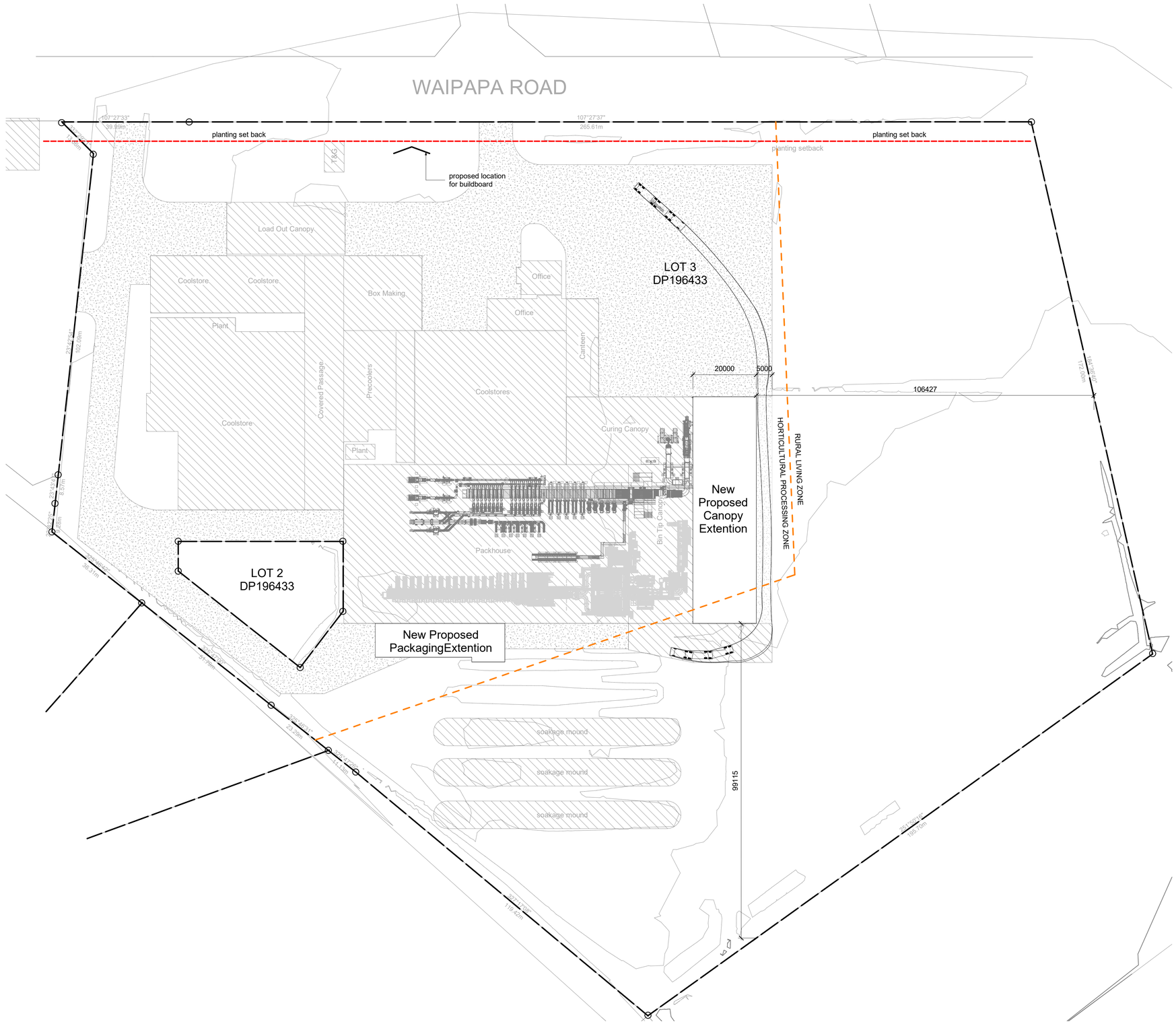
original in colour

Client: Seeka
Contractor: form
BCD GROUP

Sheet: INDEX & STANDARD NOTES
Project Title: SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION
153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
4	06-06-2025	MT	RESOURCE CONSENT
3	06-06-2025	MT	FOR BUILDING CONSENT
2	06-02-2025	MT	FOR INFORMATION
1	23-01-2025	MT	FOR INFORMATION

Drawn: MT Scale: 1 : 10 at A1
Engineer: SJ
Job No: 25-0030 Sheet No: 000 Revision: 4



Site Information & Requirements

Street Address: 153 Waipapa Road, Kerikeri

DP & Lot Number: DP 196433, Lot 3

Local Council: Far North District Council

Zone: Horticulural Processing / Rural Living Zone

Site Area: 68,752m²

Zone Information:
EQ Zone: Zone 1
Wind Zone: H
Corrosion Zone: Zone c

Notes:

- Site boundaries/ levels nominal and subject to survey.
- Easements not shown.
- Dimensions approximate and subject to confirmation.
- Structure and grid setout indicative only and subject to calculation.
- Stormwater detention/ soakage/ treatment/ discharge not yet checked.
- Resource Consent not expected/ expected.

Client
Seeka

Contractor
form

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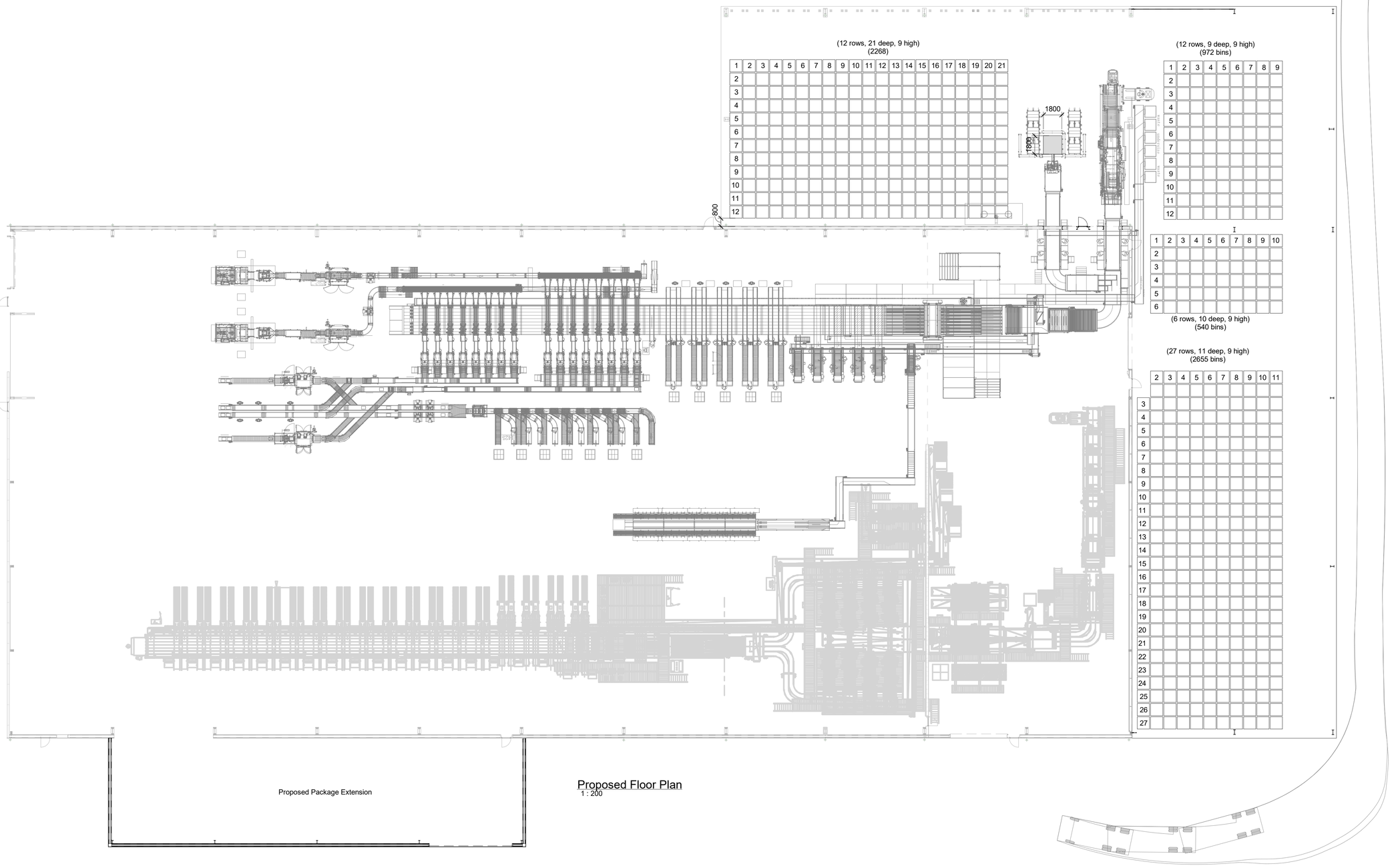
Sheet
PROPOSED SITE PLAN

Project Title
SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION
153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
6	06-06-2025	MT	RESOURCE CONSENT
5	06-06-2025	MT	FOR BUILDING CONSENT
4	23-05-2025	MT	FOR INFORMATION
3	16-05-2025	MT	FOR INFORMATION
2	06-02-2025	MT	FOR INFORMATION
1	23-01-2025	MT	FOR INFORMATION

Drawn: MT
Scale: As indicated at A1
Reviewer: SJ
Job No: 25-0030
Sheet No: A-100
Revision 6

all dimensions to be verified on site before making any shop drawings or commencing any work.



Proposed Floor Plan
1 : 200

6435 total bins

Client: Seeka

Contractor: form

BCD GROUP

Sheet
PROPOSED FLOOR PLAN

Project Title
SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION
153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
4	06-06-2025	MT	RESOURCE CONSENT
3	06-06-2025	MT	FOR BUILDING CONSENT
2	23-05-2025	MT	FOR INFORMATION
1	06-02-2025	MT	FOR INFORMATION

Drawn: MT | Scale: As indicated | at A1
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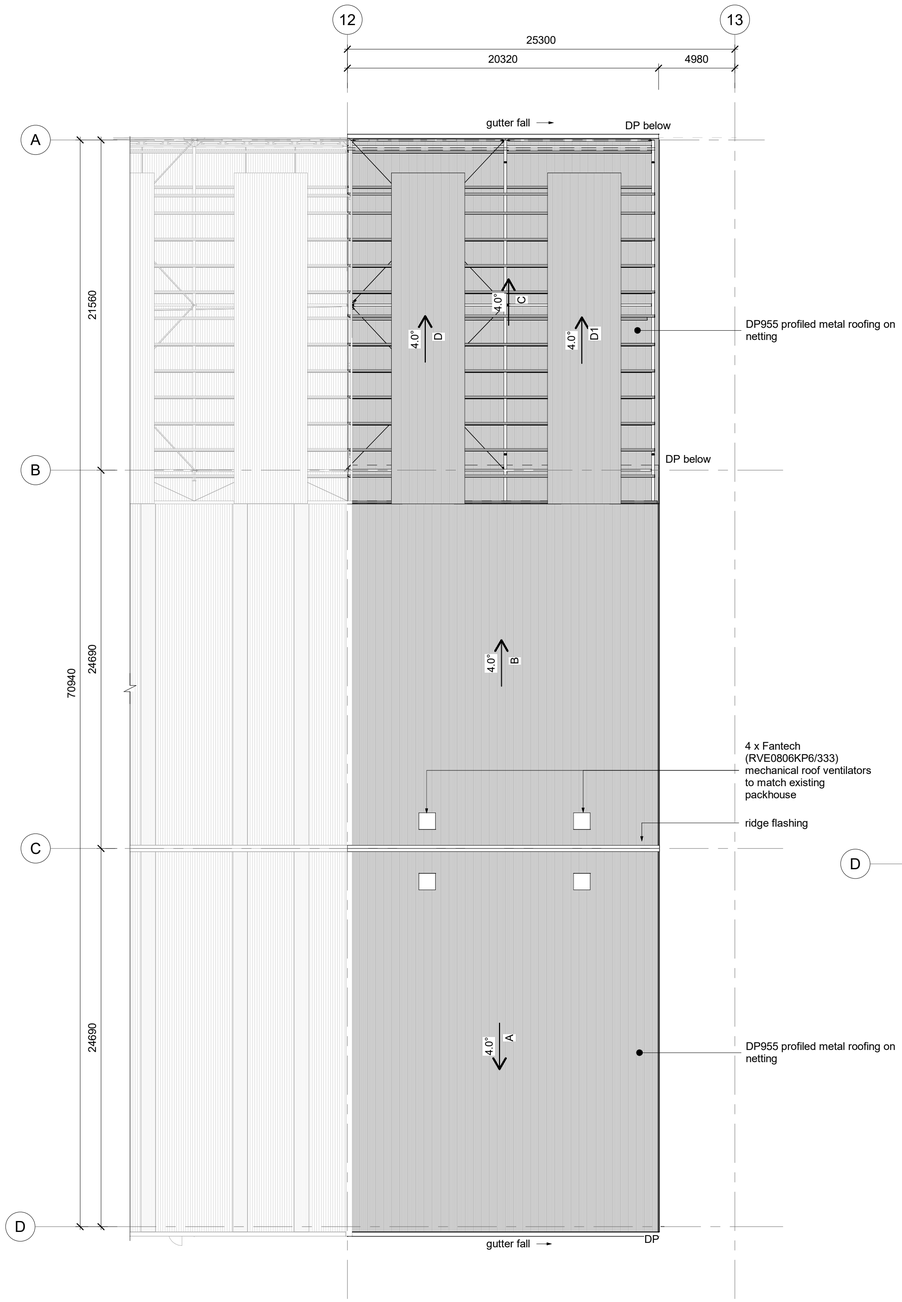
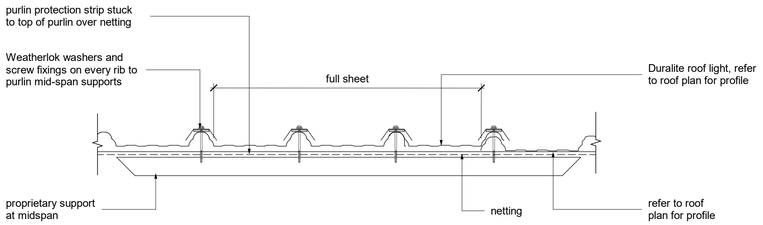
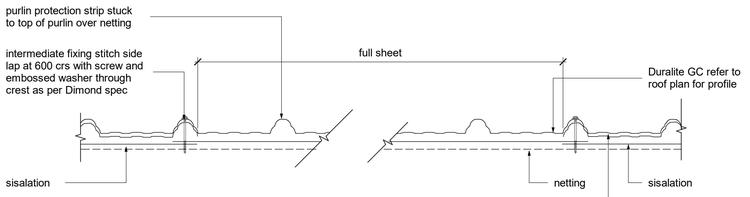
Job No: 25-0030 | Sheet No: A-101 | Revision: 4



Roof Plan - Canopy Extension
1 : 200

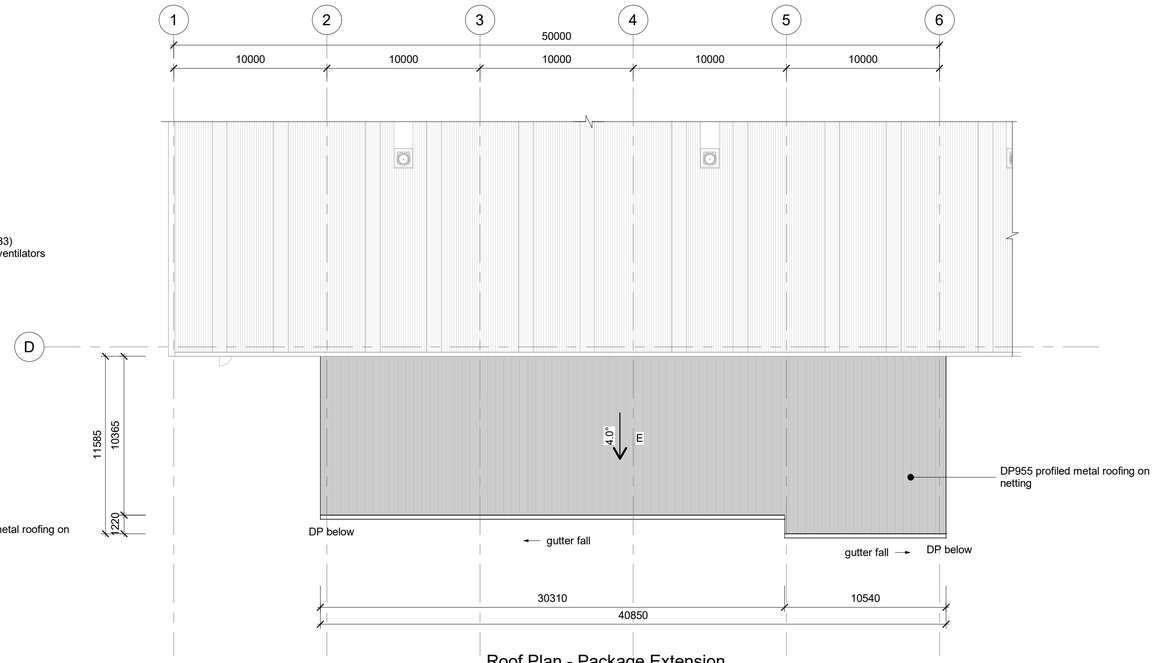


Typical Roof Light Section at DHS Purlins and Mid Span Supports



Typical Roof Light Section

Note:
refer to Dimond natural lighting systems specification for fixing requirements



Roof Plan - Package Extension
1 : 200

Roof Notes

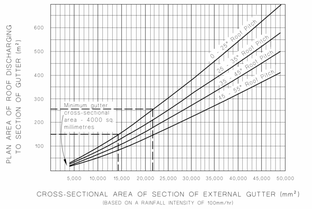
- All roofing work is to be carried out by suitably qualified and experienced tradespeople.
- All work is to be carried out in accordance with NZ Metal Roof & Wall Cladding Code of Practice.
- All work is to be carried out in accordance with the NZ Building Code.
- Any details that the contractor does not consider to be good trade practice are to be noted to the designer at time of tender.
- All flashings are to be fitted to allow for thermal expansion as per NZBC E2/AS1 clause 4.5
- Screw fixing set out is to comply with NZ Metal Roof & Wall Cladding Code of Practice.
- All roofing and flashings are to be a minimum thickness of 0.55mm BMT gauge.
- Metal Flashings - general dimensions as per NZBC E2/AS1 Table 7
- Allow for compatibility of materials in contact as per NZBC E2/AS1 Table 20.
- Allow for one piece welded under flashings at all complex junctions.
- Allow for all nogging required for support of flashings and penetrations.
- Roof trusses shall be designed by a truss manufacturer and shall be supported on exterior walls only. The truss manufacturer shall design all lintels supporting girder trusses.

DOWN PIPE SIZE FOR GIVEN ROOF PITCH & AREA

Max plan area of roof served by the downpipe (m²)

Dia	0-25°	25-35°	35-45°	45-55°
63mm Ø	60	50	40	35
74mm Ø	85	70	60	50
100mm Ø	155	130	110	90
150mm Ø	350	290	250	200

External Gutter



NZBC E1/AS1 - Surface Water
Paragraphs 5.1.2 and 5.1.3
Figure 15 - Cross-sectional Area of External Gutter

Roof Areas

Roof area **A** 507m²
as per NZBC E2/AS1 Figure 16
minimum internal gutter cross-sectional area = 18500m²
as per NZBC E2/AS1 Table 5, minimum downpipe size = 100 Ø

Roof area **B** 507m²
as per NZBC E2/AS1 Figure 16
minimum internal gutter cross-sectional area = 18500m²
as per NZBC E2/AS1 Table 5, minimum downpipe size = 100 Ø

Roof area **C** 349m²
as per NZBC E2/AS1 Figure 16
minimum internal gutter cross-sectional area = 18500m²
as per NZBC E2/AS1 Table 5, minimum downpipe size = 100 Ø

Roof area **D&D1** 103m²
as per NZBC E2/AS1 Figure 16
minimum internal gutter cross-sectional area = 18500m²
as per NZBC E2/AS1 Table 5, minimum downpipe size = 100 Ø

Roof area **C,D & D1** 555m²
as per NZBC E2/AS1 Table 5
minimum external gutter cross-sectional area = 18500m²
minimum downpipe size = 100 Ø

Roof area total 1918m²

Roof area **E** 437m²
as per NZBC E2/AS1 Table 5
minimum external gutter cross-sectional area = 18500m²
minimum downpipe size = 100 Ø

Client: Seeka
Contractor: form
BCD GROUP

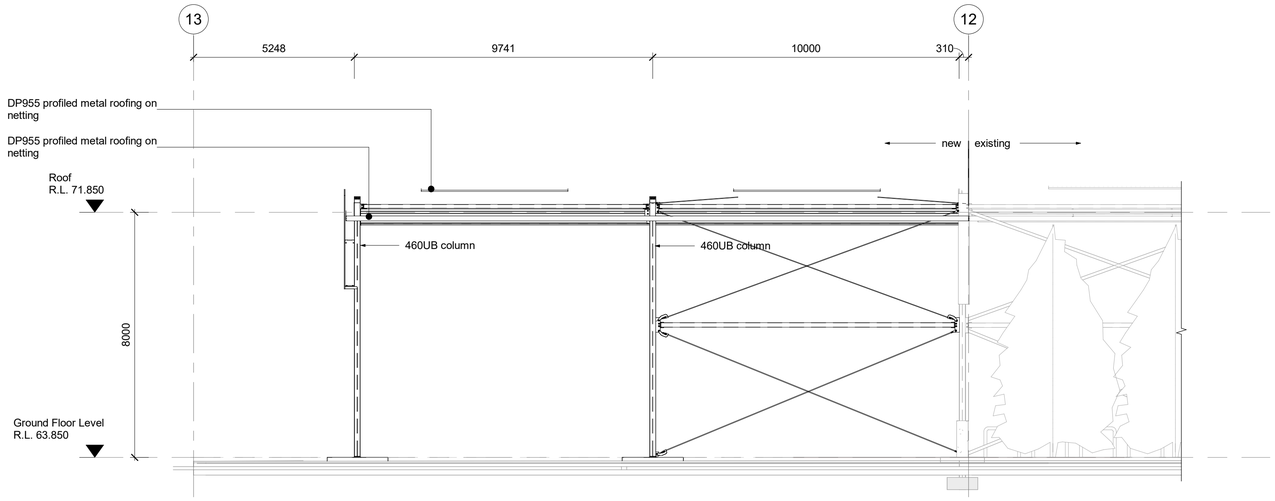
Sheet: **ROOF PLAN**

Project Title: **SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION**
153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
3	06-06-2025	MT	RESOURCE CONSENT
2	06-06-2025	MT	FOR BUILDING CONSENT
1	23-05-2025	MT	FOR INFORMATION

Drawn: MT | Scale: As indicated | at A1
Reviewer: SJ
Job No: 25-0030 | Sheet No: A-150 | Revision: 3

all dimensions to be verified on site before making any shop drawings or commencing any work.



Architectural Elevation North
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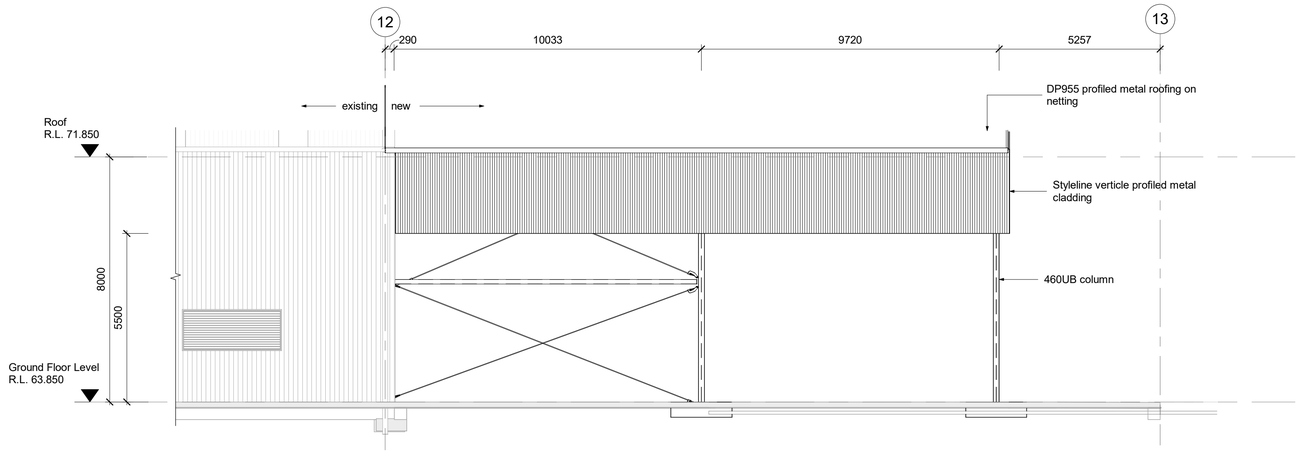

Architectural Elevation West
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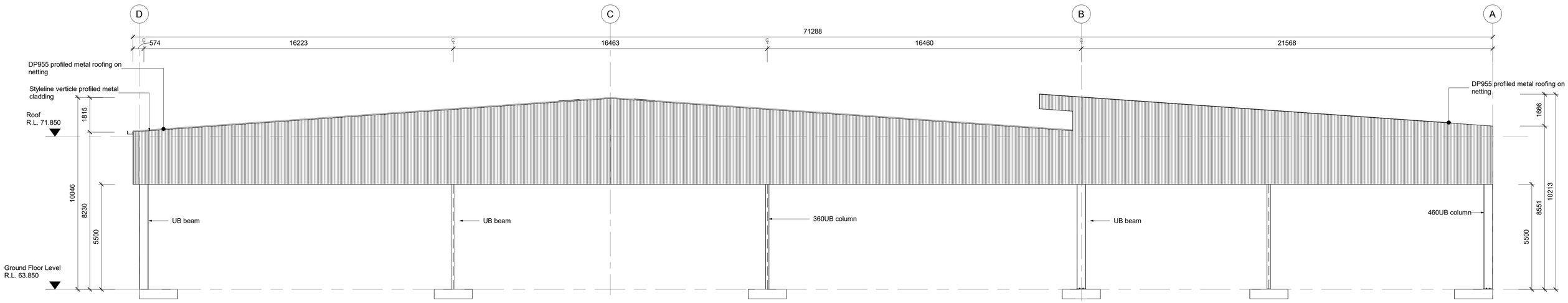


Architectural Elevation East
1 : 100

Client: Seeka

Contractor: form

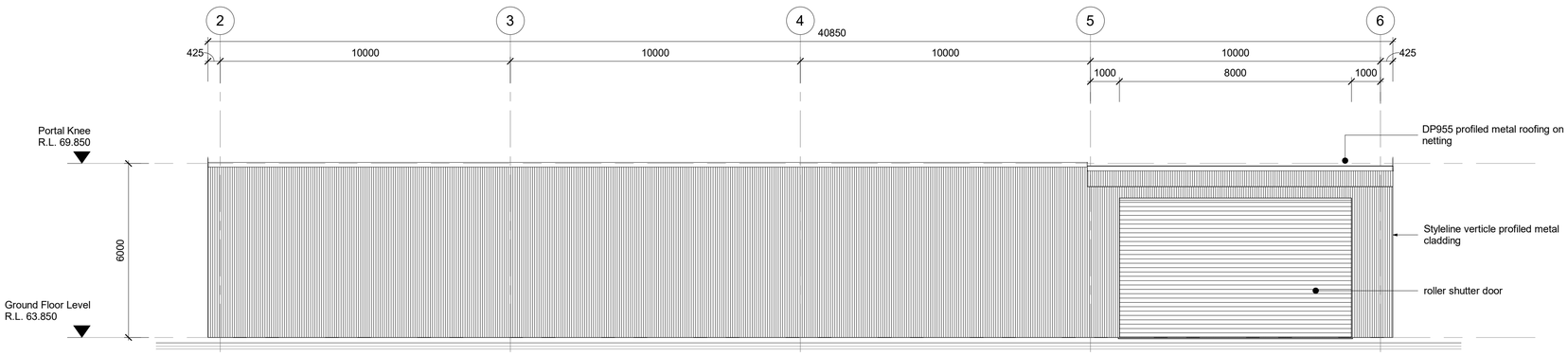
BCD GROUP

Sheet
EXTERIOR ELEVATIONS

Project Title
SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION
153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
4	06-06-2025	MT	RESOURCE CONSENT
3	06-06-2025	MT	FOR BUILDING CONSENT
2	23-05-2025	MT	FOR INFORMATION
1	06-02-2025	MT	FOR INFORMATION

Drawn: MT | Scale: 1 : 100 | at A1
Reviewer: SJ
Job No: 25-0030 | Sheet No: A-200 | Revision: 4



Archiectural Elevation - Gridline D
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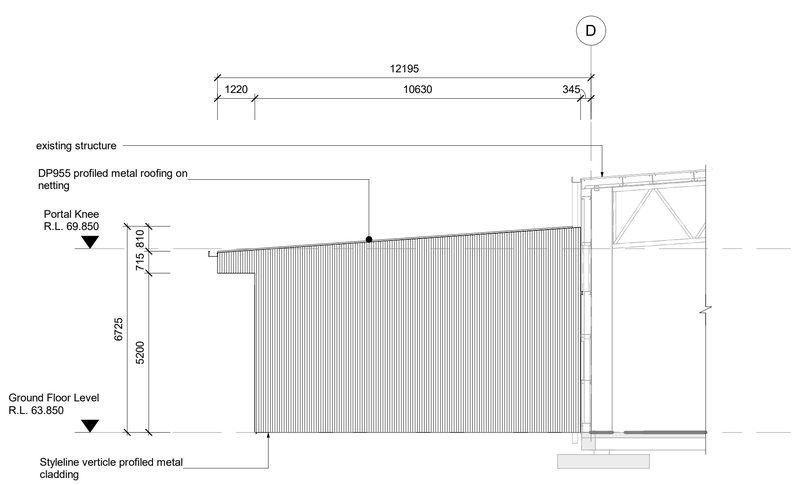

Archiectural Elevation - Gridline 6
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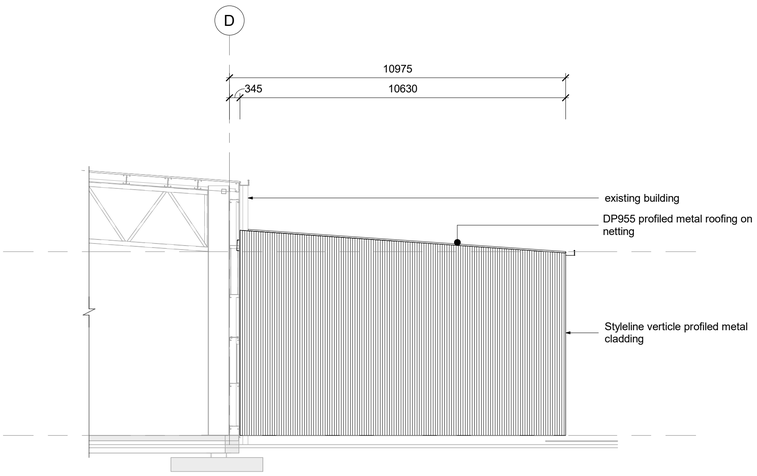

Architectural Elevation - Gridline 2
1 : 100

original in colour

Client: Seeka

Contractor: form

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Sheet: EXTERIOR ELEVATIONS

Project Title: SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION

153 WAIPAPA ROAD, KERIKERI

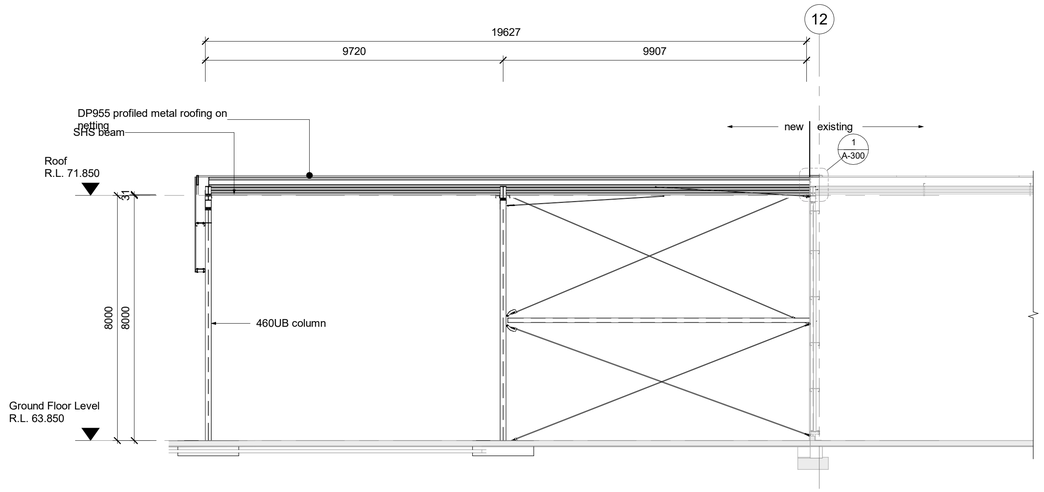
Rev	Date	by	Reason
1	06-06-2025	MT	RESOURCE CONSENT

Drawn: Author | Scale: 1 : 100 | at A1

Engineer: Designer

Job No:	Sheet No:	Revision
25-0030	A-200a	1

all dimensions to be verified on site before making any shop drawings or commencing any work.



Architectural Section A
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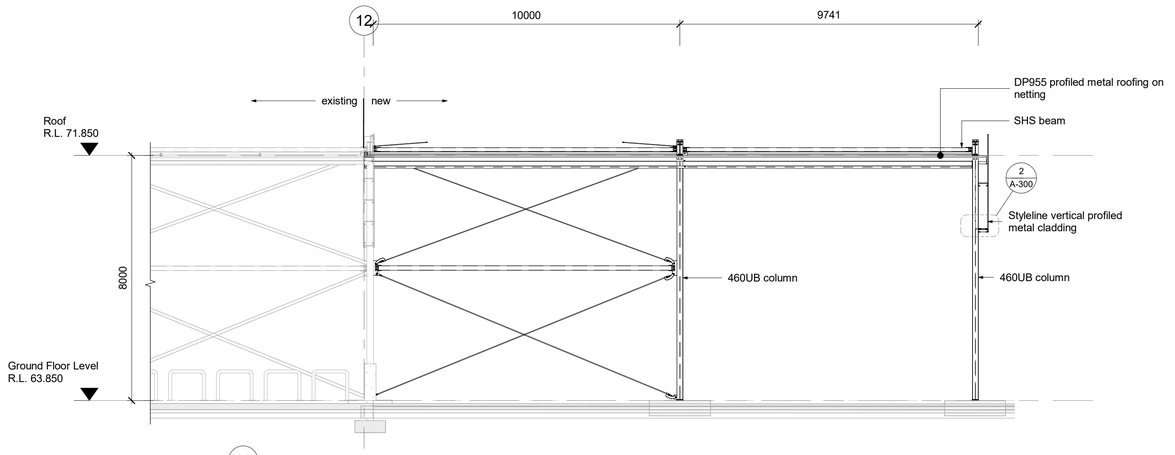
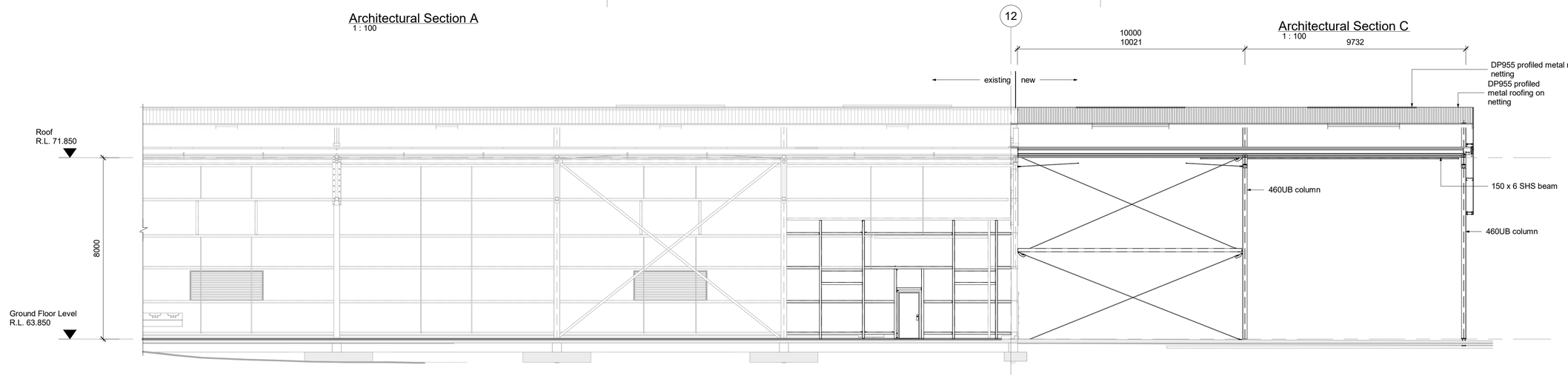


Architectural Section C
1 : 100



Architectural Section B
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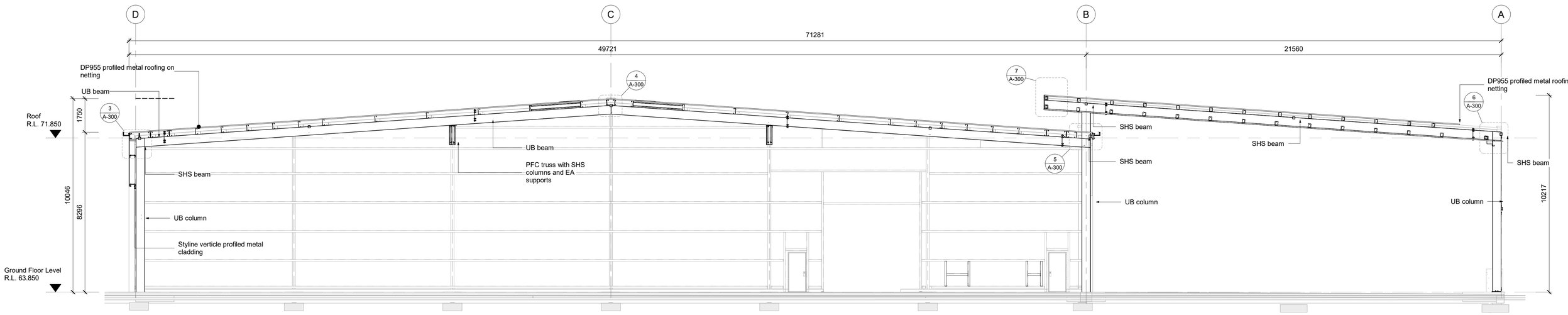


Architectural Section D
1 : 100

Client: Seeka

Contractor: form

BCD GROUP

Sheet: **CROSS SECTIONS**

Project Title: **SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION**

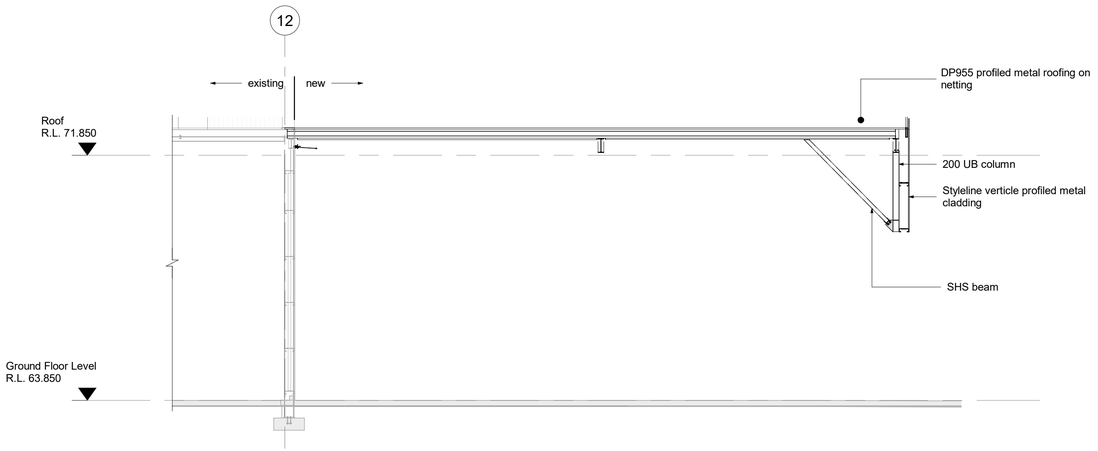
153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
4	06-06-2025	MT	RESOURCE CONSENT
3	06-06-2025	MT	FOR BUILDING CONSENT
2	23-05-2025	MT	FOR INFORMATION
1	06-02-2025	MT	FOR INFORMATION

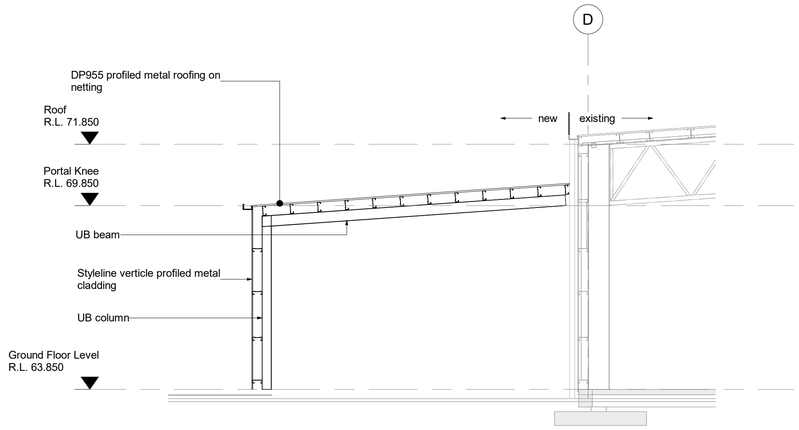
Drawn: MT | Scale: 1 : 100 | at A1

Reviewer: SJ

Job No:	Sheet No:	Revision
25-0030	A-205	4



Architectural Section Between Gridline C and D
1 : 100



Architectural Section Gridline 4
1 : 100

original in colour

Client: Seeka

Contractor: form

BCD GROUP

Sheet: CROSS SECTIONS

Project Title: SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION

153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
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1	23-05-2025	MT	FOR INFORMATION

Drawn: MT | Scale: 1 : 100 | at A1

Engineer: PP

Job No:	Sheet No:	Revision
25-0030	A-206	3

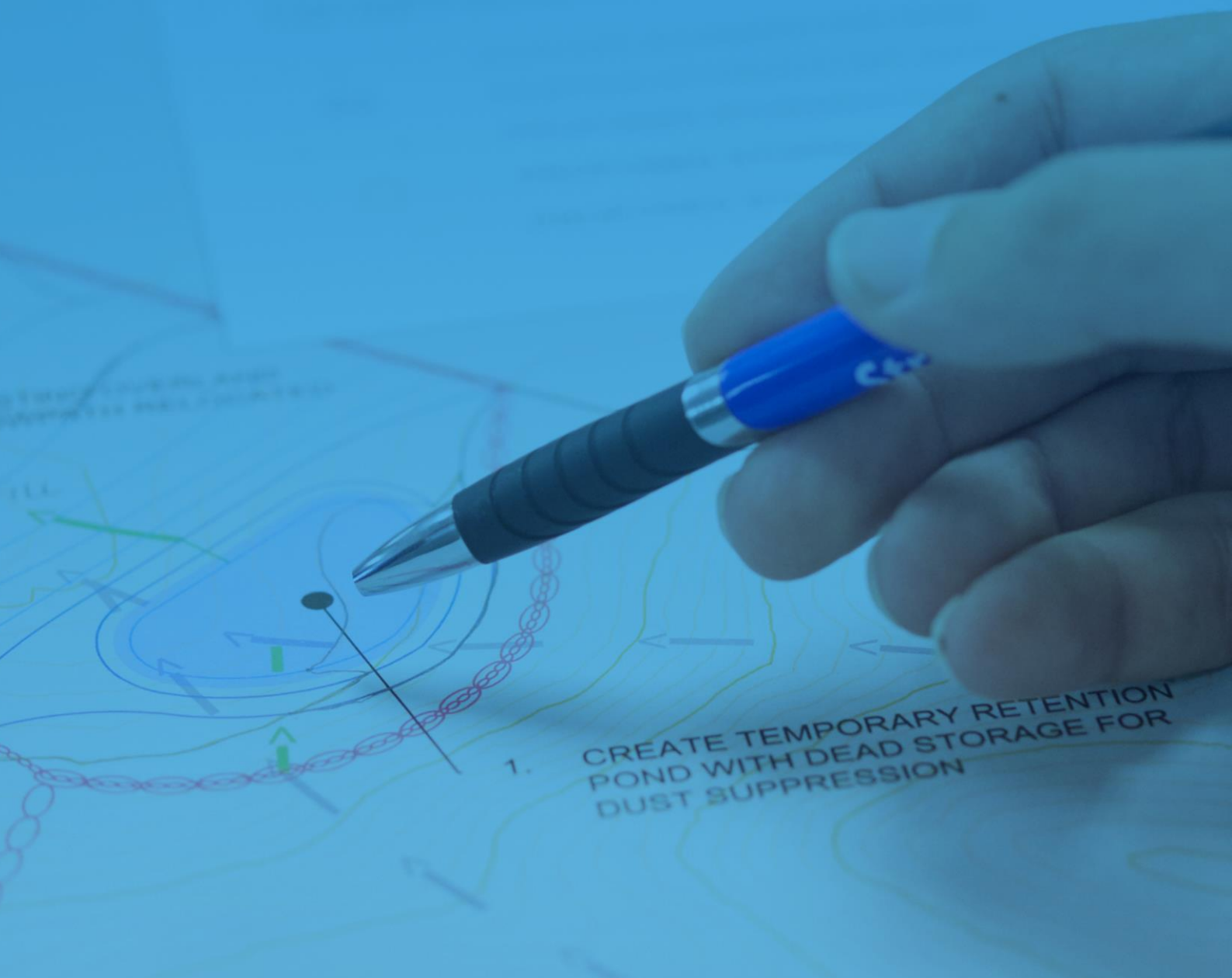
x1 'V' Shape Billboard

x2 changeable printed canvas sign panels @ 3000mm x 6000mm

Total Height 5m ground to top of sign panel

Appendix C

Existing Resource Consent



Far North District Council

Private Bag 752, Memorial Ave
Kaikohe 0440, New Zealand
Freephone: 0800 920 029
Phone: (09) 401 5200
Fax: (09) 401 2137
Email: ask.us@fndc.govt.nz
Website: www.fndc.govt.nz

Te Kaunihera o Tai Tokerau Ki Te Raki

Application No: 2190181-RMALUC

23 November 2018

Seeka Limited
C/- Stratum Consultants Ltd Attn: Jared Bartlett
PO Box 13651
Tauranga 3141

Dear Sir / Madam,

Re: RESOURCE CONSENT APPLICATION BY Seeka Limited

I am pleased to inform you that your application for resource consent has been approved. The decision is enclosed for your information. The application was considered and determined under authority delegated to the Team Leader Resource Consents of the Far North District Council, pursuant to Section 34A of the Resource Management Act 1991.

It is very important that you understand and comply with any conditions of consent. If you have any questions or concerns about any aspect of your consent or its conditions, please contact the planner who prepared the decision.

Please note, that you will be sent either an invoice or credit note depending on the actual cost of processing your application. Any additional costs shown on an invoice need to be paid by the 20th of the month following the date of the invoice. If you receive a credit note, you have the option of requesting a refund by bank transfer, or transferring the amount to any other Council account. Please advise and supply a printed bank deposit slip and allow 10 working days for the refund to be processed.

If you have any further queries regarding this matter, please contact the reporting Planner.

Yours faithfully

Lynka May
Planning Support
Resource Consents Department

Far North District Council

Private Bag 752, Memorial Ave
Kaikohe 0440, New Zealand
Freephone: 0800 920 029
Phone: (09) 401 5200
Fax: (09) 401 2137
Email: ask.us@fndc.govt.nz
Website: www.fndc.govt.nz

Te Kaunihera o Tai Tokerau Ki Te Raki

23-Nov-2018

Seeka Limited
C/- Stratum Consultants Ltd Attn: Jared Bartlett
PO Box 13651
Tauranga 3141

Dear Seeka Limited,

Thank you for your recent application for resource consent at 153 Waipapa Road, Kerikeri 0295.

Far North District Council provides a number of services to assist individuals and organisations comply with the obligations of the Resource Management Act and we would very much like to know how well we responded to your application on this occasion.

We would be grateful if you would take a few minutes to complete the short questionnaire on the reverse side of this letter. **If you are not the person that was most directly involved with the application, please pass this questionnaire to them instead.**

We have enclosed a FreePost envelope for the completed questionnaire to be returned directly to CTMA (the independent service-quality improvement firm that is helping us with our customer service improvement programme).

Alternatively, you may prefer to respond on-line by selecting the "Resource Consent" questionnaire at:

www.WasItOK.com/FNDC/resource

If you do choose to complete the questionnaire on-line please enter the following reference number **2190181-RMALUC** in the space provided on the web page. This number will help us link your response to the type of consent you applied for and those responsible for processing it.

We appreciate the time you may spend completing this short questionnaire and we assure you that we will use the information to continue to improve our service to you.

If you have any further enquiries regarding Far North District Council and our services, please contact our call centre on 0800 920 029.

Yours sincerely

Shaun Clarke
Chief Executive Officer

Resource Consent Customer Survey

2190181-RMALUC

If you prefer, you may respond to this survey online at: www.WasItOK.com/FNDC/resources

Thank you for telling us about your recent experience obtaining a **Resource Consent** from **Far North District Council**.

How satisfied were you with the **resource consent process** at **Far North District Council** in **each** of the following areas?

	Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Very dissatisfied	(Or, not applicable)
The clarity of what you needed to supply with your application	☐	☐	☐	☐	☐	
Ease completing the council's application form(s)	☐	☐	☐	☐	☐	☐
Access to information from the council throughout the process	☐	☐	☐	☐	☐	☐
Consistency of information from the council throughout the process	☐	☐	☐	☐	☐	☐
Helpfulness of counter staff you spoke to about the Resource Consent process	☐	☐	☐	☐	☐	☐
Availability of Resource Consent staff	☐	☐	☐	☐	☐	☐
Knowledge of Resource Consent staff	☐	☐	☐	☐	☐	☐
Helpfulness of Resource Consent staff	☐	☐	☐	☐	☐	☐
Responsiveness of staff returning your phone calls and email messages	☐	☐	☐	☐	☐	☐
Support from staff following up on promised actions and keeping you informed of progress	☐	☐	☐	☐	☐	☐
The time it took to process your Resource Consent	☐	☐	☐	☐	☐	
The value for money offered by Far North District Council's Resource Consent process	☐	☐	☐	☐	☐	

In total, **how many times did you need to make contact** with **Far North District Council** to progress this consent application?

1 time only (at time of lodgement)	2 times	3 times	4 times	5 or more times
☐	☐	☐	☐	☐

How satisfied were you OVERALL with the Resource Consent process at **Far North District Council** on this occasion?

Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Very dissatisfied
☐	☐	☐	☐	☐

Overall, **how EASY** did you find it dealing with **Far North District Council** obtaining Resource Consent?

Very easy	Somewhat easy	Neither easy nor difficult	Somewhat difficult	Very difficult
☐	☐	☐	☐	☐

Based on your experience obtaining Resource Consent from **Far North District Council** on this occasion, **would you recommend the area, to others wishing to build, invest or develop**?

I definitely would	I probably would	I might or might not	I probably would not	I definitely would not
☐	☐	☐	☐	☐

Thank you again for your help. Please return this questionnaire using the FreePost envelope provided to: CTMA New Zealand Ltd., FreePost 199937, PO Box 35444, Browns Bay, Auckland 0753.

Far North District Council

FAR NORTH DISTRICT COUNCIL

FAR NORTH OPERATIVE DISTRICT PLAN
DECISION ON RESOURCE CONSENT APPLICATION

Resource Consent Number: 2190181-RMALUC

Pursuant to Sections 104 and 104B of the Resource Management Act 1991 (the Act), the Far North District Council hereby grants resource consent to:

Seeka Limited

The activities to which this decision relates are listed below:

Landuse for additions and alterations to an existing horticulatural processing facility, consisting of the following:

- Removal of existing packhouse and construction of a new 4500m2 packhouse within the southern portion of the horticultural processing zone at the subject site
- A 1000m2 bin-tip canopy
- An 800m2 curing canopy
- Bin Storage Area 1050m2
- Truck Unloading Area 700m2
- A 558m2 Load out Canopy
- Relocated OSET Treatment Plant (for effluent disposal)

Subject Site Details

Address:	153 Waipapa Road, Kerikeri
Legal Description:	Lot 3 DP 196433
CFR references:	NA124C/509

Pursuant to Sections 108 and 220 of the Act, this consent is issued subject to the following conditions:

1. The proposal is to be carried out and completed generally in accordance with the information that forms the application prepared by Stratum Consultants Limited dated September 2018, inclusive of Appendices A – J, and the following additional information received:
    - Plans prepared by Stratum Consultants Limited entitled 'Drawing Set for Resource Consent' Sheets 00-21, where Sheets 00-19 are marked as 'Issued for Engineering Approval' dated 11 September 2018, and Sheets 20-21 are marked as 'Issued for Resource Consent' dated 5 September 2018;
    - Memorandum prepared by Stratum Consultants Ltd dated 24th September 2018 received by the Council on the 9th October 2018;

    subject to the following conditions.

2. Prior to the opening and operation of the additional building space as provided for under this consent, the consent holder shall:
    (a) Install and complete the new car parking areas identified on the Site Development Plan prepared by Stratum Consultants Limited (reference 638080-M-E-D001 Sheet No 10 Issue A dated 11

September 2018) to provide a total of 130 on-site carparks. The design and construction of all parking is to comply with Appendix 3D of the Far North District Plan.
Note: A finished metalled and marked surface for the carparking is acceptable

(b) Undertake and complete all stormwater management and disposal works required on the site, generally in accordance with the design specified in the Memorandum prepared by Stratum Consultants Limited dated 24 September 2018, inclusive of the Stormwater Layout Plan prepared by Stratum Consultants Limited attached to the Memorandum.

(c) Within 4 months of the issue of this consent upgrade the existing western vehicle crossing exit point to a commercial crossing standard. The entrance shall be concreted from the existing road carriageway to the property boundary, use a minimum of 25MPa concrete, and be constructed in general accordance with Council's Engineering Standards and Guidelines FNDC/S/2.

(d) On completion of the works required under (a), (b) and (c) above, the consent holder shall provide suitable written evidence to confirm the works are completed. Such evidence shall be provided to the Councils duly authorised Officer and shall consist of a written statement from a suitably qualified and experience engineer confirming completion, and may include as-built plans and producer statement (PS4).

3. The operation of the consented activity shall comply with the following:

(a) A minimum of 130 on-site carparks are to be available at all times on the site during the hours of operation

(b) At all times the noise generated by the proposed activities shall comply with the permitted standards of the District Plan.

(c) The circulation of vehicles through the site is to comply at all times with the Vehicle Access Plan prepared by Stratum Consultants Limited (reference 638080-M-E-D001 Sheet No 20 Issue A dated 5 September 2018)

4. In accordance with section 128 of the Resource Management Act 1991, the Council may serve notice on the Consent Holder of its intention to review Conditions 1 and 3 a)-(c) at least one year following this consent being given effect to, and in one year intervals thereafter. Any review will be for the purpose of:

a) Addressing any significant adverse effect on the environment arising from the exercise of this consent that was not foreseen at the time the application was determined and are is not currently avoided, remedied, or mitigated by the implementation of conditions, or

b) Requiring the Consent Holder to adopt the best practicable option to remove or reduce any adverse effects on the environment.

Specifically, where a review of these conditions is undertaken at any time, the consent holder is advised that the Council may consider options including reducing the maximum occupancy, requiring additional on-site carparking, or other options as may be considered reasonably necessary should the need arise as a result of a review.

All costs associated with any review shall be met by the Consent Holder.

Advice Notes

1. Where there is any complaint or dispute regarding compliance with the permitted noise standards, the onus will be on the consent holder to illustrate compliance. This may require provision of suitable acoustic testing and assessment by an acoustic engineer at the consent holders expense.

2. The Far North District Council is not responsible for any management or maintenance of on-site infrastructure provided as part of this consent. All asset management is the responsibility of the consent holder or any future owner/s.

3. This resource consent should be read in conjunction with the resource consent issued by Far North District Council (reference RC2190096) on the 5th September 2018. That consent provides for earthworks to be undertaken on the site in preparation for the proposed building and activities that this consent provides for.

Reasons for the Decision

1. The Council has determined (by way of an earlier report and resolution) that the adverse environmental effects associated with the proposed activity are not more than minor on the receiving environment. Written approval has been obtained from persons considered to be adversely affected to a minor or more than minor extent by the granting of consent. There are no other affected persons or any affected customary rights group or customary marine title group.

2. It is noted that the Council has previously issued a resource consent (reference RC2190096) providing for the preparatory earthworks for the construction of buildings and facilities as defined in this consent application now being considered. These earthworks form part of the existing environment. The decision regarding notification and this decision report therefore both consider the extent of adverse effects and assessment of relevant planning provisions on the basis that all preparatory earthworks have and will be carried out in accordance with that consent.

3. For the purposes of Section 104(1)(a), the adverse effects of the proposed activity on the receiving environment are considered to be minor and less than minor and therefore acceptable in the receiving environment. The existing environment is defined by the existing horticultural facility and immediately surrounding area, inclusive of rural lifestyle properties on the opposite side of Waipapa Road. The proposal will extend the existing buildings, amend the existing internal parking layout and traffic circulation, and increase the activity in terms of traffic.

4. The application notes under Section 6.6 that positive effects will arise from the granting of consent. Those positive effects are accepted and adopted for the purpose of this report.

5. Despite being a discretionary activity, the extent of those additional adverse effects arising from the proposed activity on the existing environment are considered to be acceptable and can be suitably mitigated or avoided by way of the conditions discussed below.

6. In terms of Section 108, conditions will be required to ensure the development proceeds in accordance with the information provided. That includes suitable design and implementation of stormwater management measures, appropriate formation and use of on-site parking and vehicle circulation, and compliance with the permitted noise standards in all respects. A review condition under Section 128 is considered appropriate in this case, in the event that adverse effects arise from the consented activity, particularly in terms of noise and traffic, which are not anticipated in this decision, and conditions.

7. Consideration has been given to the need for internal landscaping, particularly to the east of the development site. On the basis that the applicant owns the adjacent Rural Living zoned land, the need to screen the existing and proposed development from both the adjacent land and Waipapa Road is considered unnecessary in this case. It is noted that the current rules in the District Plan require that the existing screening vegetation on the road frontage cannot be removed without further consent from the Council.

8. With specific regard to effluent disposal, it is understood that the on-site system is subject to consent from the Northland Regional Council. On that basis, no conditions are imposed addressing this matter.

9. In terms of Section 104(1)(b), the application provided an assessment of the relevant planning provisions. The assessments provided under Sections 7.1, 7.2 and 8.1, as they relate to the operative Regional Policy Statement, Regional Plans, and relevant National Environmental Standards, are accepted and adopted for the purpose of this decision.

10. Section 5.0 of the application provides an assessment of the proposal against the relevant District Plan provisions. Those relevant provisions are contained in Chapters 8.7 Rural Living Zone, 15 Transportation, and 18.4 Horticultural Processing Zone. The application assesses the provisions under Chapters 15 and 18.4 and concludes that the proposal is in keeping with the relevant provisions. This is accepted and adopted for the purpose of this decision.

11. The application assesses the provisions under Chapter 8.7 Rural Living Zone and concludes that the proposal is in keeping with the objectives and policies. While that conclusion is generally accepted, some detailed consideration of the relevant Plan provisions is required. In particular, Policies 8.7.4.5, 8.7.4.8, and 8.7.4.9 address situations where non-residential activities and/or activities other than a single residential unit are proposed in the Rural Living Zone.

12. The assessment notes that *'The portion of development within the Rural Living zone includes a small corner of the proposed packhouse, and the south eastern corner of the bin-tip canopy, with the majority of development within the Rural Living zone being in concrete pad, and hardstand for access.'* The area included for development in the Rural Living zone is understood to be approximately 850m^2. As an initial comment, the HPZ commentary in the District Plan states that *'The zone therefore enables the further expansion of the horticultural processing and storage facilities, provided that these activities are carried out in a manner which does not adversely affect the character and amenity of the surrounding environment.'* The current application does intrude across the zone boundary, indicating that the existing

HPZ may not be sufficient to accommodate what is a growing industry in the area. Taking this into account, and considering the Rural Living policies identified above, compatibility of effects particularly on amenity values is important. Having assessed the adverse effects of granting consent previously, noting the separation distance afforded by the existing Rural Living zoned land owned by the applicant, and the minor extent of intrusion across the zone boundary, in this instance the adverse effects on amenity are considered to be acceptable.

13. Overall, the proposal is considered to be consistent with the objectives and policies of the District Plan.

14. Section 104(1)(c) requires consideration of Other Matters. There are no other matters that are considered relevant or reasonably necessary to determine this application.

15. As per current case law, an assessment of relevant matters under Section 104 is subject to Part 2. A council must have regard to the provisions of Part 2 when it is appropriate to do so. In this case, the application and the matters requiring assessment therein are largely confined to issues addressed in Section 7 Other Matters. Those include Section 7(b), Section 7(c), and Section 7(f). There is no suggestion that the effects that have been identified and assessed, and the relevant District Plan provisions that require assessment, do not reflect those relevant matters in Section 7. On that basis, it is not considered appropriate or necessary to undertake a detailed assessment of Part 2 matters.

16. Section 104B specifies that a Council may grant or refuse consent to a discretionary activity. If it grants consent, it may impose conditions under Section 108. Taking into account the extent of existing development, the acceptable extent of adverse effects arising from the proposal, and the general consistency of the application with the District Plan provisions, it is considered that the activity is consistent with the sustainable management purpose of the RMA. Consent can therefore be granted subject to conditions.

Approval
This resource consent has been prepared by A Hartstone, Consultant Planner, and is granted under delegated authority (pursuant to Section 34A of the Resource Management Act 1991) from the Far North District Council by:

P J Killalea.

Pat Killalea, Principal Planner

Date: 22nd November 2018

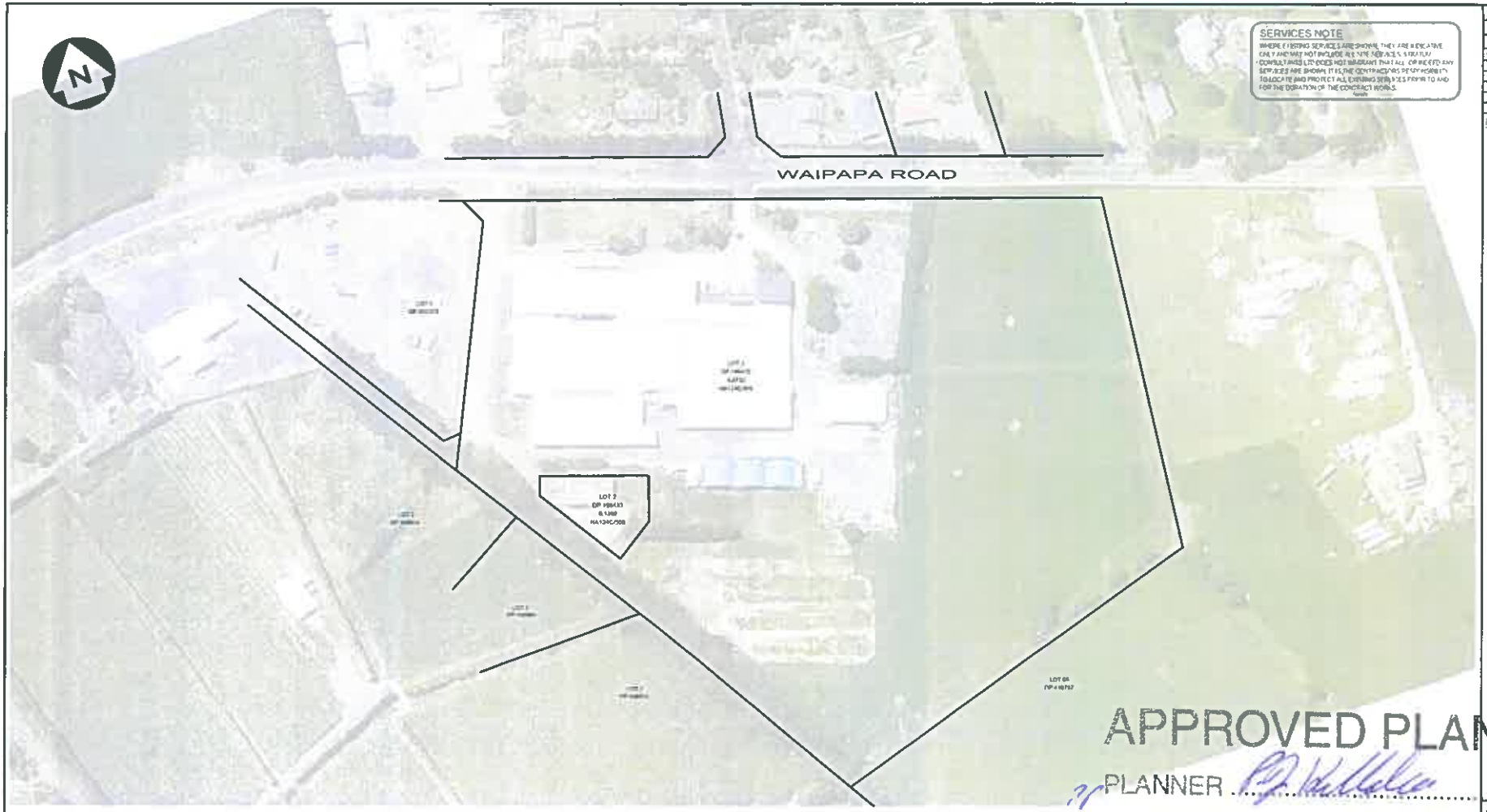
Right of Objection
If you are dissatisfied with the decision or any part of it, you have the right (pursuant to section 357A of the Resource Management Act 1991) to object to the decision. The objection must be in writing, stating reasons for the

objection and must be received by Council within 15 working days of the receipt of this decision.

Lapsing Of Consent
Pursuant to section 125 of the Resource Management Act 1991, this resource consent will lapse 5 years after the date of commencement of consent unless, before the consent lapses;

a) The consent is given effect to; or

b) An application is made to the Council to extend the period of consent, and the council decides to grant an extension after taking into account the statutory considerations, set out in section 125(1)(b) of the Resource Management Act 1991.



APPROVED PLAN

PLANNER .....

RC 2190181 ..... Date 20/11/18 .....

Seeka Ltd

Redevelopment
153 Waipapa Road, Kerikeri
-SITE DEVELOPMENT-

Drawing Set for Resource Consent

SHEETS

DRAWN	ADP	DESIGNED	ADP
CHECKED	-	SURVEYED BY	-

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Purpose
A	07-06-18	ADP	DRAFT
B	07-09-18	ADP	ISSUED FOR RESOURCE CONSENT
C	1-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL

NOTES/KEY

Seeka
SELECT EXCELLENCE

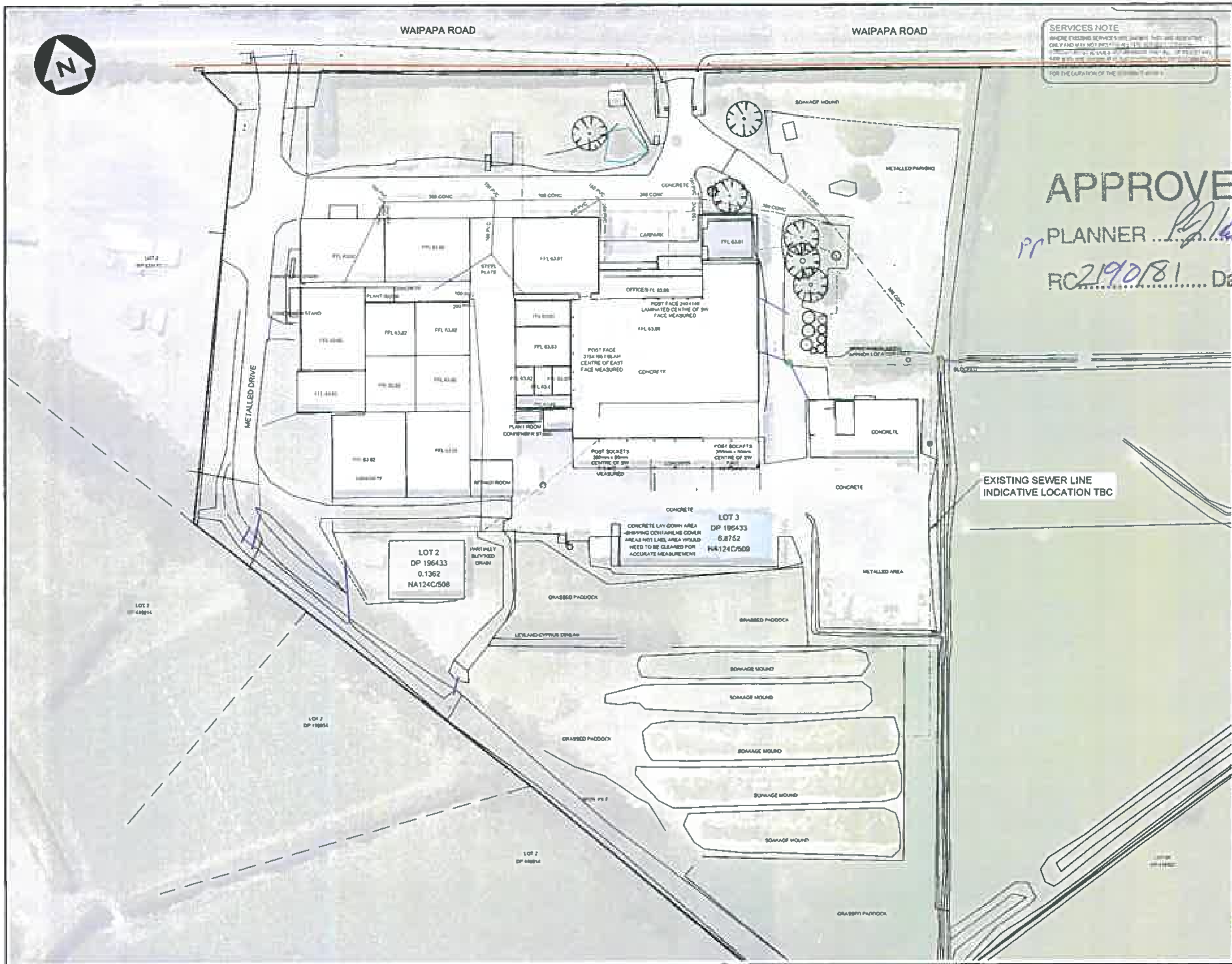
SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

COVER PAGE

Stratum CONSULTANTS
Planners | Engineers | Surveyors

SCALE NTS ORIGINAL DWG. SIZE A3

DRAWING No 638080-M-E-D001 00 B



APPROVED PLAN

PLANNER [signature]

RC 2190181 Date 20/11/18

DRAWN ADP	DESIGNED ADP
CHECKED -	SURVEYED BY -

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	07-08-18	ADP	DRAFT
B	07-08-18	ADP	ISSUED FOR RESOURCE CONSENT
C		ADP	ISSUED FOR ENGINEERING APPROVAL

NOTES/KEY

Seeka
SELECT EXCELLENCE

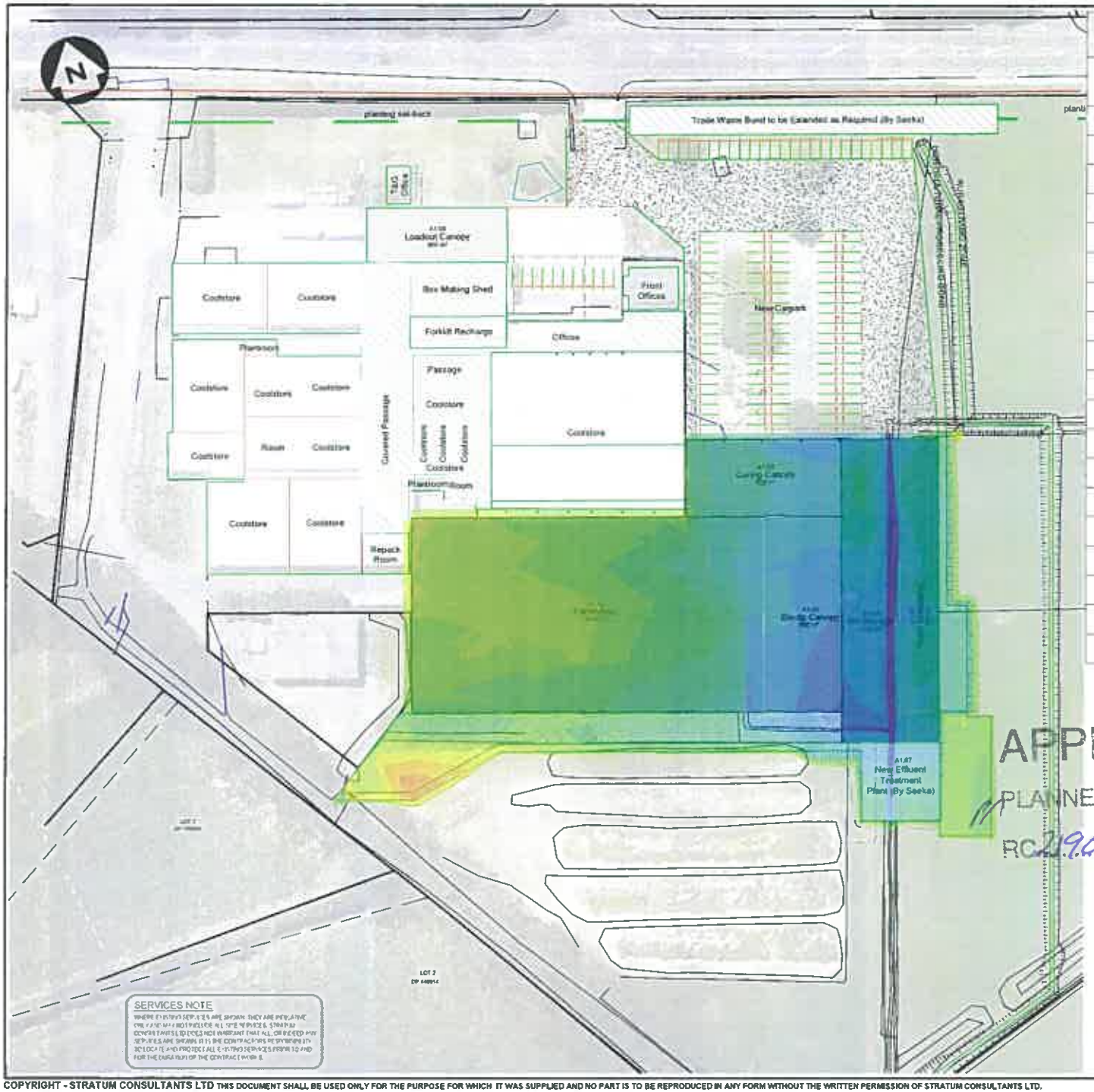
SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

TOPOGRAPHICAL PLAN
EXISTING SITE LAYOUT

Stratum
CONSULTANTS
Planners | Engineers | Surveyors

SCALE 1:1000 ORIGINAL DWG. SIZE A3

DRAWING No. 638080-M-E-D001 SHEET No. 01 REV. B



Cut Fill Banding

Number	Color	Minimum Elevation (m)	Maxir
1		-1.000	
2		-0.800	
3		-0.600	
4		-0.400	
5		-0.200	
6		0.000	
7		0.200	
8		0.400	
9		0.600	
10		0.800	
11		1.000	
12		1.200	
13		1.400	
14		1.600	
15		1.800	
16		2.000	
17		2.200	
18		2.400	
19		2.600	

APPROVED PLAN

PLANNER PJ Killalea

RC 190181 Date 20/11/18

DRAWN	ADP	DESIGNED	-
CHECKED	-	SURVEYED BY	-

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Purpose
A	03-08-18	ADP	DRAFT
B	07-09-18	ADP	ISSUED FOR RESOURCE CONSENT
C	[illegible] 18	[illegible]	UPDATE CHANGES
D	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL

NOTES/KEY

Cut / Fill Volume
Final Surface to Unsuitable Material Removed

Cut/Fill - 17,493.57m³

Floor Slab - 1,887.00m³

TOTAL - 15,606.57m³

Unsuitable Material

Cut - 6097.15m³

Seeka
SELECT EXCELLENCE

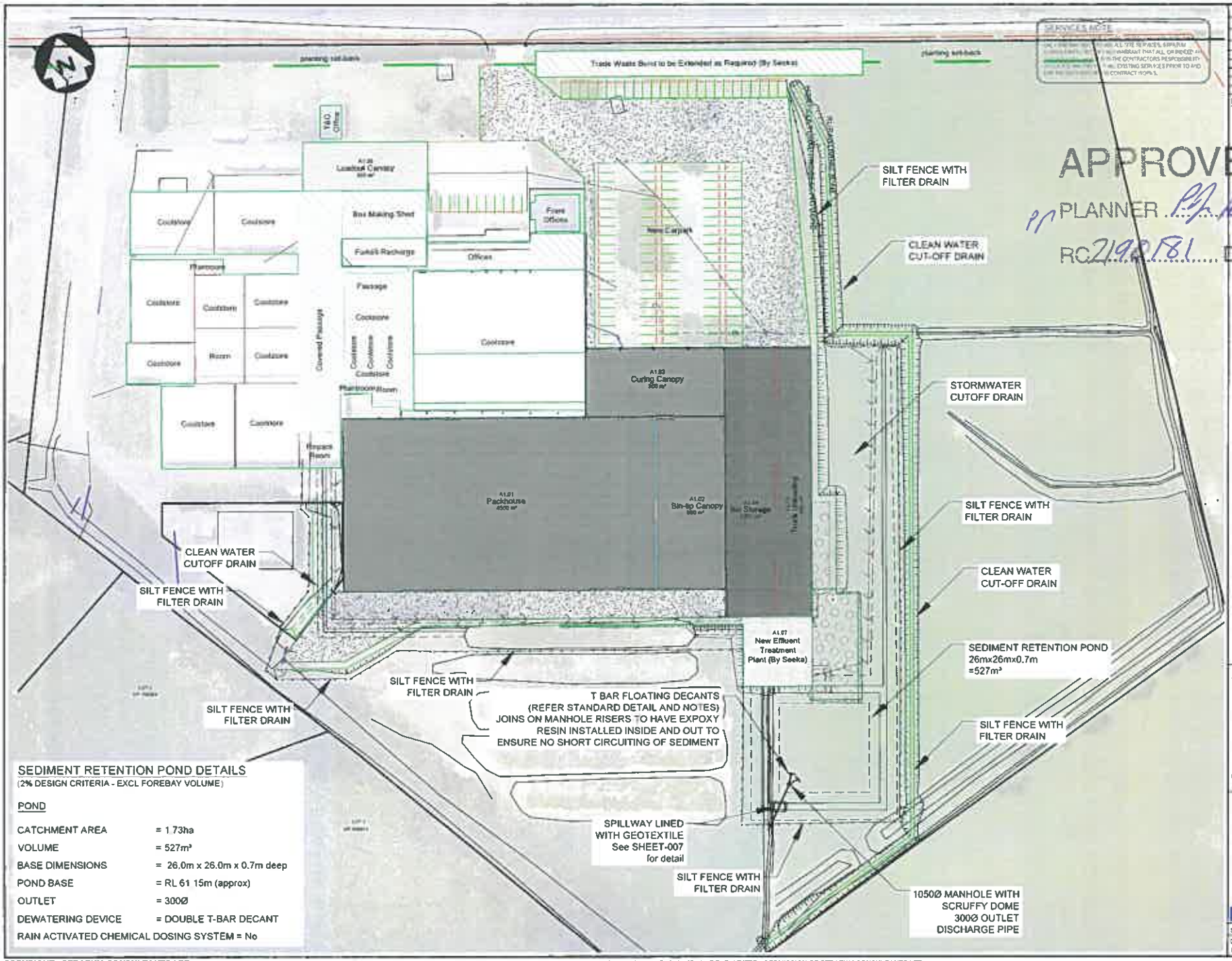
SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

CUT FILL PLAN
3 METERS OUTSIDE NEW BUILDING PLATFORM

Stratum CONSULTANTS
Planners | Engineers | Surveyors

SCALE 1:1000 ORIGINAL DWG. SIZE A3

DRAWING No. 638080-M-E-D001 SHEET No. 02 REV D



SEDIMENT RETENTION POND DETAILS

(2% DESIGN CRITERIA - EXCL FOREBAY VOLUME)

POND

CATCHMENT AREA	= 1.73ha
VOLUME	= 527m³
BASE DIMENSIONS	= 26.0m x 26.0m x 0.7m deep
POND BASE	= RL 61.15m (approx)
OUTLET	= 300Ø
DEWATERING DEVICE	= DOUBLE T-BAR DECANT
RAIN ACTIVATED CHEMICAL DOSING SYSTEM = No	

APPROVED PLAN

PLANNER PJ Kibblewhite

RC 2190181 Date 20/11/18

DRAWN ADP | DESIGNED ADP | CHECKED - | APPROVED -

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Description
A	03-08-18	ADP	DRAFT
B	07-08-18	ADP	ISSUED FOR RESOURCE CONSENT
C	11-08-18	ADP	EARTHWORKS PLAN UPDATED
D	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL

NOTES/KEY

Seeka
SELECT EXCELLENCE

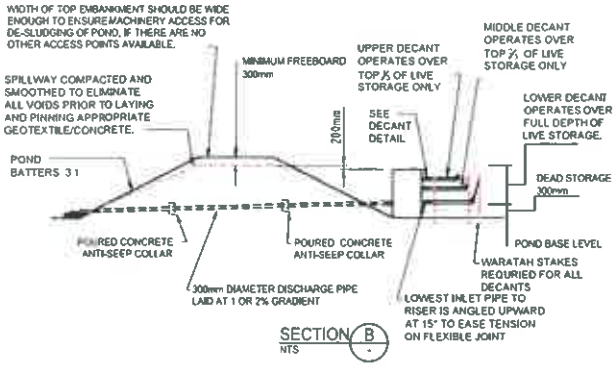
SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

EARTHWORKS PLAN
EROSION AND SEDIMENT
CONTROL LAYOUT

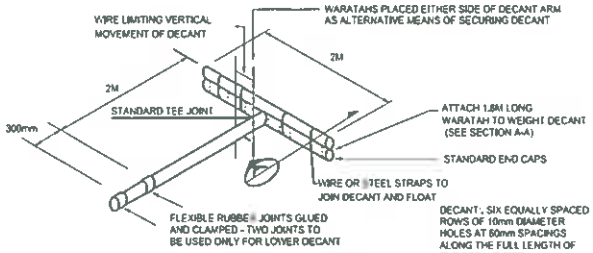
Stratum CONSULTANTS
Planners | Engineers | Surveyors

SCALE 1:1000 | ORIGINAL DWG. SIZE A3

DRAWING No. 638080-M-E-D001 | SHEET No. 03 | ISSUE D

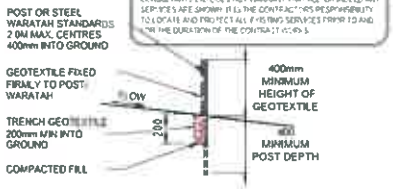


SECTION B
NTS



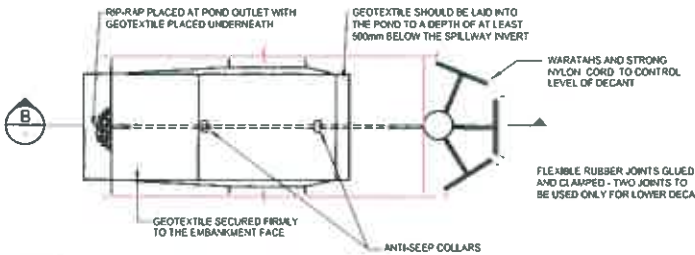
DECANT SYSTEM (UP TO 1.0ha)
SCALE NTS

SERVICES NOTE
WHERE EXISTING SERVICES ARE SHOWN, THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. STRATUM CONSULTANTS 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.

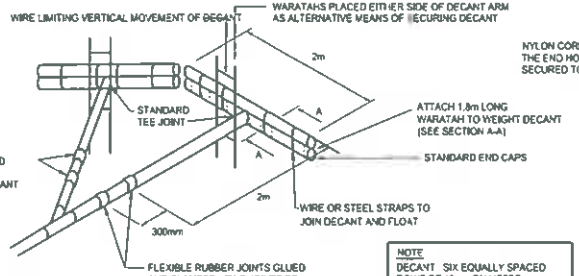


STANDARD SILT FENCE CONSTRUCTION
SCALE NTS

APPROVED PLAN
STRATUM CONSULTANTS
Date 20/11/18

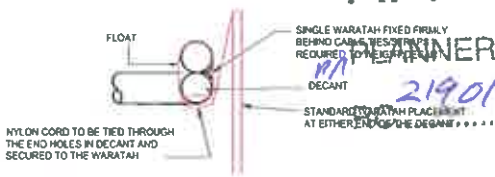


DETAIL1: SPILLWAY ARRANGEMENT OF SEDIMENT RETENTION
SCALE: NTS



NOTE
DECANT SIX EQUALLY SPACED ROWS OF 10mm DIAMETER HOLES AT 60mm SPACINGS ALONG THE FULL LENGTH OF THE DECANT PIPE

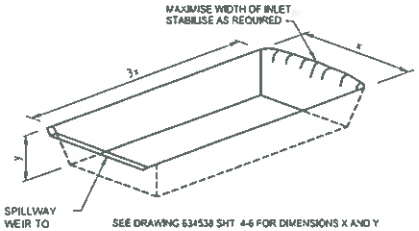
DECANT SYSTEM (1.0 Ha - 2.0ha)
DECANT SYSTEM (2.0ha - 3.0ha) - USE 3 DECANTS
SCALE NTS



SECTION A
NTS

NUMBER OF HECTARES	NUMBER OF T-BARS	DESIGN DECANT (L/S/HA)	# HOLES TO BLOCK OFF (OF 200 TOTAL)
1	1	3 l/s	⅓ (66) OF THE DECANT
2	2	6 l/s	⅔ (33) OF THE DECANT
3	3	9 l/s	NONE

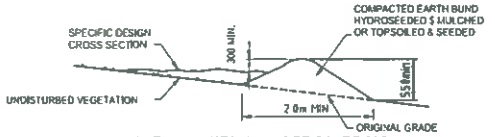
DECANT SYSTEM REQUIREMENTS



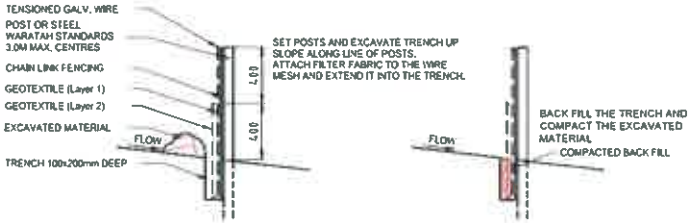
SEE DRAWING 634538 SHT 4-6 FOR DIMENSIONS X AND Y

TYPICAL SILT RETENTION POND
SCALE NTS

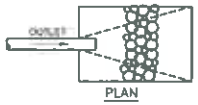
TYPICAL CROSS SECTION OF CONTOUR DRAIN
SCALE: NTS
(TYPICAL DIMENSIONS UNLESS NOTED OTHERWISE)



CLEANWATER RUNOFF DIVERSION
TYPICAL CROSS SECTION
SCALE NTS
(TYPICAL DIMENSIONS UNLESS NOTED OTHERWISE)

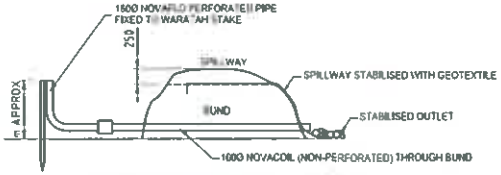


SUPER SILT FENCE CONSTRUCTION
SCALE: NTS

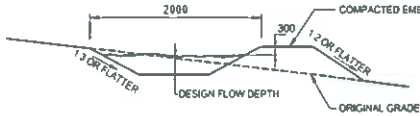


PLAN

STABILISED OUTFALL
SCALE: NTS



DEWATERING DEVICE FOR SMALL BUNDS
SCALE: NTS



TYPICAL CROSS SECTION OF A RUNOFF DIVERSION DRAIN - CRITICAL FLOW CAPACITY
SCALE: NTS
(TYPICAL DIMENSIONS UNLESS NOTED OTHERWISE)

DRAWN	ADP	DESIGNED	-	SURVEYED	-
CHECKED	-				

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Purpose
A	23-08-18	ADP	DRAFT
B	07-09-18	ADP	ISSUED FOR RESOURCE CONSENT
C	11-09-18	ADP	ISSUED FOR CONSENTING APPROVAL

NOTES/KEY

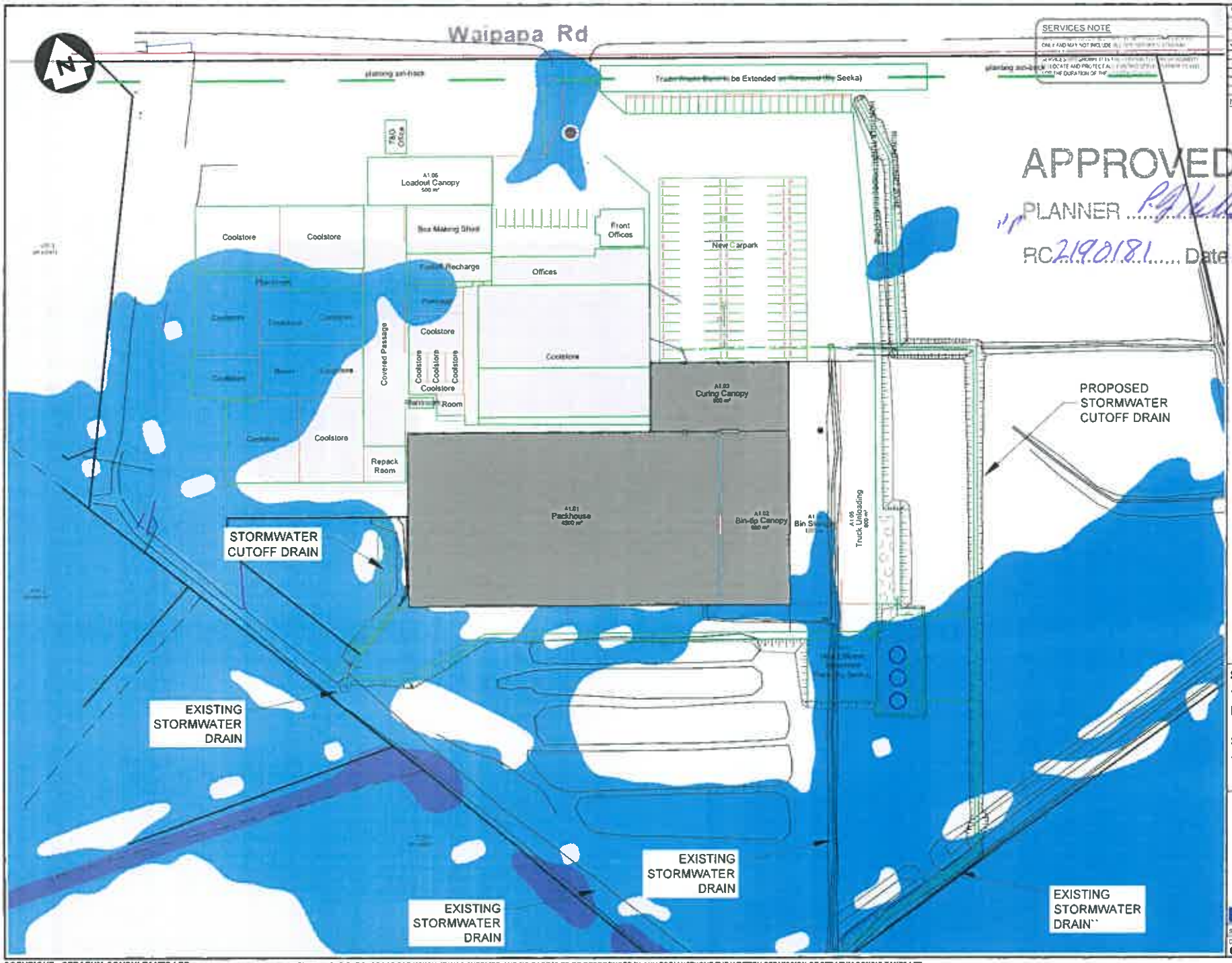
Seeka
SELECT EXCELLENCE

SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

STANDARD EROSION AND SEDIMENT CONTROL DETAIL DRAWINGS

Stratum CONSULTANTS
Environmental Engineers | Surveyors

SCALE	NTS	ORIGINAL DWG. SIZE A3	
DRAWING No.		SHEET No.	ISSUE
638080-M-E-D001		04	C



DRAWN: ADP

OFFICE OF ORIGIN - TAURANGA PH 07 571 4500

No.	Date	By	Issue/Revision
A	02-08-18	ADP	DRAFT
B	07-08-18	ADP	ISSUED FOR RESOURCE CONSENT
C	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL

Seeka
SELECT EXCELLENCE

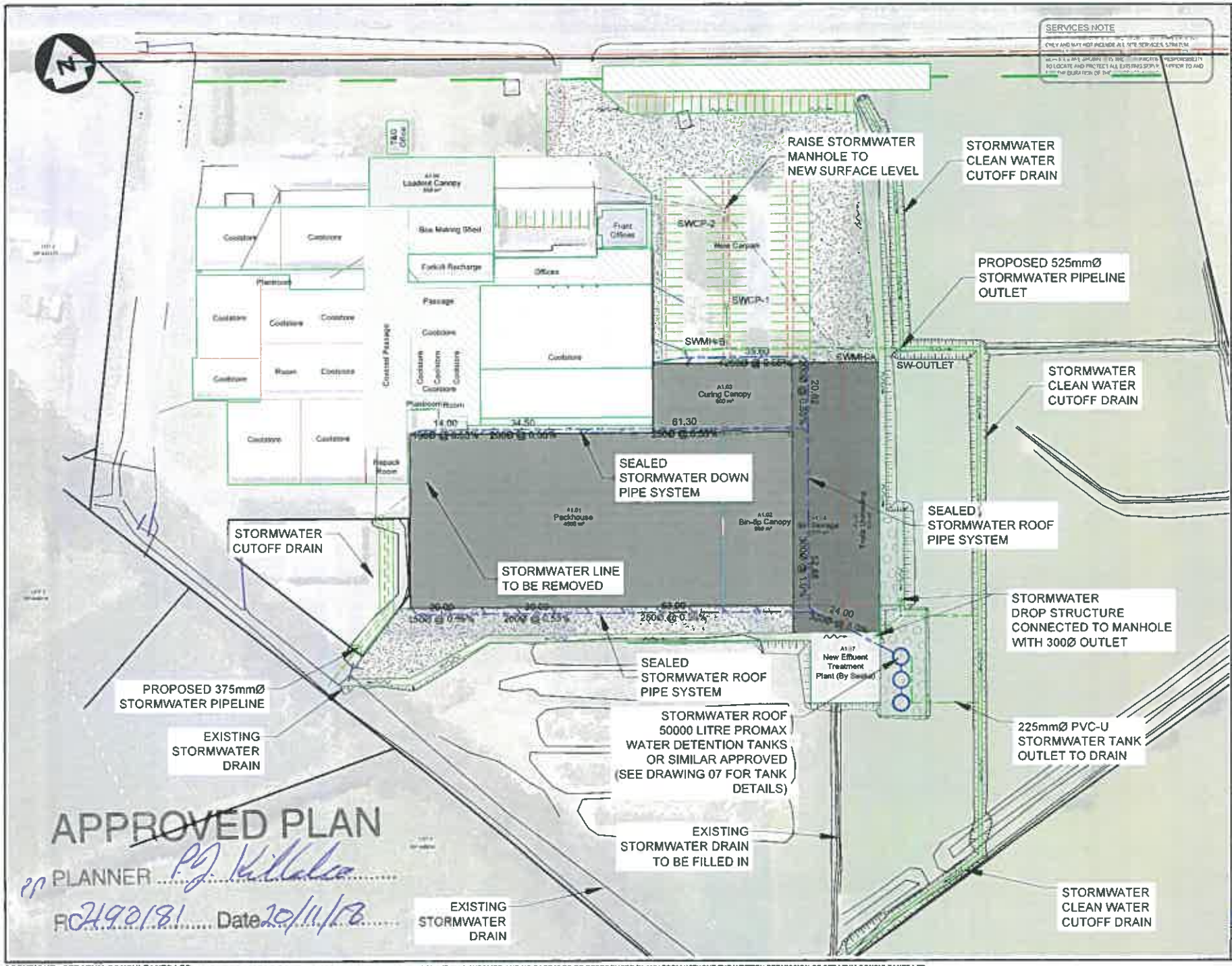
SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

STORMWATER PLAN
100 YEAR FLOOD EXTENT

Stratum CONSULTANTS
Planners | Engineers | Surveyors

SCALE 1:1000 ORIGINAL DWG. SIZE A3

DRAWING No. 638080-M-E-D001 SHEET No. 05 ISSUE C



SERVICES NOTE

APPROVED PLAN

PLANNER P.J. Killalea

RC 2490181 Date 20/11/18

DRAWN	ADP	DESIGNED	-
CHECKED	-	SURVEYED BY	-

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	02-08-18	ADP	DRAFT
B	07-09-18	ADP	ISSUED FOR RESOURCE CONSENT
C	11-05-19	ADP	ISSUED FOR ENGINEERING APPROVAL

NOTES/KEY

Key

- Existing Stormwater
- Proposed Stormwater
- Proposed Roof Drain

1. ALL WORKS TO COMPLY WITH FAR NORTH DISTRICT COUNCIL STANDARDS.
2. ALL WORKS TO BE CARRIED OUT BY APPROVED CONTRACTOR.
3. ALL PIPES UNDER CARRIGEWAYS AND VEHICLE CROSSINGS TO BE BACKFILLED WITH COMPACTED HARDFILL.
4. CONTRACTOR TO SEARCH, LOCATE, PROTECT AND MAINTAIN ALL EXISTING SERVICES.
5.

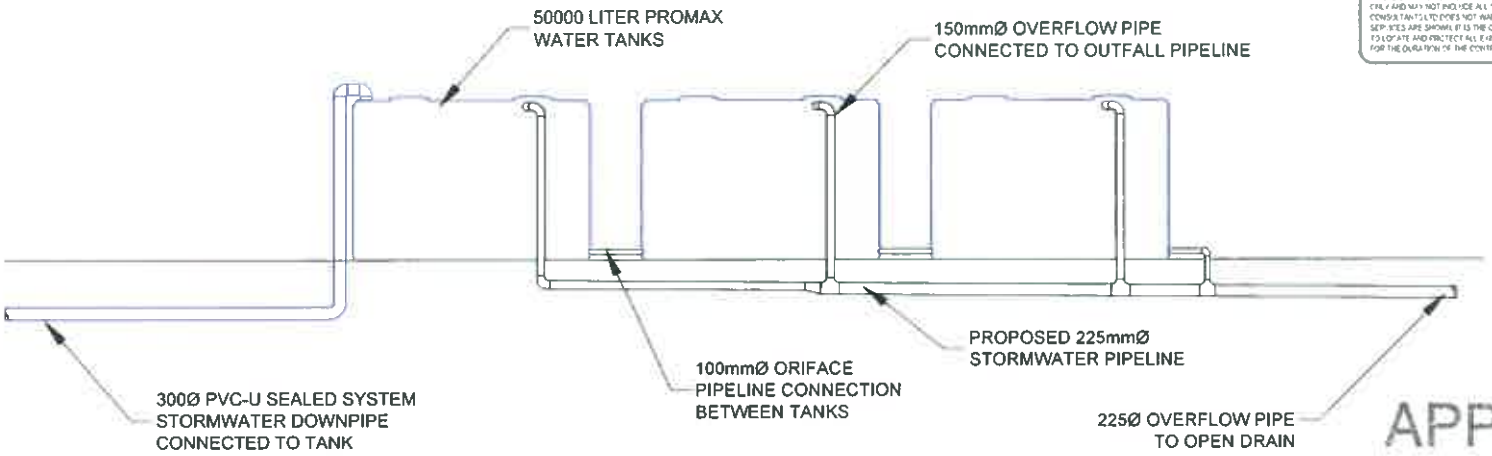
Seeka
SELECT EXCELLENCE

SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

STORMWATER LAYOUT PLAN

Stratum CONSULTANTS
Planners | Engineers | Surveyors

SCALE	1:1000	ORIGINAL DWG. SIZE A3	
DRAWING No.		SHEET No.	ISSUE
638080-M-E-D001		06	C



SERVICES NOTE

WHERE EXISTING SERVICES ARE SHOWN THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. STRATUM CONSULTANTS LTD DOES NOT WARRANT THAT ALL OR INDEED ANY SERVICES ARE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING SERVICES FROM TO AND FOR THE DURATION OF THE CONTRACT WORKS

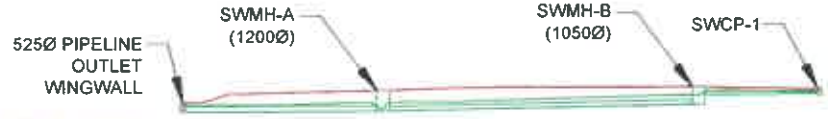
STORMWATER PROMAX TANKS

SCALE 1:100 (HORIZ & VERT)

APPROVED PLAN

PLANNER ..... Date 20/11/18

RC 2190181

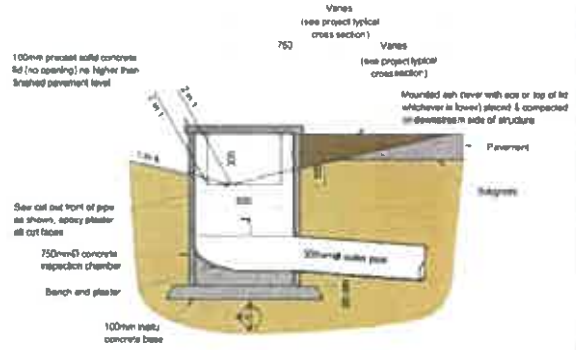


DATUM: 58.00

DEPTH TO INVERT			2.05			1.70		
INVERT LEVEL		61.08	61.18	61.18		61.79	62.74	62.80
LID LEVEL	62.09		63.23			63.49		63.34
CHAINAGE	0.00		19.40			50.00		61.77
PIPE SIZE & GRADIENT	18.5m of Ø 525 mm RCRRJ @ -0.50%			29.4m of Ø 450 mm RCRRJ @ -2.00%			11.1m of Ø 300 mm RCRRJ @ -0.50%	

STORMWATER LONGSECTION

SCALE 1:500 (HORIZ & VERT)



STORMWATER DROP STRUCTURE

DRAWN ADP
CHECKED -
SURVEYED BY -
OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No	Date	By	Issue/Revision
A	03-08-18	ADP	DRAFT
B	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL
C	-	-	-

NOTES & KEY

Key

- Existing Stormwater
- Proposed Stormwater
- Proposed Roof Drain

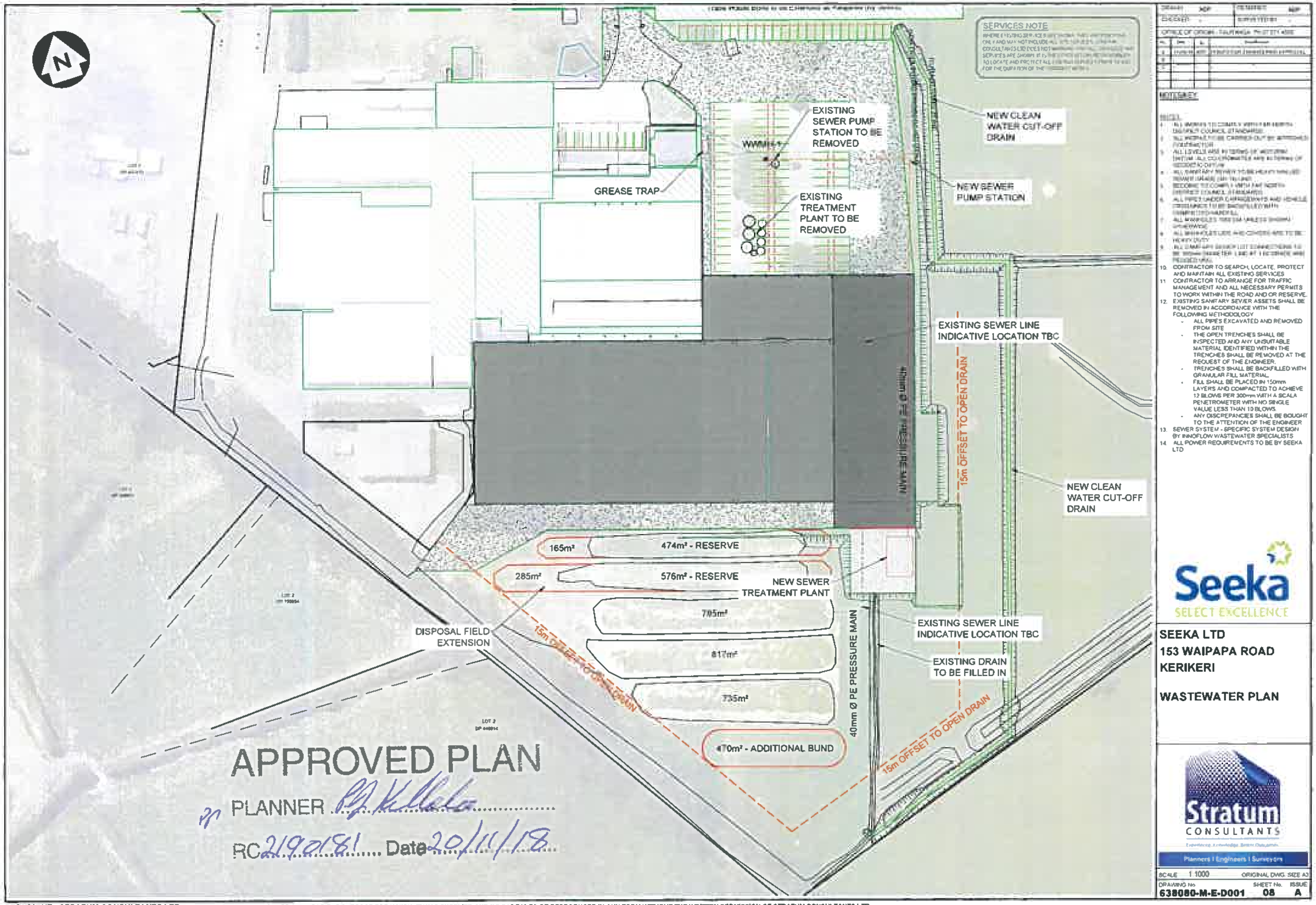
Seeka
SELECT EXCELLENCE

SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

STORMWATER DETAILS

Stratum CONSULTANTS
Planners | Engineers | Surveyors

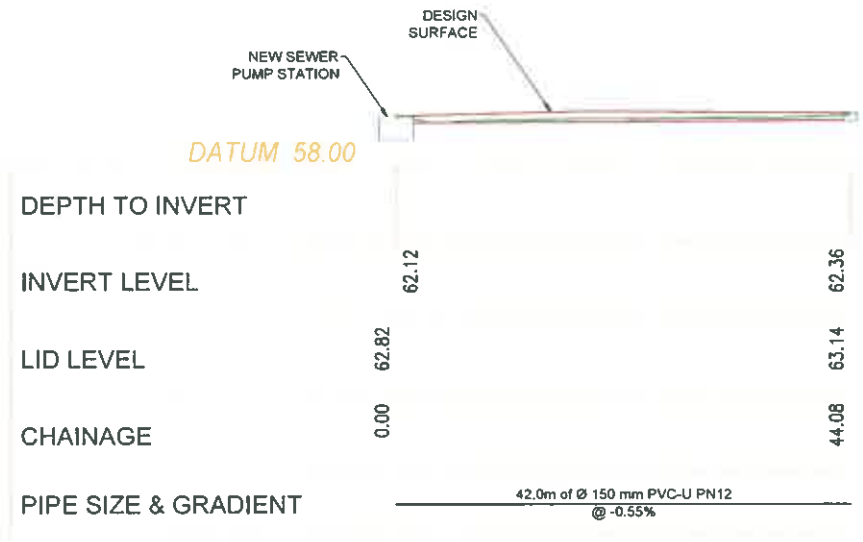
SCALE 1:1000 ORIGINAL DWG SIZE A3
DRAWING No. 638080-M-E-D001 07 B



SERVICES NOTE
EXISTING SEWER PUMP STATION TO BE REMOVED
WWMH-1
NEW CLEAN WATER CUT-OFF DRAIN
GREASE TRAP
EXISTING TREATMENT PLANT TO BE REMOVED
NEW SEWER PUMP STATION
EXISTING SEWER LINE INDICATIVE LOCATION TBC
40mm Ø PE PRESSURE MAIN
15m OFFSET TO OPEN DRAIN
NEW CLEAN WATER CUT-OFF DRAIN
165m²
474m² - RESERVE
285m²
576m² - RESERVE
NEW SEWER TREATMENT PLANT
705m²
DISPOSAL FIELD EXTENSION
817m²
735m²
470m² - ADDITIONAL BUND
15m OFFSET TO OPEN DRAIN
40mm Ø PE PRESSURE MAIN
EXISTING SEWER LINE INDICATIVE LOCATION TBC
EXISTING DRAIN TO BE FILLED IN
15m OFFSET TO OPEN DRAIN
APPROVED PLAN
PLANNER
RC 2190181 Date 20/11/18
10. CONTRACTOR TO SEARCH, LOCATE, PROTECT AND MAINTAIN ALL EXISTING SERVICES
11. CONTRACTOR TO ARRANGE FOR TRAFFIC MANAGEMENT AND ALL NECESSARY PERMITS TO WORK WITHIN THE ROAD AND OR RESERVE.
12. EXISTING SANITARY SEWER ASSETS SHALL BE REMOVED IN ACCORDANCE WITH THE FOLLOWING METHODOLOGY
- ALL PIPES EXCAVATED AND REMOVED FROM SITE
- THE OPEN TRENCHES SHALL BE INSPECTED AND ANY UNSUITABLE MATERIAL IDENTIFIED WITHIN THE TRENCHES SHALL BE REMOVED AT THE REQUEST OF THE ENGINEER.
- TRENCHES SHALL BE BACKFILLED WITH GRANULAR FILL MATERIAL.
- FILL SHALL BE PLACED IN 150mm LAYERS AND COMPACTED TO ACHIEVE 12 BLOWS PER 300mm WITH A SCALA PENETROMETER WITH NO SINGLE VALUE LESS THAN 10 BLOWS.
- ANY DISCREPANCIES SHALL BE BOUGHT TO THE ATTENTION OF THE ENGINEER
13. SEWER SYSTEM - SPECIFIC SYSTEM DESIGN BY INNOFLOW WASTEWATER SPECIALISTS
14. ALL POWER REQUIREMENTS TO BE BY SEEKA LTD
Seeka
SELECT EXCELLENCE
SEEKA LTD
153 WAIPAPA ROAD
KERIKERI
WASTEWATER PLAN
Stratum
CONSULTANTS
Planners | Engineers | Surveyors
SCALE 1:1000
ORIGINAL DWG. SIZE A3
DRAWING No. 638080-M-E-D001
SHEET No. 08
ISSUE A

SERVICES NOTE

WHERE EXISTING SERVICES ARE SHOWN THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. STRATUM CONSULTANTS 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



APPROVED PLAN

PLANNER .....

RC 219181 ..... Date 20/4/18

DRAWN	ADP	DESIGNED	ADP
CHECKED	-	SURVEYED BY	-

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issued/Purpose
A	11-05-17	ADP	ISSUED FOR ENGINEERING APPROVAL
B	-	-	-
C	-	-	-

NOTES/KEY

NOTES

1. ALL WORKS TO COMPLY WITH FAR NORTH DISTRICT COUNCIL STANDARDS
2. ALL WORKS TO BE CARRIED OUT BY APPROVED CONTRACTOR
3. ALL LEVELS ARE IN TERMS OF MOTURIKI DATUM. ALL CO-ORDINATES ARE IN TERMS OF GEODETIC DATUM.
4. ALL SANITARY SEWER TO BE HEAVY WALLED SEWER GRADE (SN 16) UNO.
5. BEDDING TO COMPLY WITH FAR NORTH DISTRICT COUNCIL STANDARDS
6. ALL PIPES UNDER CARRIGEWAYS AND VEHICLE CROSSINGS TO BE BACKFILLED WITH COMPACTED HARDFILL.
7. ALL MANHOLES 1050 DIA UNLESS SHOWN OTHERWISE
8. ALL MANHOLES LIDS AND COVERS ARE TO BE HEAVY DUTY
9. ALL SANITARY SEWER LOT CONNECTIONS TO BE 100mm DIAMETER LAID AT 1:60 GRADE AND PEGGED UNO.
10. CONTRACTOR TO SEARCH, LOCATE, PROTECT AND MAINTAIN ALL EXISTING SERVICES
11. CONTRACTOR TO ARRANGE FOR TRAFFIC MANAGEMENT AND ALL NECESSARY PERMITS TO WORK WITHIN THE ROAD AND OR RESERVE.
12. EXISTING SANITARY SEWER ASSETS SHALL BE REMOVED IN ACCORDANCE WITH THE FOLLOWING METHODOLOGY
    - ALL PIPES EXCAVATED AND REMOVED FROM SITE
    - THE OPEN TRENCHES SHALL BE INSPECTED AND ANY UNSUITABLE MATERIAL IDENTIFIED WITHIN THE TRENCHES SHALL BE REMOVED AT THE REQUEST OF THE ENGINEER
    - TRENCHES SHALL BE BACKFILLED WITH GRANULAR FILL MATERIAL.
    - FILL SHALL BE PLACED IN 150mm LAYERS AND COMPACTED TO ACHIEVE 12 BLOWS PER 300mm WITH A SCALA PENETROMETER WITH NO SINGLE VALUE LESS THAN 10 BLOWS.
    - ANY DISCREPANCIES SHALL BE BOUGHT TO THE ATTENTION OF THE ENGINEER
13. SEWER SYSTEM - SPECIFIC SYSTEM DESIGN BY INNOFLOW WASTEWATER SPECIALISTS
14. ALL POWER REQUIREMENTS TO BE BY SEEKA LTD

Seeka
SELECT EXCELLENCE

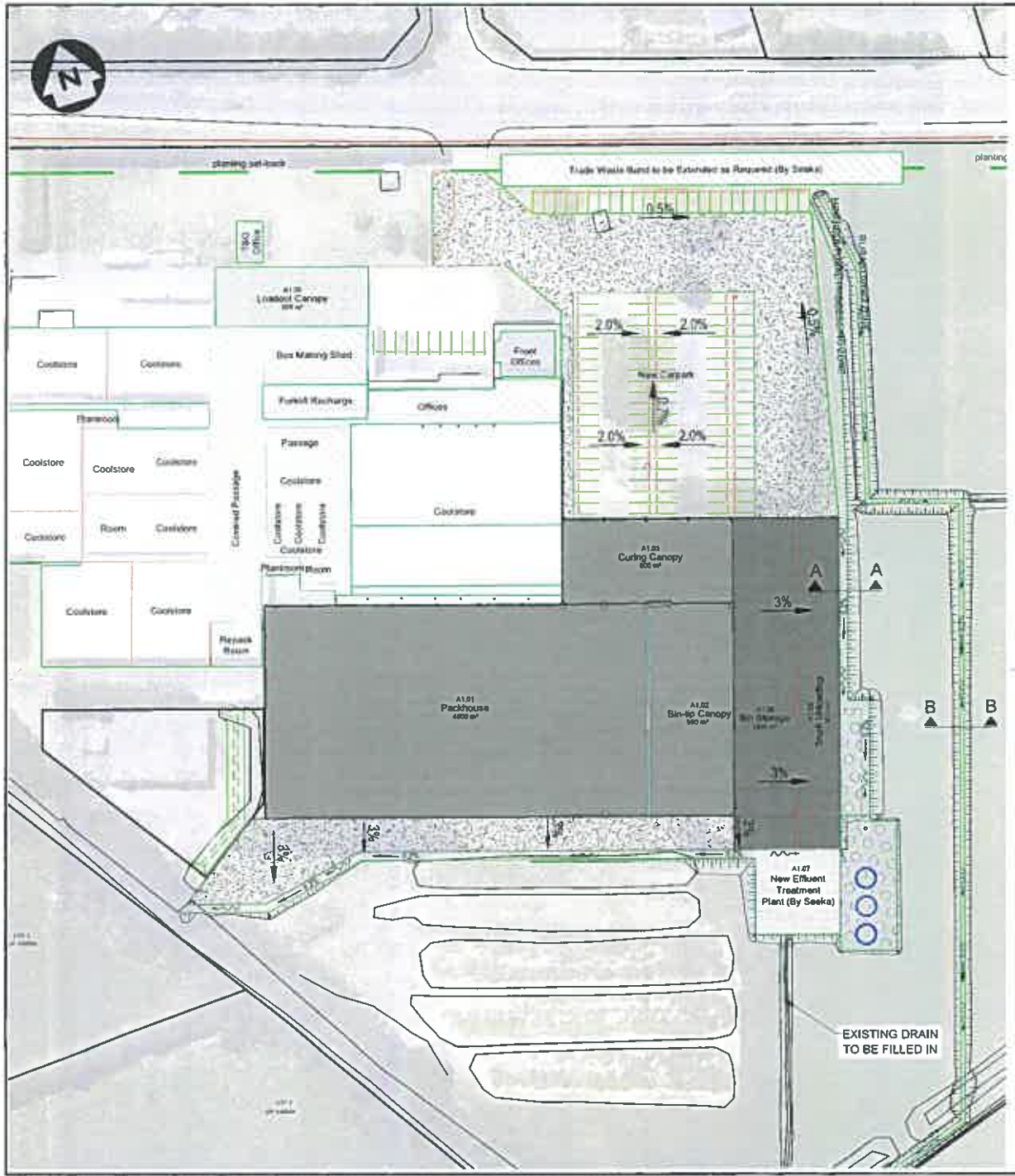
SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

WASTEWATER
LONG SECTION

Stratum CONSULTANTS
Planning | Engineering | Surveying

SCALE 1:1000 ORIGINAL DWG SIZE A3

638080-M-E-D001 09 A



SERVICES NOTE

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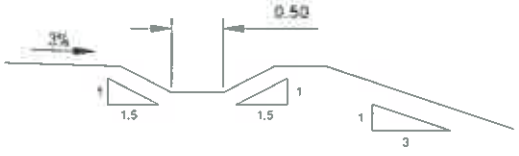
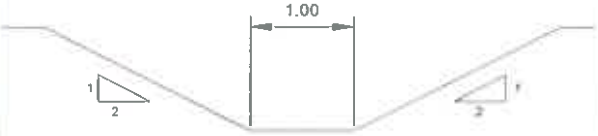


SECTION A - A

(BUND DRAIN CHANNEL)

SCALE 1:5 (HORIZ & VERT)



SECTION B - B

(CLEAN WATER CUT-OFF DRAIN)

SCALE 1:5 (HORIZ & VERT)

APPROVED PLAN

PLANNER P.J. Killalea

RC 2190181 Date 20/11/18

DRAWN	ADP	CHECKED	ADP
	-	SURVEYED BY	-

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Amendment
A	11-09-18	ADP	ISSUED FOR RESOURCE CONSENT APPROVAL
B	-	-	-
C	-	-	-

NOTES/KEY

BASECOURSE ACCESS 200mm GAP40

150mm CONCRETE ON 50mm SAND BASE ON SUBGRADE ≥ CBR 7

Seeka
SELECT EXCELLENCE

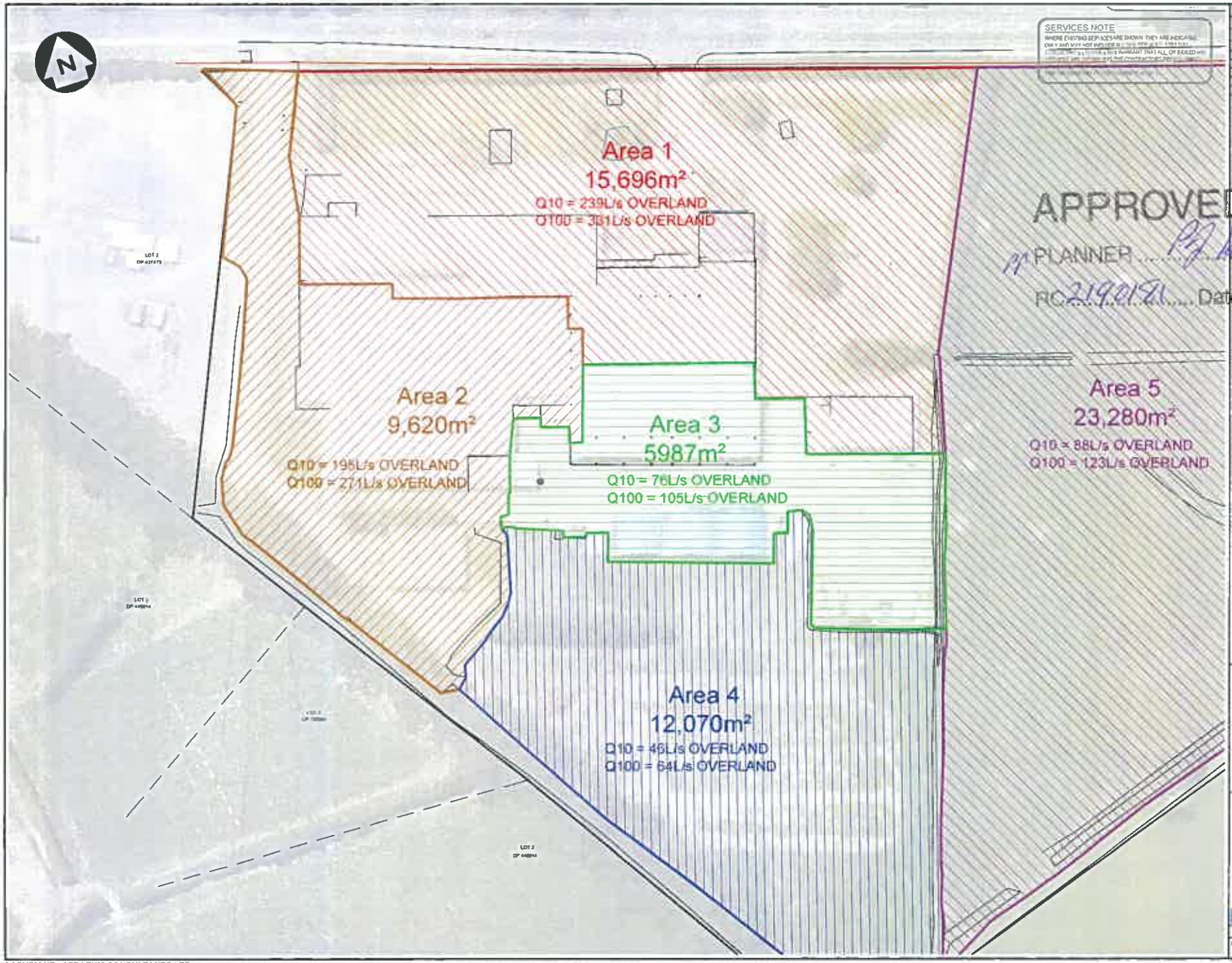
SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

SITE DEVELOPMENT PLAN

Stratum CONSULTANTS
Planning | Engineering | Surveying

SCALE 1:1000 ORIGINAL DWG SIZE A3

DRAWING No. 638080-M-E-D001 SHEET No. 10 ISSUE A



DRAWN ADP | DESIGNED ADP
CHECKED - | SURVEYED BY -
OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Reason
A	11-05-10	ADP	ISSUED FOR EARTHWORKS APPROVAL

NOTE ONLY

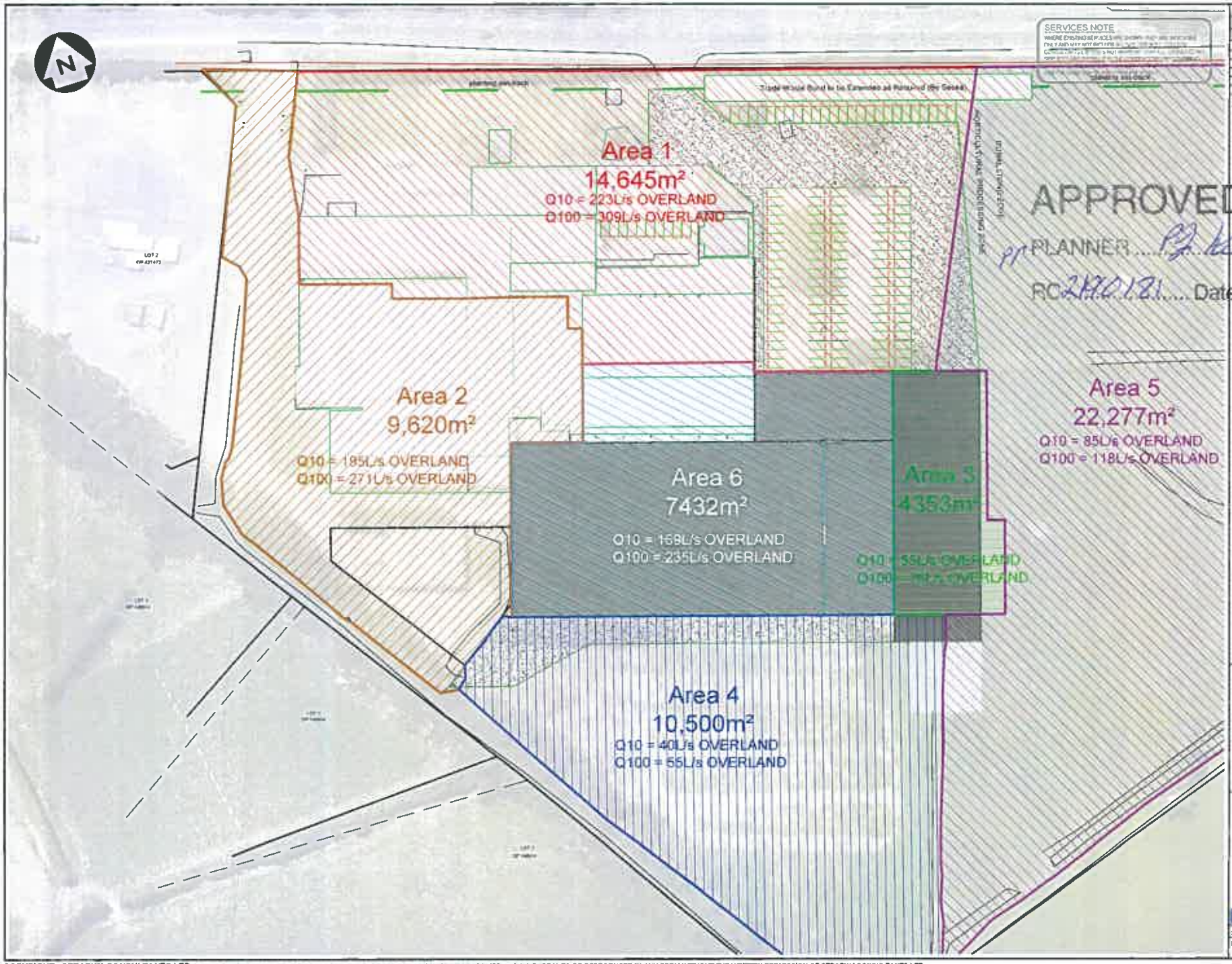
Seeka
SELECT EXCELLENCE

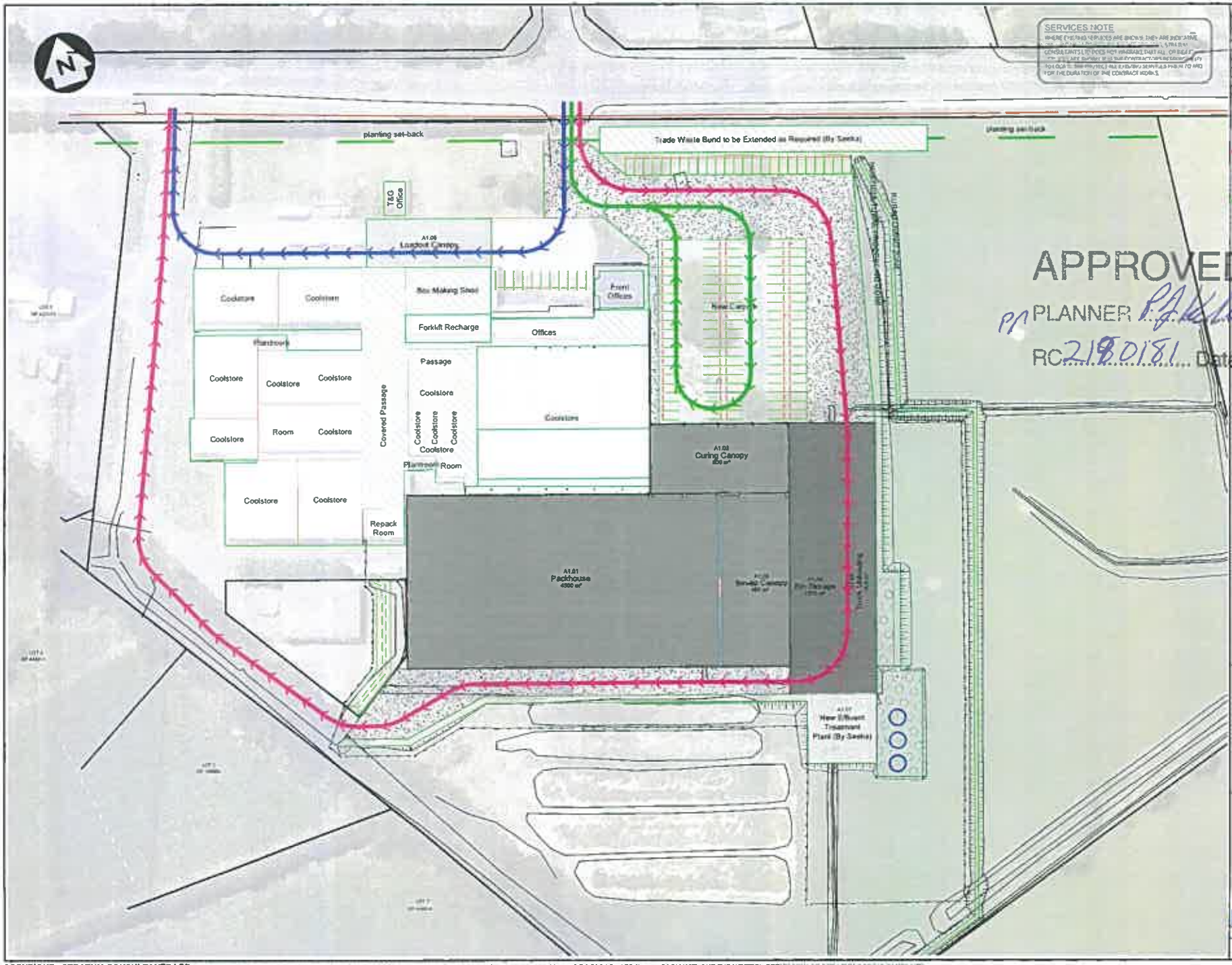
SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

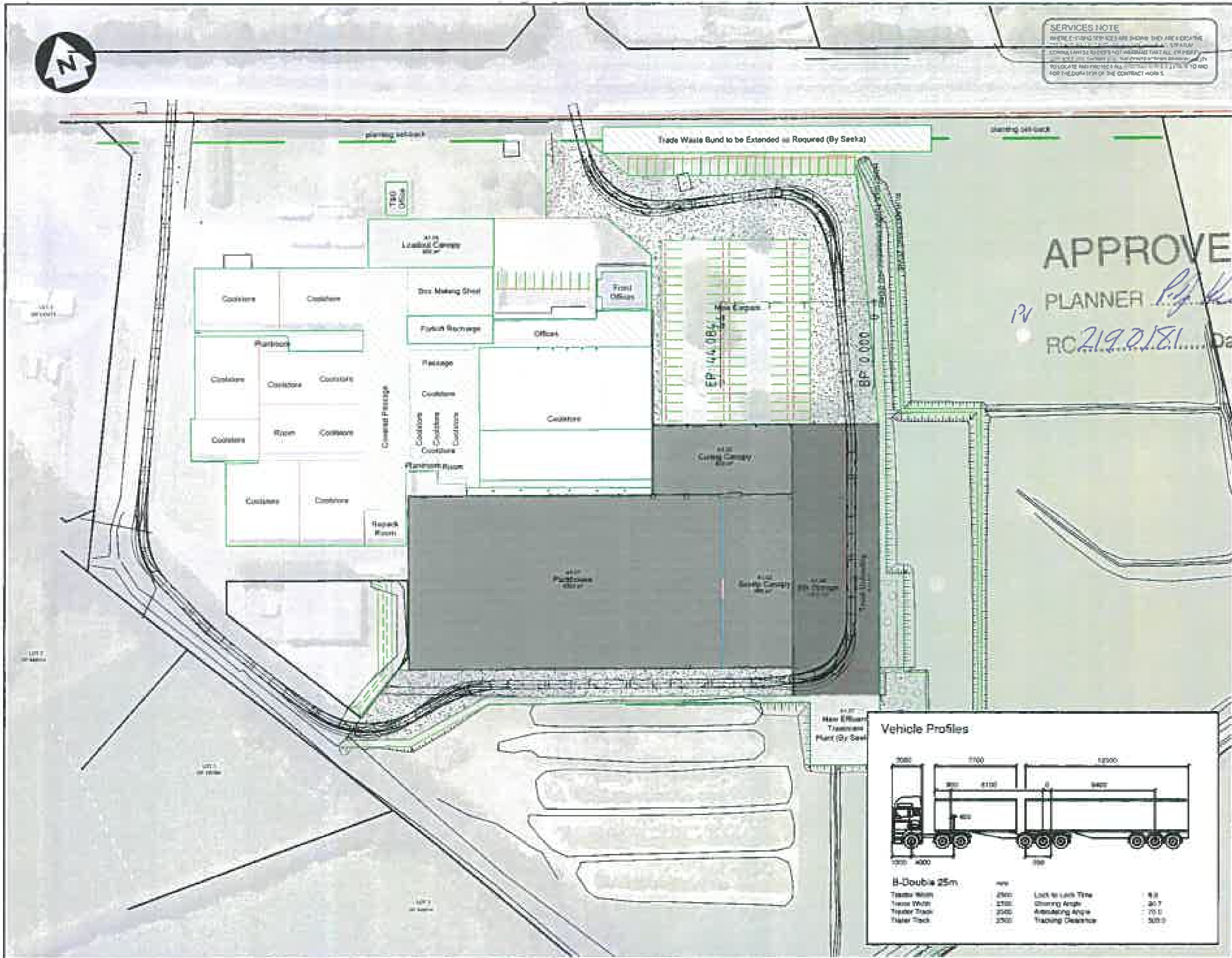
CATCHMENT PLAN
PRE DEVELOPMENT

Stratum CONSULTANTS
Planning | Engineering | Surveying

SCALE 1:1000 ORIGINAL DWG SIZE A3
DRAWING No. 638080-M-E-D001 SHEET No. 18 ISSUE A







SERVICES NOTE
planning set-back
Trade Waste Bund to be Extended as Required (By Seeka)
Loading Canopy
Coolstore
Box Making Shed
Front Offices
Forklift Recharge
Offices
Plantroom
Passage
Covered Passage
Room
Plantroom Room
Repack Room
New Carpark
EP 44.084
BP 0.000
Curing Canopy
Packhouse
Seeka Canopy
New Effluent Treatment Plant (By Seeka)
APPROVED PLAN
PLANNER
RC 2190181
Date 20/11/18
Vehicle Profiles
B-Double 25m
Tractor Width
Tractor Track
Trailer Width
Trailer Track
Lock to Lock Time
Steering Angle
Articulating Angle
Tracking Clearance

DRAWN	ADP	DESIGNED	ADP
CHECKED	-	SURVEYED BY	-
OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500			

No.	Date	By	Issue/Amendment
A	05-09-18	ADP	ISSUED FOR RESOURCE CONSENT
B	-		-
C	-		-

NOTES/KEY

SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

B-TRAIN VEHICLE TRACKING

Stratum CONSULTANTS

Planners | Engineers | Surveyors

SCALE 1:1000

DRAWING No. 638080-M-E-D001 SHEET No. 21 ISSUE A

Accidental Discovery Protocol (ADP)

Prior to the commencement of any works, a copy of this ADP should be made available to all contractors working on site.

Under the *Historic Places Act* (1993) an archaeological site is defined as a place associated with pre-1900 human activity, where there may be evidence relating to the history of New Zealand. Over 11,000 archaeological sites have been recorded in Northland, and more are identified on a regular basis.

For Maori sites (the most common site types in Northland), the largest and most obvious site types are pa, pits and terraces. However, evidence may be of a smaller nature, in the form of bones, shells, charcoal, burnt stone etc; a midden is an archaeological rubbish tip, in which many of these items can be found consolidated together. Evidence of disturbance of a midden can be a scattering of shell across a wide area; this can be confusing if it is near a beach. Pieces of obsidian or chert, together with stone tools, may also be recovered.

In later sites of European origin artefacts such as bottle glass, iron/metal, crockery etc. may be found, or evidence of old foundations, wells, drains or similar structures.

Burials/koiwi tangata may be found from any period.

Some examples:

Shell midden

Discoloured soils indicating burning

Animal bone

Historic pottery on a roadside scrape

A flight of pits in forest

Shell midden uncovered in road scraping

In the event of an "accidental discovery" of archaeological material the following steps must be taken:

1. All work on the site will cease immediately. The contractor works supervisor will shut down all equipment and activity.

2. The contractor/works supervisor/owner will take immediate steps to secure the site (tape it off) to ensure the archaeological remains are undisturbed and the site is safe in terms of health and safety requirements. Work may continue outside of the site area.

3. The contractor/works supervisor/owner will notify the Area Archaeologist of the Historic Places Trust (Northland Office), tangata whenua and any required statutory agencies[1] if this has not already occurred.

4. The New Zealand Historic Places Trust will appoint/advise a qualified archaeologist who will confirm the nature of the accidentally discovered material.

5. If the material is confirmed as being archaeological, under the terms of the *Historic Places Act*, the landowner will ensure that an archaeological assessment is carried out by a qualified archaeologist, and if appropriate, an archaeological authority is obtained from the Trust before work resumes.

6. If burials, human remains/koiwi tangata are uncovered, steps 1 to 3 above must be taken and the Area Archaeologist of the Historic Places Trust, the New Zealand Police and the Iwi representative for the area must be contacted immediately. The area must be treated with discretion and respect and the koiwi tangata/human remains dealt with according to law and tikanga.

7. Works at the site area shall not recommence until an archaeological assessment has been made, all archaeological material has been dealt with appropriately, and statutory requirements met. All parties will work towards work recommencement in the shortest possible timeframe while ensuring that archaeological and cultural requirements are complied with

ADVICE TO ALL CONTRACTORS/SITE WORKERS/OWNERS:-

***IF IN DOUBT, STOP AND ASK; TAKE A PHOTO AND SEND IT TO THE NZHPT ARCHAEOLOGIST* (details below)**

Contact details for the Area Archaeologist for Northland are:

Bill Edwards, Area Archaeologist Northland *or*
Shelagh Norton, Assistant Area Archaeologist Northland
NZ Historic Places Trust
PO Box 836, Kerikeri 0245
Ph. +64 9 401 7947; mobile 027 2490864; fax. +64 9 407 3454
bedwards@historic.org.nz or snorton@historic.org.nz

[1] For example, the New Zealand Police in the event that human remains are found.

Appendix D

Stormwater Assessment

Memorandum

To: Seeka Ltd File No: 638080-CLV -SW memo
Attention:
From: S Bos
Date: 11 June 2025
Subject: 153 Waipapa Road, Kerikeri
Additional Canopy Extension – Stormwater mitigation

As per Seeka's advice we confirm the following:

- It is proposed to provide for an additional area of canopy on the southeast corner of the existing main building.
- The new canopy will add an additional 1428 sq metres of roof area.
- There is also a requirement to cater for an additional 205 sq metres of additional development elsewhere on the site.
- Currently the site stormwater flow is mitigated with initial discharge to 4 x 50,000 litre retention tanks that then release the flow to the site boundary.
- The tanks are controlled by a 100 and 80 mm diameter orifice outlets with a high level 150 mm outlet.
- To account for the additional discharge area, it is recommended that a further 2 x 50,000 litre tanks are added to the retention tanks 'farm'.
- We have provided calculations , PS 1 and drawings outlining the requirements and confirming the derivation of the additional storage volume requirement.

Based on the provision of the additional storage mitigation we confirm that the site discharge remains as per the existing outflows, with no increase or change of effects at the boundary.

Should you have any queries on the information supplied please contact the undersigned.
Yours faithfully,

Stratum Consultants Ltd

Stephen Bos
CPEng, CMEngNZ, BE, NZCE

PRODUCER STATEMENT – PS1
DESIGN

BUILDING CODE CLAUSE(S): E1 **JOB NUMBER:** 638080
ISSUED BY: STRATUM CONSULTANTS LTD
(Engineering Design Firm)
TO: SEEKA LIMITED
(Owner/Developer)
TO BE SUPPLIED TO: FAR NORTH DISTRICT COUNCIL
(Building Consent Authority)
IN RESPECT OF: DESIGN OF STORMWATER CAPTURE AND RETENTION FOR CANOPY EXTENSION
(Description of Building Work)
AT: 153 Waipapa Road, Kerikeri
(Address, Town/City)
LEGAL DESCRIPTION: LLot 3 DP 196433 **N/A** ☐

We have been engaged by the owner/developer referred to above to provide *(Extent of Engagement)*:
DESIGN OF RETENTION TANKS AND STORMWATER DRAINAGE FOR NEW CANOPY EXTENSION
in respect of the requirements of the Clause(s) of the Building Code specified above for Part only , as specified in the Schedule, of the proposed building work.

The design carried out by us has been prepared in accordance with:

- ☑ Compliance documents issued by the Ministry of Business, Innovation & Employment *(Verification method/acceptable solution)* NZBC E1 / AS 1 / VM1 and/or;
- ☐ Alternative solution as per the attached Schedule.

The proposed building work covered by this producer statement is described on the drawings specified in the Schedule, together with the specification, and other documents set out in the Schedule.

On behalf of the Engineering Design Firm, and subject to:

- Site verification of the following design assumptions: Ground conditions / loading as per the Geotechnical report .
- All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that:

- the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the Schedule, will comply with the relevant provisions of the Building Code and that;
- the persons who have undertaken the design have the necessary competency to do so.

I recommend the CM 3 level of **construction monitoring**.

I, *(Name of Engineering Design Professional)* STEPHEN BOS , am:

- ☑ CPEng number 154367

and hold the following qualifications BE (hons), CPEng, CMEngNZ, NZCE (civil)

The Engineering Design Firm holds a current policy of Professional Indemnity Insurance no less than $200,000
The Engineering Design Firm Choose one a member of ACE New Zealand.

SIGNED BY *(Name of Engineering Design Professional)*: STEPHEN BOS
(Signature below):

ON BEHALF OF *(Engineering Design Firm)*: STRATUM CONSULTANTS LTD Date: 11/06/2025

Note: This statement has been prepared solely for the Building Consent Authority named above and shall not be relied upon by any other person or entity. Any liability in relation to this statement accrues to the Engineering Design Firm only. As a condition of reliance on this statement, the Building Consent Authority accepts that the total maximum amount of liability of any kind arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in tort or otherwise, is limited to the sum of $200,000.

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.

SCHEDULE to PS1

Please include an itemised list of all referenced documents, drawings, or other supporting materials in relation to this producer statement below:

DESIGN VERIFICATION OF STORMWATER PIPE SIZIGN AND NEW RETENTION TANKS FOR SITE EXPANSION WORKS

GUIDANCE ON USE OF PRODUCER STATEMENTS

Information on the use of Producer Statements and Construction Monitoring Guidelines can be found on the Engineering New Zealand website
https://www.engineeringnz.org/engineer-tools/engineering-documents/producer-statements/

Producer statements were first introduced with the Building Act 1991. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute of Architects (NZIA), Institution of Professional Engineers New Zealand (now Engineering New Zealand), Association of Consulting and Engineering New Zealand (ACE NZ) in consultation with the Building Officials Institute of New Zealand (BOINZ). The original suite of producer statements has been revised at the date of this form to ensure standard use within the industry.

The producer statement system is intended to provide Building Consent Authorities (BCAs) with part of the reasonable grounds necessary for the issue of a Building Consent or a Code Compliance Certificate, without necessarily having to duplicate review of design or construction monitoring undertaken by others.

PS1 DESIGN Intended for use by a suitably qualified independent engineering design professional in circumstances where the BCA accepts a producer statement for establishing reasonable grounds to issue a Building Consent;

PS2 DESIGN REVIEW Intended for use by a suitably qualified independent engineering design review professional where the BCA accepts an independent design professional's review as the basis for establishing reasonable grounds to issue a Building Consent;

PS3 CONSTRUCTION Forms commonly used as a certificate of completion of building work are Schedule 6 of NZS 3910:2013 or Schedules E1/E2 of NZIA's SCC 2011[2]

PS4 CONSTRUCTION REVIEW Intended for use by a suitably qualified independent engineering construction monitoring professional who either undertakes or supervises construction monitoring of the building works where the BCA requests a producer statement prior to issuing a Code Compliance Certificate.

This must be accompanied by a statement of completion of building work (Schedule 6).

The following guidelines are provided by ACE New Zealand and Engineering New Zealand to interpret the Producer Statement.

Competence of Engineering Professional
This statement is made by an engineering firm that has undertaken a contract of services for the services named, and is signed by a person authorised by that firm to verify the processes within the firm and competence of its personnel.

The person signing the Producer Statement on behalf of the engineering firm will have a professional qualification and proven current competence through registration on a national competence-based register such as a Chartered Professional Engineer (CPEng).

Membership of a professional body, such as Engineering New Zealand provides additional assurance of the designer's standing within the profession. If the engineering firm is a member of ACE New Zealand, this provides additional assurance about the standing of the firm.

Persons or firms meeting these criteria satisfy the term "suitably qualified independent engineering professional".

Professional Indemnity Insurance
As part of membership requirements, ACE New Zealand requires all member firms to hold Professional Indemnity Insurance to a minimum level.

The PI Insurance minimum stated on the front of this form reflects standard practice for the relationship between the BCA and the engineering firm.

Professional Services during Construction Phase
There are several levels of service that an engineering firm may provide during the construction phase of a project (CM1-CM5 for engineers[3]). The building Consent Authority is encouraged to require that the service to be provided by the engineering firm is appropriate for the project concerned.

Requirement to provide Producer Statement PS4
Building Consent Authorities should ensure that the applicant is aware of any requirement for producer statements for the construction phase of building work at the time the building consent is issued as no design professional should be expected to provide a producer statement unless such a requirement forms part of the Design Firm's engagement.

Refer Also:

1. Conditions of Contract for Building & Civil Engineering Construction NZS 3910: 2013
2. NZIA Standard Conditions of Contract SCC 2011
3. Guideline on the Briefing & Engagement for Consulting Engineering Services (ACE New Zealand/Engineering New Zealand 2004)
4. PN01 Guidelines on Producer Statements

www.acenz.org.nz
www.engineeringnz.org

Job Title	SEEKA Ltd	***Page***	
Site Address	153 Waipapa Road	***No of Pages***	
City	Kerikeri	***Date***	June 25
Job No.	638080	***By***	SB

TGA REV 3 - 13/08/2019

Stormwater Catchment Data

Existing Site Area = 7988 m^2

Existing runoff coeff 0.5 From Original Calc

Rainfall Intensities mm/hr HIRDS

Return		Duration (minutes)					
Period	10	20	30	60	120	360	720
10	132.0	95.6	79.1	56.8	39.9	21.3	13.7
50	178.0	129.0	107.0	77.3	54.4	29.2	18.8
100	199.0	144.0	120.0	86.2	60.8	32.8	21.1

Revised runoff coeff

		Runoff coeff	Total
Building Coverage	6355	0.9	5720
Canopy	1428	0.9	1285
Future Roof area	205	0.9	184.5
wastewater		0.3	0
Balance		0.3	0
			7189
Average runoff coeff =			**0.9**

Existing Site Discharge (Q = CIA) l/s

Return		Duration (minutes)					
Period	10	20	30	60	120	360	720
10	146.4	106.1	87.8	63.0	44.3	23.6	15.2
50	197.5	143.1	118.7	85.8	60.4	32.4	20.9
100	220.8	159.8	133.1	95.6	67.5	36.4	23.4

Developed Site Discharge (Q = CIA) l/s

Return		Duration (minutes)					
Period	10	20	30	60	120	360	720
10	263.6	190.9	158.0	113.4	79.7	42.5	27.4
50	355.5	257.6	213.7	154.4	108.6	58.3	37.5
100	397.4	287.6	239.6	172.1	121.4	65.5	42.1

Orifice Plate sizing

$Q = cA\ (2gH)^{0.5}$

c= 0.609 H = 3.1 Existing Tank and Orifice Bae Level Outlet

Orifice Plate diameter = 100 mm Area = 0.008

Q @ max head = 37.3 l/s (less than peak non developed flow)

Storage Required - m^3 - (inflow less outflow x storm duration

Return		Duration (minutes)					
Period	10	20	30	60	120	360	720
10	135.8	184.3	217.2	274	305	113	-429.6
50	190.9	264.4	317.5	421	514	454	10.4
100	216.1	300.3	364.2	485.4	605.6	609	208.8

USE 6 x PROMAX WATER TANK (50,000 LITRES) PLUMBED INTO SW DOWNPIPES (FROM HIGH LEVEL) WITH 100mm DIAMETER OUTLET TO SW DRAIN

TANK TO BE NOMINALLY EMPTY AND TO FILL DURING RAINFALL EVENTS

Stratum Consultants Ltd	JOB TITLE	Seeka Katikati				PAGE	1
	ADDRESS						
	JOB No.	638080		DATE	June 25	BY	SJB

Stormwater pipe sizing

Location 153 Waipapa Road, Kerikeri 2095

Design rate is 1 in 10 year Tc = 10min

LINE	Contributing Lot	Contributing Area m^2	C	I mm/Hr	Q l/s Q = CIA l/s	**Sum Q l/s**	IL 1st point m	IL 2nd point m	Diff m	Dist Between m	**GRADIENT**	PIPE Roughness K	Pipe Dia Rqd mm	Pipe Capacity l/s	
DP set 1	Canopy 1	928.00	0.9	132	30.62	**31**					**0.50%**	1.5	**250**	35	OK
DP set 2	Canopy 2	500.00	0.9	132	16.50	**17**					**0.50%**	1.5	**200**	20	OK
		combined				**47**					**0.50%**		**300**	65	OK

0.00 m^2 m^2 TOTAL CONTRIBUTING AREA

HIRDS V4 Intensity-Duration-Frequency Results

Sitename: 1 Kerikeri 2095

Coordinate system: WGS84

Longitude: 173.948

Latitude: -35.2091

DDF Model Parameters	c	d	e	f	g	h	i
Values:	0.002375	0.509989	-0.014502	-0.003816	0.253522	-0.011696	3.23771

Example:	Duration (h	ARI (yrs)	x	y	Rainfall Rate (mm/hr)
	24	100	3.178054	4.600149	10.64305

Rainfall intensities (mm/hr) :: Historical Data

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
10	0.1	98.8	71.5	59.1	42.5	30.1	16.6	11	6.96	4.2	3.04	2.39	1.97
50	0.02	132	96	79.6	57.3	40.7	22.6	15	9.51	5.75	4.17	3.29	2.71
100	0.01	147	107	88.5	63.8	45.4	25.3	16.7	10.6	6.44	4.68	3.69	3.04

Rainfall intensities (mm/hr) :: RCP8.5 for the period 2031-2050

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
10	0.1	110	79.4	65.7	47.2	33.3	18.2	11.9	7.44	4.45	3.21	2.51	2.06
50	0.02	148	107	88.7	63.9	45.3	24.8	16.2	10.2	6.11	4.42	3.46	2.85
100	0.01	164	119	98.7	71.2	50.5	27.7	18.2	11.4	6.85	4.96	3.89	3.2

Rainfall intensities (mm/hr) :: RCP8.5 for the period 2081-2100

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
10	0.1	132	95.6	79.1	56.8	39.9	21.3	13.7	8.41	4.95	3.55	2.76	2.26
50	0.02	178	129	107	77.3	54.4	29.2	18.8	11.6	6.85	4.91	3.83	3.13
100	0.01	199	144	120	86.2	60.8	32.8	21.1	13	7.69	5.52	4.3	3.52

planting set back

265.61m

planting set back

planting setback

T&G Office

153

New Concrete

Loadout Canopy

Coolstore

Box Making Shed

Office

Forklift Recharge

Offices

Plantroom

Coolstore

Coolstore

Covered Passage

Coolstore

Coolstore

Coolstore

Room

Coolstore

Coolstore

Coolstore

Plantroom

Plant

Coolstore

Coolstore

Coolstore

Repack

LOT 3
DP196433

SWMH (existing)
LL = 62.97m
IL 61.69m

SWPIT
LL = 62.51m
OUT IL = 61.64m

23,28
225Ø @ 0.52%

SW OUTLET
IL 61.52m

Car Park
metalled

SWPIT
LL = 62.42m
OUT IL = 61.69m

22,99
225Ø @ 0.43%

SW OUTLET
IL 61.59m

Canteen

Car Park
metalled

RURAL LIVING ZONE
HORTICULTURAL PROCESSING ZONE

SWMH
LL = 63.42m
OUT IL = 62.12m
INV 1 = 62.23m

SWMH
LL = 63.40m
OUT IL = 61.85m
INV 1 = 61.88m

SWMH
LL = 63.67m
OUT IL = 61.21m
INV 1 = 61.29m
INV 2 = 61.31m

20000

Ramp

5000

13,31
150Ø @ 1.80%

30,04
300Ø @ 1.80%

18,49
450Ø @ 0.54%

SW OUTLET
IL 61.11m

106427

35,66
200Ø @ 0.52%

Curing Canopy

19,98
200Ø @ 1.43%

Conc Pad

20,15
150Ø @ 0.56%

30,02
200Ø @ 0.54%

63,85
250Ø @ 0.50%

New
Proposed
Canopy
Extention
1428 m²

71.4

50,52
250Ø @ 1.43%

OPEN DRAIN

EXISTING SWMH
LL = 63.69m
OUT IL = 62.54m
INV 1 = 63.03m

SWMH C
LL = 63.63m
OUT IL = 62.28m
INV 1 = 62.37m
INV 2 = 62.54m
INV 3 = 62.33m

New Pack House
FFL 63.82m

EXISTING SERVICED
AREA = 6355 sq m

450Ø @ 0.40%

24,74

SWMH D
LL = 63.38m
OUT IL = 62.16m
INV 1 = 62.60m
INV 2 = 62.18m

20,05
150Ø @ 0.55%

40,07
200Ø @ 0.55%

54,35
250Ø @ 0.55%

20.0

26,39
300Ø @ 0.5%

31,51
450Ø @ 1.43%

325°47'00"
51.79m

Levels and Coordinates are in terms of
Thomson and Survey Topographical Plan
9361 180618 TOPO MERG

225mmØ PVC-U
STORMWATER TANK
OUTLET TO DRAIN

SW OUTLET-B
IL = 61.93m

EXISTING
STORMWATER
DRAIN

OPEN DRAIN

325°46'51"
23.29m

325°47'26"

STORMWATER ROOF
50000 LITRE PROMAX
WATER DETENTION TANKS

soakage mound

SW OUTLET
IL 61.09m

SERVICES NOTE

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DRAWN:	ADP	DESIGNED:	ADP
CHECKED:	SC	SURVEYED BY:	PH

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	05.11.19	ADP	ISSUED TO FORM B & D Ltd
B	-	-	-
C	-	-	-

NOTES:

SW EXIST. STORMWATER PIPELINE

SW NEW STORMWATER PIPELINE

SEEKA LTD
WAIPAPA ROAD
KERIKERI

STORMWATER ASBUILT

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Planners I Engineers I Surveyors

SCALE: 1:750 ORIGINAL DWG. SIZE A3

DRAWING No. **638080-M-E-C005** SHEET No. **AB1** ISSUE **A**

C:\work - projects\600000 PROJECTS\638080 - Seeka\2025 Civil SW assessment\638080-M-E-C005 - ASBUILT+new drainage.dwg - Plotted: 12/06/2025

planting set back

265.61m

planting set back

planting setback

T&G Office

Future roof area ~205 Sq m

New Concrete

Loadout Canopy

153

LOT 3
DP196433

Coolstore

Box Making Shed

Office

Forklift Recharge

Offices

Plantroom

Coolstore

Coolstore

Coolstore

Room

Coolstore

Covered Passage

Coolstore

Coolstore

Coolstore

Coolstore

Plantroom

Plant

Coolstore

Coolstore

Coolstore

Repack

Canteen

Car Park metalled

Car Park metalled

Ramp

RURAL LIVING ZONE
HORTICULTURAL PROCESSING ZONE

106427

SWMH (existing)
LL = 62.97m
IL 61.69m

SWPIT
LL = 62.51m
OUT IL = 61.64m

23,28
225Ø @ 0.52%

SW OUTLET
IL 61.52m

SWPIT
LL = 62.42m
OUT IL = 61.69m

22,99
225Ø @ 0.43%

SW OUTLET
IL 61.59m

SWMH
LL = 63.42m
OUT IL = 62.12m
INV 1 = 62.23m

SWMH
LL = 63.40m
OUT IL = 61.85m
INV 1 = 61.88m

SWMH
LL = 63.67m
OUT IL = 61.29m
INV 2 = 61.31m

20000

5000

13,31
200Ø @ 1.80%

30,04
300Ø @ 1.80%

18,49
300Ø @ 0.54%

20,53
200Ø @ 0.5%

35,66
200Ø @ 0.52%

SW OUTLET
IL 61.11m

200-300
enlarger

19,98
200Ø @ 1.43%

Conc Pad

73,01
300Ø @ 0.5%

71.4

OPEN DRAIN

20,15
150Ø @ 0.56%

30,02
200Ø @ 0.54%

63,85
250Ø @ 0.50%

Curing Canopy

New
Proposed
Canopy
Extention
1428 m²

50,52
250Ø @ 1.43%

New Pack House
FFL 63.82m

EXISTING SERVICED
AREA = 6355 sq m

EXISTING SWMH
LL = 63.69m
OUT IL = 62.54m
INV 1 = 63.08m

SWMH C
LL = 63.63m
OUT IL = 62.28m
INV 1 = 62.37m
INV 2 = 62.54m
INV 3 = 62.33m

SWMH D
LL = 63.36m
OUT IL = 62.16m
INV 1 = 62.60m
INV 2 = 62.18m

20,53
200Ø @ 0.5%

20.0

18,51
300Ø @ 0.5%

2 NEW 50,000 LITRE
TANKS PLUMBED INTO
EXISTING SYSTEM

225mmØ PVC-U
STORMWATER TANK
OUTLET TO DRAIN

31,51
450Ø @ 1.43%

325°47'00"
51.79m

SW OUTLET-P
IL= 61.99m

EXISTING
STORMWATER
DRAIN

325°46'31"
23.29m

OPEN DRAIN

325°47'26"

Levels and Coordinates are in terms of
Thomson and Survey Topographical Plan
9361 180618 TOPO MERG

STORMWATER ROOF
50000 LITRE PROMAX
WATER DETENTION TANKS

soakage mound

SW OUTLET
IL 61.09m

SERVICES NOTE

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DRAWN:	SB	DESIGNED:	SB
CHECKED:	SC	SURVEYED BY:	PH

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	11.06.25	SB	ISSUED FOR CONSENT

NOTES:

SW EXIST. STORMWATER PIPELINE

SW NEW STORMWATER PIPELINE

SEEKA LTD
WAIPAPA ROAD
KERIKERI

STORMWATER WORKS
NEW CANOPY EXTENSION

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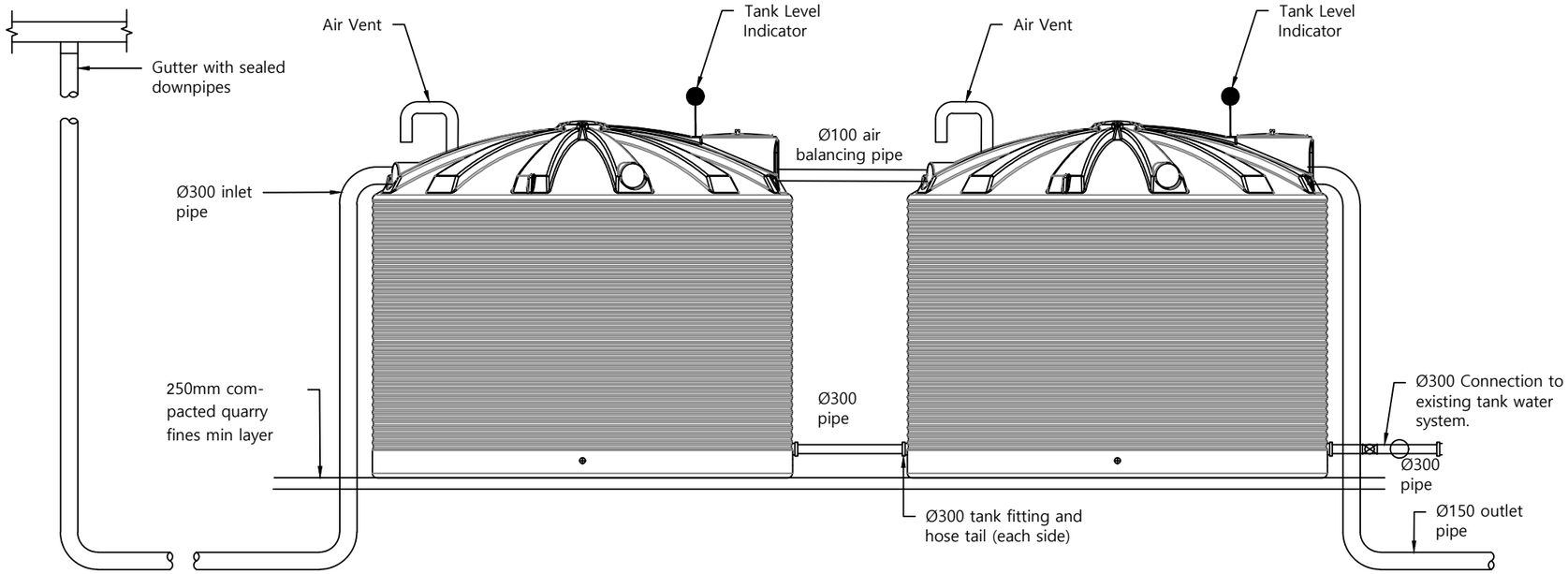
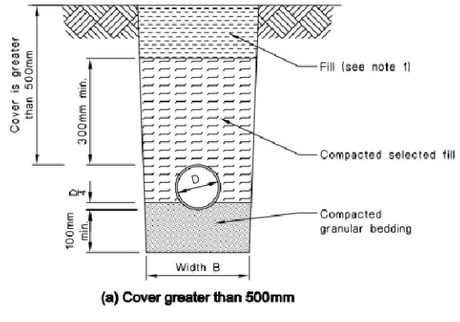
SCALE: 1:750 ORIGINAL DWG. SIZE A3

DRAWING No. **638080-M-E-C005** SHEET No. **D01** ISSUE **A**

C:\work - projects\600000 PROJECTS\638080 - Seeka\2025 Civil SW assessment\638080-M-E-C005 - ASBUILT+new drainage.dwg - Plotted: 12/06/2025



ADDITIONAL Tank Schematic - 1:50 @ A3



(a) Cover greater than 500mm

Bedding and Backfill Detail - nts

Figure 9: Inspection points
Paragraph 5.7.3

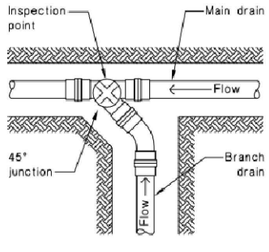
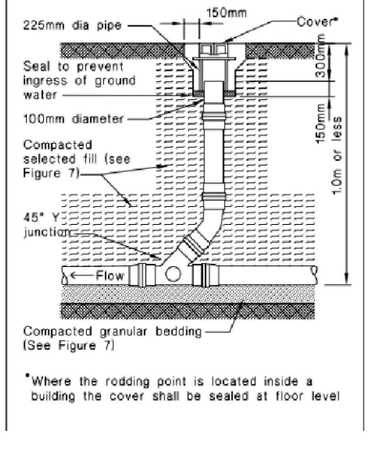


Figure 10: Rodding points
Paragraphs 3.4.6, 5.7.3 and 5.9.1



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DRAWN:	SB	DESIGNED:	SB
CHECKED:	SC	SURVEYED BY:	PH

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	11.06.25	SB	ISSUED FOR CONSENT

NOTES:

SW EXIST. STORMWATER PIPELINE

SW NEW STORMWATER PIPELINE

SEEKA LTD
WAIPAPA ROAD
KERIKERI

STORMWATER DETAILS

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SCALE: 1:750 ORIGINAL DWG. SIZE A3

DRAWING No. **638080-M-E-C005** SHEET No. **D02** ISSUE **A**

C:\work - projects\600000 PROJECTS\638080 - Seeka\2025 Civil SW assessment\638080-M-E-C005 - ASBUILT+new drainage.dwg - Plotted: 12/06/2025

ORIGINAL DESIGN REPORT

MEMORANDUM

Stratum CONSULTANTS
Experience. Knowledge. Better Outcomes.

To: SEEKA Ltd **File No.** 638080-M-E-D001
Attention: Michael Ruegg
From: Alex du Plessis
Date: 16.10.2018
Subject: Seeka Coolstore Site, 153 Waipapa Road, Kerikeri

Introduction

Please find attached supporting documents for your building consent lodgement for the proposed coolstore at the above site. Further commentary is provided under the relevant headings.

Site Works

Site works are being carried out in accordance with the recommendations of our geotechnical assessment report[1], and the resource consent for large scale earthworks obtained from Northland Regional Council[2] and Far North District Council[3]

Works comprise undercutting unsuitable material comprising topsoil and uncertified fill from beneath the building platform and backfilling with imported granular fill.

The completed works will provide a platform suitable for construction of the proposed coolstore.

Site works are being carried out with appropriate geotechnical monitoring comprising site inspections by geotechnical engineers and progressive testing of compacted fill material.

Upon completion, a summary report including as built will be prepared and PS4 issued for the works.

Stormwater Disposal

Attached are plans, calculations and a PS1 for the stormwater drainage works on site.

Comparison of total site discharge for predevelopment and post development has been calculated for a 100 year / 10 minute storm).

Pre-development Runoff	1173l/s
Post-development Run-off	1344l/s – Pre-mitigation
Post Development Run-off	1119l/s - Post-mitigation

The total detention for the site was assessed and an attempt was made to mitigate only the roof stormwater, so as to not require any other site stormwater control.

[1] Geotechnical Assessment prepared by Stratum Consultants Ltd dated 8.08.2018 and referenced 638080-M-E-C003
[2] Northland Regional Council Resource Consent File: 40373 - AUT.040373.01.01 to AUT.040373.04.01.
[3] Far North District Council Consent File: 2190096-RMALUC.

Stratum Consultants Limited
Planners | Engineers | Surveyors
Level 1, 29 Grey Street, PO Box 13651, Tauranga 3141 P 07 571 4500 F 07 571 3500 W www.stratum.nz

Based on the fact that the carparks and hardstand (on ground and therefore by default not able to be serviced by a standard detention tanks) are of a similar size as the new building, mitigation of the roof water alone is sufficient to ensure that the post development flow was less than the predevelopment. The carpark will be constructed using an unsealed surface with metal placed and swale grass drains to treat stormwater runoff as it drains to the southern boundary. It was noted that some maintenance and cleaning need to be done on the existing catchpits and stormwater system to provide better stormwater runoff.

Accordingly, the areas were therefore examined on roofed area and 'on ground' area basis, with the roofed area provided with stormwater control tanks, sized to mitigate the 1 in 100 year 60 minute storm.

It is recommended that Promax 50,000 Litre tanks be installed (4 in total for roofed area) and all down pipes be piped to the retention tanks. The outfall for the tanks should be controlled by a 100mm diameter orifice plate for the 10 year/60-minute storm, which then connects to the piped stormwater system to open drain. A second 80mm diameter orifice was calculated and need to be placed 2.45m higher than 100mm diameter orifice on the tanks for the 100 year/60-minute storm. This will allow attenuation for both storm events.

The restricted runoff from the 100mm diameter orifice was calculated to be 37.3l/s less than peak non developed flow and 83.93l/s less than peak non developed flow for the 100 year/10-minute storm. (See drawing 638080-M-E-D001 SHT 07 for details on the stormwater tanks layout).

On ground: - To future proof the development a 375mm diameter pipeline will be installed from SWMH A to the outlet. The upstream pipeline form SWMH A to SWMH B will be serviced by a 300mm diameter pipeline. Which will be used for a future cool storage building upgrade and unsealed carpark and access surfaces.

The access road to the north and to the front of the new development should be provided with a nominal fall to the open grassed drain (located at the low point). The open drain is flowing south and is east of the new development and flows for slow release to the adjacent existing Stormwater system.

Provision of both sets of stormwater controls will therefore result in controlled discharge of the development site to a lesser predevelopment level.

Wastewater Disposal

Wastewater to be installed by Innoflow.

Site Access

1. Metaled areas:

Excavate for access and paved areas to the line, gradient and levels shown on the drawings.
Should any excavation be made below the level required or directed, the Contractor must fill the over excavation with compacted hardfill.

After the subgrade has been trimmed and compacted to level and prior to the placement of basecourse the Engineer shall inspect the subgrade and may carry out CBR testing. The Engineer shall also inspect the basecourse prior to paving or laying foundations.

If unsuitable ground, rock or underground obstruction is encountered during excavation, notify the Engineer and cease work in that area until inspected and agreement on volume and rate for removal is agreed.

Basecourse GAP40 metal shall be spread evenly from trucks with tailboards set for spreading, avoiding all unnecessary segregation. (Refer drawings for details.) It shall then be evenly spread over the full width of the strip being metalled to a maximum depth of 125mm loose.

Compaction shall be carried out immediately after the basecourse has been spread. Compact by rolling with a 10 to 12 tonne steel wheeled roller until solid. Water shall be added as necessary.

The roller shall begin at the channel or low side and moving longitudinally, progress towards the high side or crown working the metal thoroughly until it does not weave or creep. Additional layers shall then be placed in a similar manner until the total compacted thickness has been reached. Judicious hand spreading of mineral fines, at the Contractors expense, to open textured areas will be permitted. Moistening and blading of metal shall be kept to a minimum.

2. Concrete areas:

The Truck Unloading area shall be generally be concrete with 663 mesh layer laid central and a minimum 28 day strength of 20MPa and with a minimum thickness of 150mm on a compacted subgrade. The construction boxing shall be 150mm thick.

The concrete shall be supplied to the site from a certified ready mix concrete supplier. Concrete shall comply with NZS 3109 and dockets to validate this shall be provided upon completion.

Contraction joints shall be cut by guillotine and spaced at not more than 6.0m centres.

Cold joints in concrete more than two hours old shall be cut with a saw to provide a proper face on which to restart the extrusion.

The exposed surface of all concrete shall present a neat clean broom finish.
All final surfaces shall be true to the lines and levels specified. Design considerations excepted, the final surface shall not vary by more than 5mm when checked with a 3m straight edge. No finished surface shall hold water.

Care shall be taken to ensure that no damage is done to the concrete structure when placing and compacting the backfill from the metaled access areas.

If you have any further questions, please call me.

Yours faithfully
STRATUM CONSULTANTS LTD

Alex du Plessis
Civil Engineer

Attachments: -

- Drawing No 638080-M-E-D001 Sheets 6, 7 and 11
- Stormwater calculations
- PS1

Job Title	SEEKA Ltd	***Page***	
Site Address	153 Waipapa Road	***No of Pages***	
City	Kerikeri	***Date***	Oct 18
Job No.	638080	***By***	ADP

TGA REV 2 - 07/07/2010

Stratum CONSULTANTS
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Stormwater Catchment Data

Existing Site Area = 7432 m^2
Existing runoff coeff 0.5
Rainfall Intensities mm/hr HIRDS

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	104.4	75.0	62.0	44.6	31.1	17.5	12.2
50	145.2	104.7	86.6	62.6	43.8	24.9	17.4
100	166.2	120.3	99.6	71.9	50.4	28.6	20.1

Existing Site Discharge (Q = CIA) l/s

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	107.8	77.4	64.0	46.0	32.1	18.1	12.6
50	149.9	108.1	89.4	64.6	45.2	25.7	18.0
100	171.6	124.2	102.8	74.2	52.0	29.5	20.7

Developed Site Discharge (Q = CIA) l/s

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	194.0	139.4	115.2	82.9	57.8	32.5	22.7
50	269.8	194.5	160.9	116.3	81.4	46.3	32.3
100	308.8	223.5	185.1	133.6	93.6	53.1	37.3

Orifice Plate sizing
$Q = cA\ (2gH)^{0.5}$
c= 0.609 H = 3.1
Orifice Plate diameter = 100 mm Area = 0.008

Q @ max head = 37.3 l/s (less than peak non developed flow)

Storage Required - m^3 - (inflow less outflow x storm duration

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	94.0	122.5	140.2	164	147	-103	-632.2
50	139.5	188.7	222.5	284	317	194	-214.8
100	162.9	223.5	266.0	346.6	405.7	342	1.9

Revised runoff coeff

		Runoff coeff	Total
Building Coverage	6632	0.9	5969
Canopy	800	0.9	720
Parking roadway		0.45	0
wastewater		0.3	0
Balance	0	0.3	0
			6689
Average runoff coeff =			0.9

Extreme rainfall assessment with climate change

Projected temperature change: 2.1° C
Rainfall intensities (mm/h)

		Duration									
ARI (y)	aep	10m	20m	30m	60m	2h	6h	12h	24h	48h	72h
1.58	0.633	66.6	47.7	39.4	28.2	19.5	10.8	7.5	5.2	3.0	2.2
2.00	0.500	71.4	51.6	42.2	30.2	20.9	11.7	8.1	5.6	3.3	2.4
5.00	0.200	90.0	64.5	53.2	38.2	26.5	14.9	10.4	7.2	4.2	3.1
10.00	0.100	104.4	75.0	62.0	44.6	31.1	17.5	12.2	8.5	5.0	3.7
20.00	0.050	120.6	87.0	71.6	51.7	36.1	20.4	14.3	10.0	5.9	4.3
30.00	0.033	130.2	94.2	78.0	56.4	39.5	22.5	15.7	11.0	6.5	4.7
40.00	0.025	138.0	100.2	82.6	59.8	41.9	23.8	16.7	11.7	6.9	5.0
50.00	0.020	145.2	104.7	86.6	62.6	43.8	24.9	17.4	12.2	7.2	5.3
60.00	0.017	150.0	108.6	89.8	64.9	45.5	25.8	18.1	12.7	7.5	5.5
80.00	0.012	159.0	114.9	95.0	68.8	48.2	27.4	19.2	13.4	7.9	5.8
100.00	0.010	166.2	120.3	99.6	71.9	50.4	28.6	20.1	14.0	8.3	6.1

USE 4 x PROMAX WATER TANK (50,000 LITRES) PLUMBED INTO SW DOWNPIPES (FROM HIGH LEVEL)
WITH 100mm DIAMETER OUTLET TO SW DRAIN
TANK TO BE NOMINALLY EMPTY AND TO FILL DURING RAINFALL EVENTS

Job Title	SEEKA Ltd	***Page***	
Site Address	153 Waipapa Road	***No of Pages***	
City	Kerikeri	***Date***	Oct 18
Job No.	638080	***By***	ADP

TGA REV 2 - 07/07/2010

Stratum CONSULTANTS
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Existing Site Area = 7432 m^2
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Rainfall Intensities mm/hr HIRDS

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	104.4	75.0	62.0	44.6	31.1	17.5	12.2
50	145.2	104.7	86.6	62.6	43.8	24.9	17.4
100	166.2	120.3	99.6	71.9	50.4	28.6	20.1

Existing Site Discharge (Q = CIA) l/s

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	107.8	77.4	64.0	46.0	32.1	18.1	12.6
50	149.9	108.1	89.4	64.6	45.2	25.7	18.0
100	171.6	124.2	102.8	74.2	52.0	29.5	20.7

Developed Site Discharge (Q = CIA) l/s

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	194.0	139.4	115.2	82.9	57.8	32.5	22.7
50	269.8	194.5	160.9	116.3	81.4	46.3	32.3
100	308.8	223.5	185.1	133.6	93.6	53.1	37.3

Orifice Plate sizing
$Q = cA\ (2gH)^{0.5}$
c= 0.609 H = 3.1
Orifice Plate diameter = 150 mm Area = 0.018

Q @ max head = 83.93 l/s (less than peak non developed flow)

Storage Required - m^3 - (inflow less outflow x storm duration

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	66.0	66.5	56.3	-4	-188	-1111	-2646.6
50	111.5	132.7	138.6	117	-18	-814	-2229.2
100	134.9	167.5	182.0	178.8	69.9	-665	-2012.5

Revised runoff coeff

		Runoff coeff	Total
Building Coverage	6632	0.9	5969
Canopy	800	0.9	720
Parking roadway		0.45	0
wastewater		0.3	0
Balance	0	0.3	0
			6689
Average runoff coeff =			**0.9**

Extreme rainfall assessment with climate change

Projected temperature change: 2.1° C
Rainfall intensities (mm/h)

		Duration									
ARI (y)	**aep**	**10m**	**20m**	**30m**	**60m**	**2h**	**6h**	**12h**	**24h**	**48h**	**72h**
1.58	0.633	66.6	47.7	39.4	28.2	19.5	10.8	7.5	5.2	3.0	2.2
2.00	0.500	71.4	51.6	42.2	30.2	20.9	11.7	8.1	5.6	3.3	2.4
5.00	0.200	90.0	64.5	53.2	38.2	26.5	14.9	10.4	7.2	4.2	3.1
10.00	0.100	104.4	75.0	62.0	44.6	31.1	17.5	12.2	8.5	5.0	3.7
20.00	0.050	120.6	87.0	71.6	51.7	36.1	20.4	14.3	10.0	5.9	4.3
30.00	0.033	130.2	94.2	78.0	56.4	39.5	22.5	15.7	11.0	6.5	4.7
40.00	0.025	138.0	100.2	82.6	59.8	41.9	23.8	16.7	11.7	6.9	5.0
50.00	0.020	145.2	104.7	86.6	62.6	43.8	24.9	17.4	12.2	7.2	5.3
60.00	0.017	150.0	108.6	89.8	64.9	45.5	25.8	18.1	12.7	7.5	5.5
80.00	0.012	159.0	114.9	95.0	68.8	48.2	27.4	19.2	13.4	7.9	5.8
100.00	0.010	166.2	120.3	99.6	71.9	50.4	28.6	20.1	14.0	8.3	6.1

USE 4 x PROMAX WATER TANK (50,000 LITRES) PLUMBED INTO SW DOWNPIPES (FROM HIGH LEVEL) WITH 100mm DIAMETER OUTLET TO SW DRAIN
TANK TO BE NOMINALLY EMPTY AND TO FILL DURING RAINFALL EVENTS

Client: Seeka Ltd
Contract Name: 153 Waipara Road
Project Name: Seeka Ltd - 153 Waipara Road, Kerikeri

Job No.: 638080

PRE DEVELOPMENT

New System: Area A

Event Intensity I [mm/h]
10yr - 10min **104.40** primary pipe system

10yr - 10min

Inlet Tag 'exist.'	Area AC			Run-off coefficient C					Run-off Qci [m3/s]			[l/s]
	No.	[m2]	[ha]	Coef.	ΔH [m]	ΔL [m]	slope [%]	Slope cor.	per Area	2nd Flow	total	
Area 1	1	15696	1.57	0.65	0.5	107.1	0.47	-0.05	0.273		0.273	273.110
Area 2	2	9620	0.96	0.85	0.5	107.1	0.47	-0.05	0.223		0.223	223.184
Area 3	3	5987	0.60	0.55	0.5	107.1	0.47	-0.05	0.087		0.087	86.812
Area 4	4	12070	1.21	0.20	0.5	107.1	0.47	-0.05	0.053		0.053	52.505
Area 5	5	23280	2.33	0.20	0.5	107.1	0.47	-0.05	0.101		0.101	101.268

736.878

Event Intensity I [mm/h]
100yr - 10mi **166.20** primary pipe system

Inlet Tag 'exist.'	Area AC			Run-off coefficient C					Run-off Qci [m3/s]			[l/s]
	No.	[m2]	[ha]	Coef.	ΔH [m]	ΔL [m]	slope [%]	Slope cor.	per Area	2nd Flow	total	
Area 1	1	15696	1.57	0.65	0.5	107.1	0.47	-0.05	0.435		0.435	434.779
Area 2	2	9620	0.96	0.85	0.5	107.1	0.47	-0.05	0.355		0.355	355.299
Area 3	3	5987	0.60	0.55	0.5	107.1	0.47	-0.05	0.138		0.138	138.200
Area 4	4	12070	1.21	0.20	0.5	107.1	0.47	-0.05	0.084		0.084	83.585
Area 5	5	23280	2.33	0.20	0.5	107.1	0.47	-0.05	0.161		0.161	161.214

1173.077

Client: Seeka Ltd
Contract Name: 153 Waipara Road
Project Name: Seeka Ltd - 153 Waipara Road, Kerikeri

Job No.: 638080

POST DEVELOPMENT

New System: Area A

Event Intensity I [mm/h]
10yr - 10min **104.40** primary pipe system

10yr - 10min

Inlet Tag 'exist.'	Area AC			Run-off coefficient C					Run-off Qci [m3/s]			[l/s]
	No.	[m2]	[ha]	Coef.	ΔH [m]	ΔL [m]	slope [%]	Slope cor.	per Area	2nd Flow	total	
Area 1	1	14645	1.46	0.65	0.5	107.1	0.47	-0.05	0.255		0.255	254.823
Area 2	2	9620	0.96	0.85	0.5	107.1	0.47	-0.05	0.223		0.223	223.184
Area 3	3	2030	0.20	0.55	0.5	107.1	0.47	-0.05	0.029		0.029	29.435
Area 4	4	10500	1.05	0.20	0.5	107.1	0.47	-0.05	0.046		0.046	45.675
Area 5	5	22277	2.23	0.20	0.5	107.1	0.47	-0.05	0.097		0.097	96.905
Area 6	6	7432	0.74	0.95	0.5	107.1	0.47	-0.05	0.194		0.194	193.975
												843.997

Event Intensity I [mm/h]
100yr - 10mi **166.20** primary pipe system

Inlet Tag 'exist.'	Area AC			Run-off coefficient C					Run-off Qci [m3/s]			[l/s]
	No.	[m2]	[ha]	Coef.	ΔH [m]	ΔL [m]	slope [%]	Slope cor.	per Area	2nd Flow	total	
Area 1	1	14645	1.46	0.65	0.5	107.1	0.47	-0.05	0.406		0.406	405.667
Area 2	2	9620	0.96	0.85	0.5	107.1	0.47	-0.05	0.355		0.355	355.299
Area 3	3	2030	0.20	0.55	0.5	107.1	0.47	-0.05	0.047		0.047	46.859
Area 4	4	10500	1.05	0.20	0.5	107.1	0.47	-0.05	0.073		0.073	72.713
Area 5	5	22277	2.23	0.20	0.5	107.1	0.47	-0.05	0.154		0.154	154.268
Area 6	6	7432	0.74	0.95	0.5	107.1	0.47	-0.05	0.309		0.309	308.800
												1343.605

Client: Seeka Kerikeri
Project Title:
Site Address: 153 Waipapa Rd Kerikeri
File Number: 638080

Page: 1.
No. of Pages: 1.
Date: 12/10/18
By: AdP

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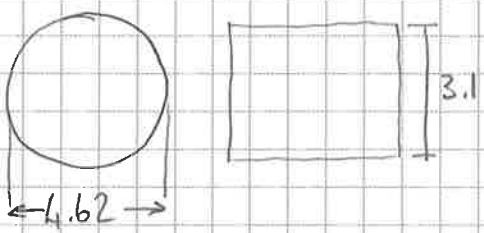
TANK 50,000 PROMAX TANK



$A = \pi\left(\frac{d}{2}\right)^2$

$= \pi\left(\frac{4.62}{2}\right)^2$

$= \pi(2.31)^2$

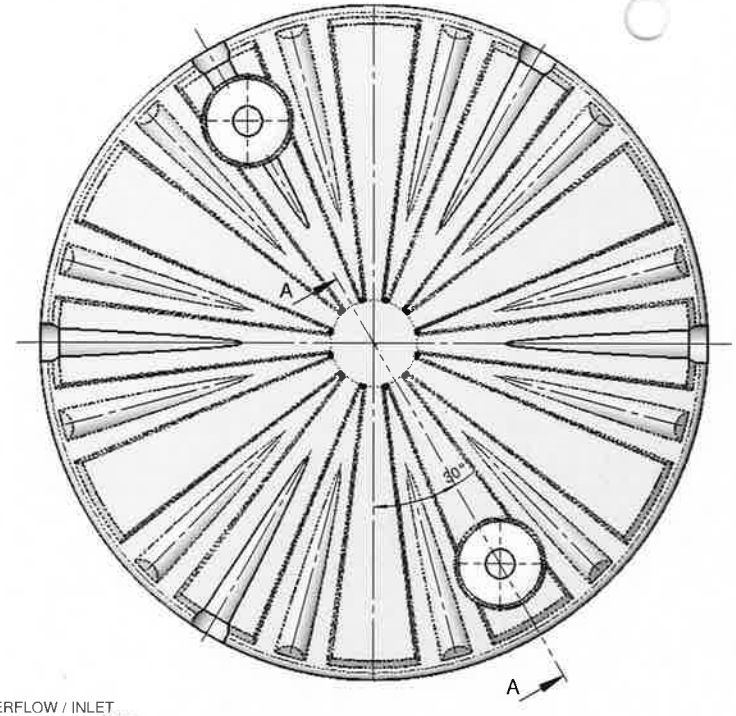
$A = 16.764\ m^2$

10 YEAR 60min STORM 164 m^3 ÷ 4 = 41,000 ℓ. (41 ÷ 16.764)
WITH 100Ø ORIFICE ∴ 2.446 m →

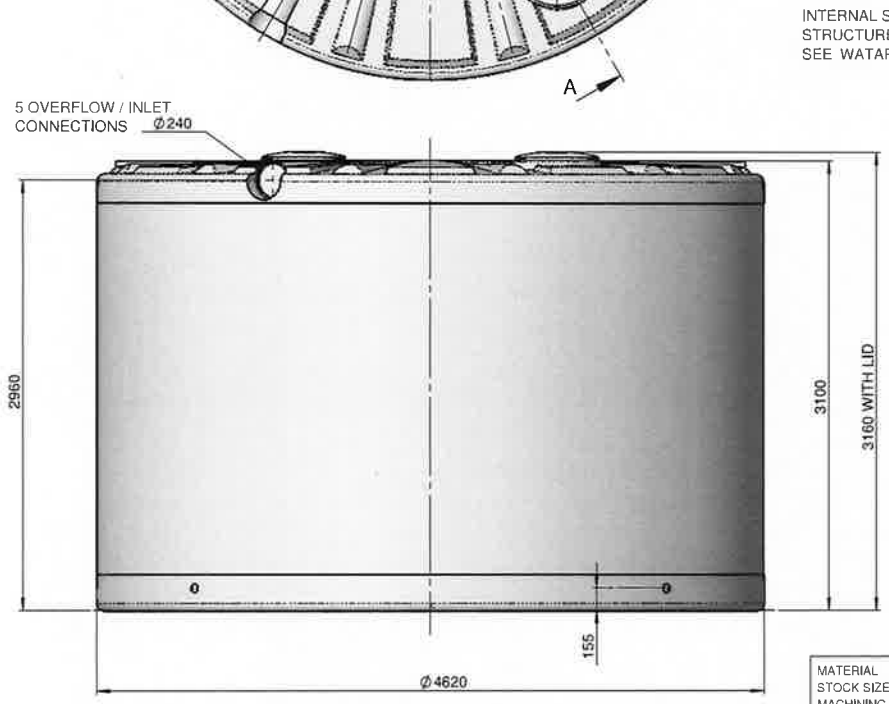
100 YEAR 60 min STORM 178 m^3 ÷ 4 = 44,500 ℓ
WITH 150Ø ORIFICE ∴ 2.654 m. →

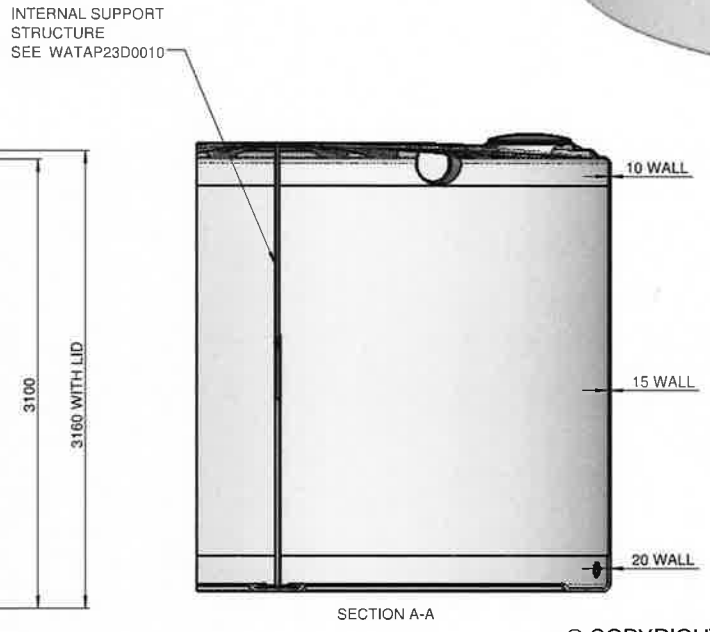
DIFF 208mm USING 100Ø ORIFICE AT GROUND LEVEL AND 80Ø ORIFICE 2.446m LEVEL ABOVE AND 150Ø OVERFLOW. MAX LEVEL OF TANK 3.1m.

50000 LITER WATER TANK



WATAA50A2010
1 OFF REQUIRED





SECTION A-A

MATERIAL :	ORIG. SCALE 1:25	A2	ORIGINAL ISSUE	A	28 APR 2016
STOCK SIZE :			REMARKS	ISS	DATE
MACHINING :					
FINISH :					
HEAT TREATMENT :					
PART/ASSY MODEL :-					
NAME : WATAA50A20 WATERTANK MODEL 50K					
CONFIGURATION : 10					
CONFIG REVISION : A					

DESIGNER	RETUS	PROMAX ENGINEERED PLASTICS
TITLE:	PROMAX 50K TANK	389 Waipara Rd, Kerikeri 0295, Bay of Island. Phone (09) 407 3575, Free Phone 0800 776629
PROJECT:	WATER TANK	
DRG#_TITLE:	WATAA50A2010 50000 L WATER TANK	SHT 1 OF 1

Client: Seeka Ltd
Contract Name: 153 Waipara Road
Project Name: Seeka Ltd - 153 Waipara Road, Kerikeri

Job No.: 638080

EXISTING SW TO NORTH OF DEVELOPMENT

EXIST ROOF DEVELOPMENT
POST DEVELOPMENT

New System: Area A

Event	Intensity I [mm/h]	
10yr - 10min	104.40	primary pipe system

10yr - 10min

Inlet Tag 'exist.'	Area AC			Run-off coefficient C					Run-off Qci [m3/s]			[l/s]
	No.	[m2]	[ha]	Coef.	ΔH [m]	ΔL [m]	slope [%]	Slope cor.	per Area	2nd Flow	total	
SWMH-C6	1	875	0.09	0.90	0.5	10.0	5.07	0	0.023		0.023	22.838
SWMH-C6-CP	1	306	0.03	0.85	0.5	107.1	0.47	-0.05	0.007		0.007	7.099
SWMH-C5	2	880	0.09	0.85	0.5	107.1	0.47	-0.05	0.020		0.020	20.416
SWMH-C5-CP	2	538	0.05	0.90	0.5	10.0	5.07	0	0.014		0.014	14.042
SWMH-C4	3	623	0.06	0.85	0.5	107.1	0.47	-0.05	0.014		0.014	14.454
SWMH-C3	4	623	0.06	0.85	0.5	107.1	0.47	-0.05	0.014		0.014	14.454
SWMH-C2-CP	4	145	0.01	0.90	0.5	10.0	5.07	0	0.004		0.004	3.785
SWMH-C2	5	365	0.04	0.85	0.5	107.1	0.47	-0.05	0.008		0.008	8.468
CP-2	6	1075	0.11	0.85	0.5	107.1	0.47	-0.05	0.025		0.025	24.940

Existing

SWMH-A2	5	2000	0.20	0.95	0.5	10.0	5.07	0	0.055		0.055	55.100
CP-1	5	1313	0.13	0.85	0.5	100.0	0.51	-0.05	0.030		0.030	30.469
												105.554

New

Event	Intensity I [mm/h]	
100yr - 10mi	166.20	primary pipe system

Inlet Tag 'exist.'	Area AC			Run-off coefficient C					Run-off Qci [m3/s]			[l/s]
	No.	[m2]	[ha]	Coef.	ΔH [m]	ΔL [m]	slope [%]	Slope cor.	per Area	2nd Flow	total	
SWMH-C6	1	875	0.09	0.90	0.5	107.1	0.47	-0.05	0.034		0.034	34.336
SWMH-C6-CP	1	306	0.03	0.85	0.5	107.1	0.47	-0.05	0.011		0.011	11.302
SWMH-C5	2	880	0.09	0.85	0.5	107.1	0.47	-0.05	0.033		0.033	32.501
SWMH-C5-CP	2	538	0.05	0.90	0.5	107.1	0.47	-0.05	0.021		0.021	21.112
SWMH-C4	3	623	0.06	0.85	0.5	107.1	0.47	-0.05	0.023		0.023	23.009
SWMH-C3	3	623	0.06	0.85	0.5	107.1	0.47	-0.05	0.023		0.023	23.009
SWMH-C2-CP	3	145	0.01	0.90	0.5	107.1	0.47	-0.05	0.006		0.006	5.690
SWMH-C2	4	365	0.04	0.45	0.5	107.1	0.47	-0.05	0.007		0.007	6.740
CP-2	5	1075	0.11	0.45	0.5	107.1	0.47	-0.05	0.020		0.020	19.852

Existing

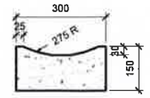
SWMH-A2	5	2000	0.20	0.95	0.5	107.1	0.47	-0.05	0.083		0.083	83.100
CP-1	5	1313	0.13	0.45	0.5	107.1	0.47	-0.05	0.024		0.024	24.252

New

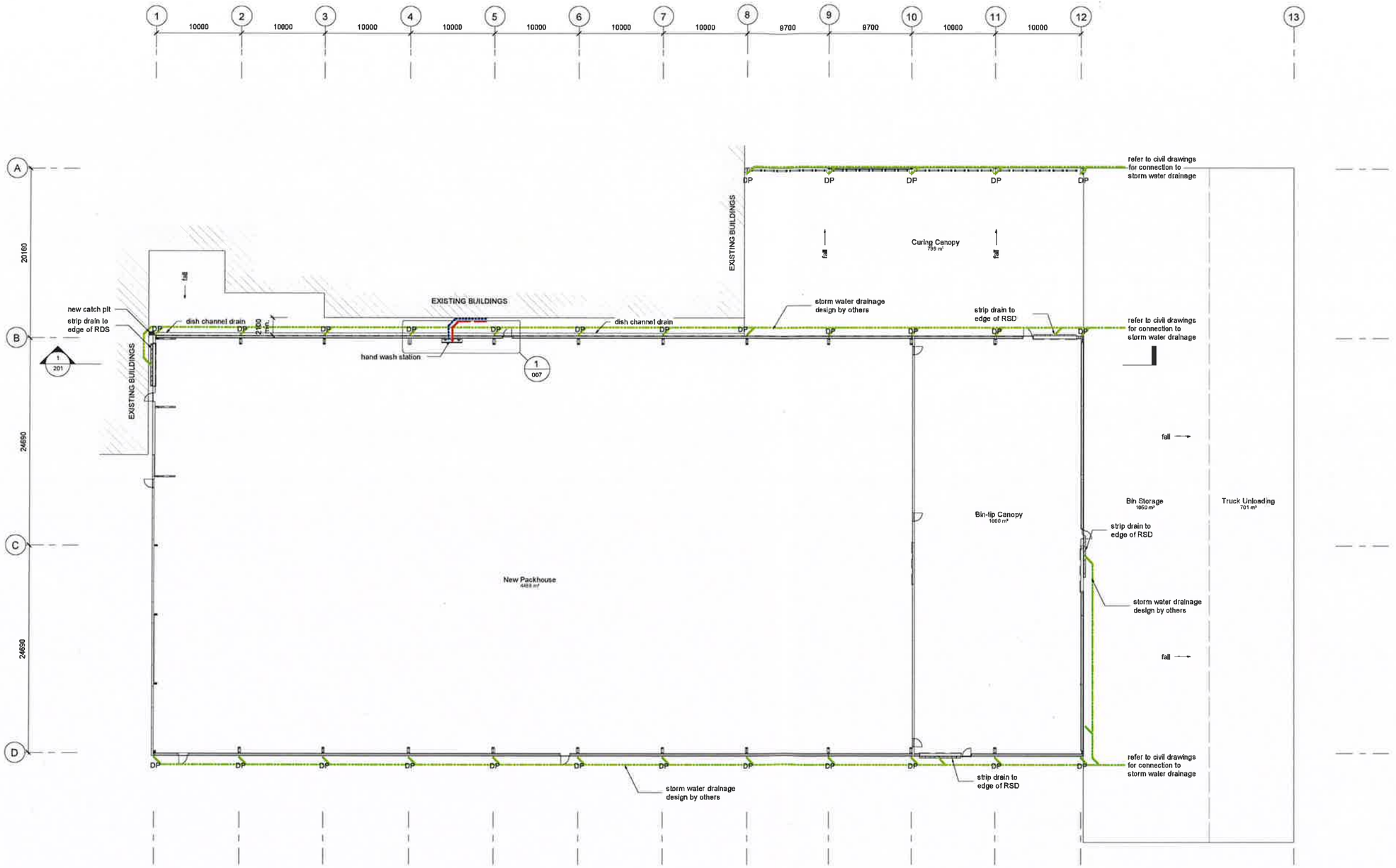
Pipe ID	ND Ø [mm]	OD Ø [mm]	ID Ø [mm]	t [mm]	Material	Rough-ness Coeff. n [-]	Length	UpStream				DownStream				Grade [%]				Pipe Capacity				System Capacity		
								Tag	Lid Level [m]	Invert [m]	Cover [m]	Tag	Lid Level [m]	Invert [m]	Cover [m]		Q_{INLET} [l/s]	Q_{INLET} [m^3/s]	Q_{Sum} [m^3/s]	A [m^2]	R [m]	Q_{PI} [m^3/s]	$Q_{OverFlow}$ [m^3/s]	Q_{PI} [m^3/s]	Pipefill [%]	$v_{100\%}$ [m/s]
153 Waipara Road 10min / 10 Year																										
New Pipeline Required pipesizes for Required catchpits																										
Line C																										
SWMH C6-C5	300	367	302	33	RCRRJ	0.015	31.63	SWMH-C6	63.72	63.09	0.296	SWMH-C5	63.65	62.90	0.416	0.60	29.94	0.0299	**0.030**	0.072	0.076	0.0661		**0.066**	45	0.92
SWMH C5-C4	375	444	380	32	RCRRJ	0.015	30.21	SWMH-C5	63.65	62.88	0.358	SWMH-C4	63.61	62.72	0.478	0.53	34.46	0.0345	**0.064**	0.113	0.095	0.1146		**0.115**	56	1.01
SWMH C4-C3	375	444	380	32	RCRRJ	0.015	28.57	SWMH-C4	63.61	62.70	0.498	SWMH-C3	63.50	62.54	0.548	0.56	14.45	0.0145	**0.079**	0.113	0.095	0.1178		**0.118**	67	1.04
SWMH C3-C2	375	444	380	32	RCRRJ	0.015	38.18	SWMH-C3	63.50	62.54	0.548	SWMH-C2	62.89	62.20	0.278	0.89	18.24	0.0182	**0.097**	0.113	0.095	0.1485		**0.149**	65	1.31
SWMH C2-A1	375	444	380	32	RCRRJ	0.015	50.08	SWMH-C2	62.89	62.18	0.298	SWOUT-C1	62.89	61.25	1.228	1.86	24.94	0.0249	**0.122**	0.113	0.095	0.2145		**0.215**	57	1.89
Line A																										
SWMH A2-A1	300	367	302	33	RCRRJ	0.003	30.6	SWMH-A2	63.49	61.36	1.796	SWMH-A1	63.23	61.21	1.686	0.49	85.57	0.0856	**0.086**	0.072	0.076	0.2986		**0.299**	29	4.17
SWMH A1-OUTLET	375	444	380	32	RCRRJ	0.003	19.39	SWMH-A1	63.23	61.18	1.638	SW-OUTLET	62.09	61.08	0.598	0.52	146.97	0.1470	**0.355**	0.113	0.095	0.5652		**0.565**	63	4.98
153 Waipara Road 10min / 100 Year																										
New Pipeline Required pipesizes for Required catchpits																										
Line C																										
SWMH C6-C5	300	367	302	33	RCRRJ	0.015	31.63	SWMH-C6	63.72	63.09	0.296	SWMH-C5	63.65	62.90	0.416	0.60	45.64	0.0456	**0.046**	0.072	0.076	0.0661		**0.066**	69	0.92
SWMH C5-C4	375	444	380	32	RCRRJ	0.015	30.21	SWMH-C5	63.65	62.88	0.358	SWMH-C4	63.61	62.72	0.478	0.53	53.61	0.0536	**0.099**	0.113	0.095	0.1146		**0.115**	87	1.01
SWMH C4-C3	375	444	380	32	RCRRJ	0.015	28.57	SWMH-C4	63.61	62.70	0.498	SWMH-C3	63.50	62.54	0.548	0.56	23.01	0.0230	**0.122**	0.113	0.095	0.1178	0.0045	**0.118**	104	1.04
SWMH C3-C2	375	444	380	32	RCRRJ	0.015	38.18	SWMH-C3	63.50	62.54	0.548	SWMH-C2	62.89	62.20	0.278	0.89	28.70	0.0287	**0.151**	0.113	0.095	0.1485	0.0024	**0.149**	102	1.31
SWMH C2-A1	375	444	380	32	RCRRJ	0.015	50.08	SWMH-C2	62.89	62.18	0.298	SWOUT-C1	62.89	61.25	1.228	1.86	33.41	0.0334	**0.184**	0.113	0.095	0.2145		**0.215**	86	1.89
Line A																										
SWMH A2-A1	300	367	302	33	RCRRJ	0.003	30.6	SWMH-A2	63.49	61.36	1.796	SWMH-A1	63.23	61.21	1.686	0.49	107.35	0.1074	**0.107**	0.072	0.076	0.2986		**0.299**	36	4.17
SWMH A1-OUTLET	375	444	380	32	RCRRJ	0.003	19.39	SWMH-A1	63.23	61.18	1.638	SW-OUTLET	62.09	61.08	0.598	0.52	204.22	0.2042	**0.496**	0.113	0.095	0.5652		**0.565**	88	4.98

NOTE:
- all downpipes to be 150Ø
- refer to civil drawings for all connections to stormwater and septic systems

water supply
sanitary sewer
storm water



DISH CHANNEL



Amenities and Drainage Plan Schematic - Zone 1
1 : 250

all dimensions to be verified on site before making any shop drawings or commencing any work.

Rev	Date	by	Reason
1	18-08-27	KT	FOR INFORMATION

contractor: form BUILDING & DEVELOPMENTS

client: Seeka

consultant: BCD GROUP
Consulting Engineers and Planners
HAMILTON | 240 Tristram St, Hamilton | p 07 839 0107
NEW PLYMOUTH | Level 3/53 Brougham St, New Plymouth | p 06 757 5051
TAURANGA | Level 1, 75 Elizabeth St, Tauranga | p 07 571 0182

project title: SEEKA KERIKERI REDEVELOPMENT 153 WAIPAPA ROAD

sheet title: DRAINAGE PLAN - ZONE 1

drawn: KT	scale: As Indicated	at A1
engineer: SJ		
job no:	sheet no:	revision:
18-0548	006	1

SERVICES NOTE

THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. STRATUM CONSULTANTS TAKES NO RESPONSIBILITY FOR SERVICES SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING SERVICES PRIOR TO AND DURING THE CONTRACT WORKS

Area 1
15,696m²
Q10 = 273L/s OVERLAND
Q100 = 435L/s OVERLAND

Area 2
9,620m²
Q10 = 223L/s OVERLAND
Q100 = 355L/s OVERLAND

Area 3
5987m²
Q10 = 87L/s OVERLAND
Q100 = 138L/s OVERLAND

Area 4
12,070m²
Q10 = 53L/s OVERLAND
Q100 = 84L/s OVERLAND

Area 5
23,280m²
Q10 = 101L/s OVERLAND
Q100 = 161L/s OVERLAND

LOT 2
DP 199954

LOT 2
DP 448914

DRAWN: ADP	DESIGNED: ADP
CHECKED: -	SURVEYED BY: -

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL
B	12-10-18	ADP	OVERLAND FLOW ADDED

NOTES/KEY:

Key

- - Overland Flow Path

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153 WAIPAPA ROAD
KERIKERI

CATCHMENT PLAN
PRE DEVELOPMENT

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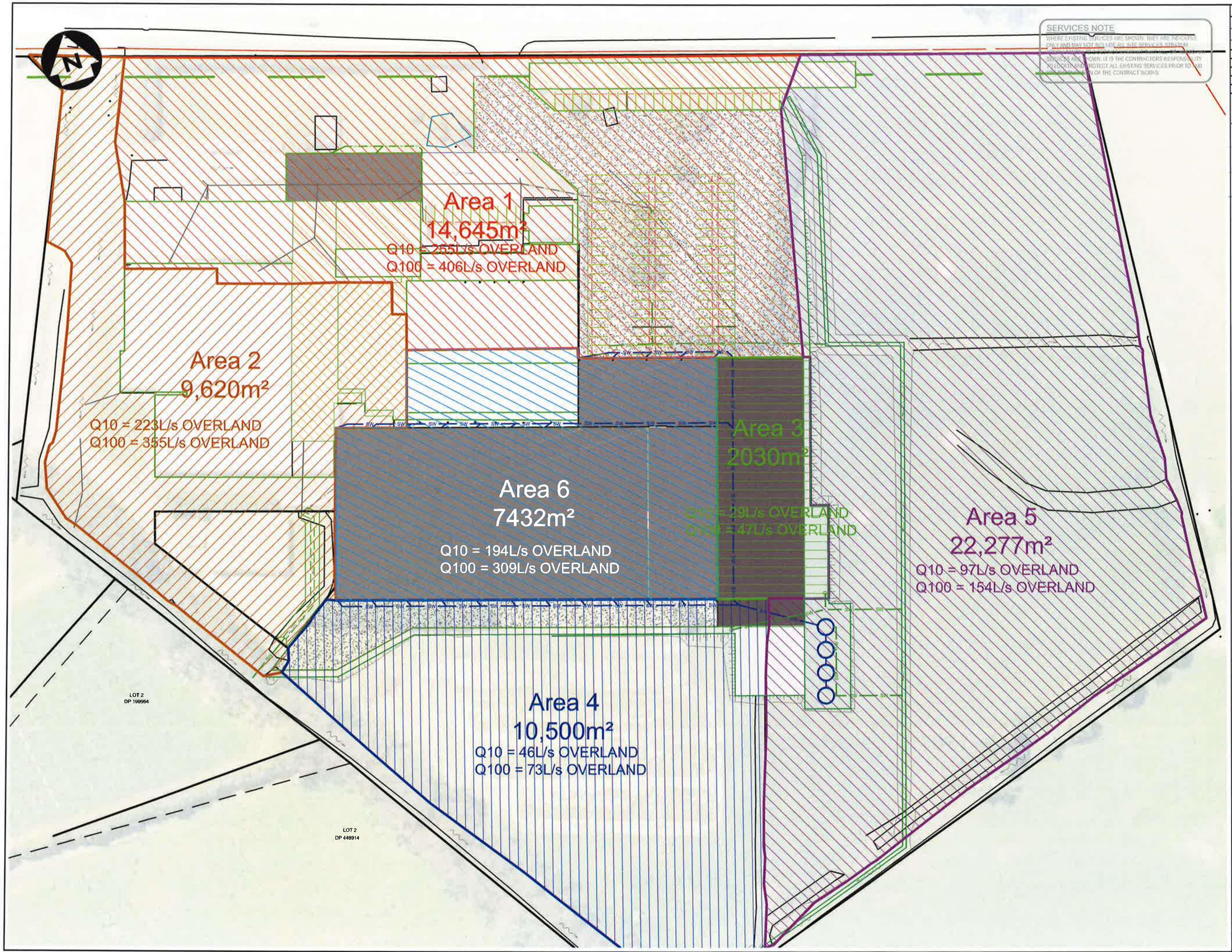
SCALE: 1:1000 ORIGINAL DWG. SIZE A3

DRAWING No. 638080-M-E-D001 SHEET No. 18 ISSUE B



DRAWN: ADP	DESIGNED: ADP
CHECKED: -	SURVEYED BY: -

OFFICE OF ORIGIN- TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL
B	12-10-18	ADP	OVERLAND FLOW ADDED

NOTES/KEY:

Key

- Existing Stormwater
- Proposed Stormwater
- Proposed Roof Drain
- Overland Flow Path

BASECOURSE ACCESS 200mm GAP40

150mm CONCRETE ON 50mm SAND BASE ON SUBGRADE ≥ CBR 7

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SELECT EXCELLENCE

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153 WAIPAPA ROAD
KERIKERI

CATCHMENT PLAN
POST DEVELOPMENT

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SCALE: 1:1000 ORIGINAL DWG. SIZE A3

DRAWING No.	SHEET No.	ISSUE
638080-M-E-D001	**19**	**B**

SERVICES NOTE

THE SERVICES SHOWN ON THESE DRAWINGS ARE SHOWN THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. STRATUM CONSULTANTS LIMITED DOES NOT WARRANT THAT ALL EXISTING 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.

DOWNPIPE CONNECTION TO EXISTING STORMWATER MANHOLE

RAISE STORMWATER MANHOLE TO NEW SURFACE LEVEL

STORMWATER CLEAN WATER CUTOFF DRAIN

PROPOSED 375mmØ STORMWATER PIPELINE TO OUTLET

STORMWATER CLEAN WATER CUTOFF DRAIN

SEALED STORMWATER DOWN PIPE SYSTEM

SEALED STORMWATER ROOF PIPE SYSTEM

STORMWATER CUTOFF DRAIN

STORMWATER LINE TO BE REMOVED

PROPOSED 375mmØ STORMWATER PIPELINE

EXISTING STORMWATER DRAIN

SEALED STORMWATER ROOF PIPE SYSTEM

STORMWATER DROP STRUCTURE CONNECTED TO MANHOLE WITH 300Ø OUTLET

STORMWATER ROOF 50000 LITRE PROMAX WATER DETENTION TANKS OR SIMILAR APPROVED (SEE DRAWING 07 FOR TANK DETAILS)

225mmØ PVC-U STORMWATER TANK OUTLET TO DRAIN

EXISTING STORMWATER DRAIN TO BE FILLED IN

EXISTING STORMWATER DRAIN

STORMWATER CLEAN WATER CUTOFF DRAIN

LOT 2 DP 437473

LOT 2 DP 448914

LOT 2 DP 448914

T&G Office

A1.05 Loadout Canopy 300 m²

SWMH C6

SWMH C5

SWMH C4

SWMH C3

SWMH C2

SWCP-2

SWCP-1

SWMH-B

SWMH-A

Box Making Shed

Front Offices

New Carpark

Forklift Recharge

Offices

Plantroom

Passage

Coolstore

Covered Passage

Room

Plantroom Room

Repack Room

A1.03 Curing Canopy 800 m²

A1.01 Packhouse 4500 m²

A1.02 Bin-tip Canopy 920 m²

A1.04 Bin Storage 200 m²

A1.06 Truck Unloading 600 m²

A1.07 New Effluent Treatment Plant (By Seeka)

SW-OUTLET

14.00 150Ø @ 0.55%

34.50 200Ø @ 0.55%

61.30 250Ø @ 0.55%

35.60 1200Ø @ 0.55%

20.62 1000 @ 0.55%

52.88 300Ø @ 1.0%

20.00 150Ø @ 0.55%

30.00 200Ø @ 0.55%

63.00 250Ø @ 0.55%

24.00 300Ø @ 5.0%

DRAWN: ADP		DESIGNED: -	
CHECKED: -		SURVEYED BY: -	
OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500			
No	Date	By	Issue/Revision
A	02-08-18	ADP	DRAFT
B	07-08-18	ADP	ISSUED FOR RESOURCE CONSENT
C	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL

NOTES/KEY:

Key

- SW - Existing Stormwater
- SW - Proposed Stormwater
- SW - Proposed Roof Drain
- Overland Flow Path

1. ALL WORKS TO COMPLY WITH FAR NORTH DISTRICT COUNCIL STANDARDS.
2. ALL WORKS TO BE CARRIED OUT BY APPROVED CONTRACTOR.
3. ALL PIPES UNDER CARRIGEWAYS AND VEHICLE CROSSINGS TO BE BACKFILLED WITH COMPACTED HARDFILL.
4. CONTRACTOR TO SEARCH, LOCATE, PROTECT AND MAINTAIN ALL EXISTING SERVICES.
5.

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153 WAIPAPA ROAD
KERIKERI

STORMWATER LAYOUT PLAN

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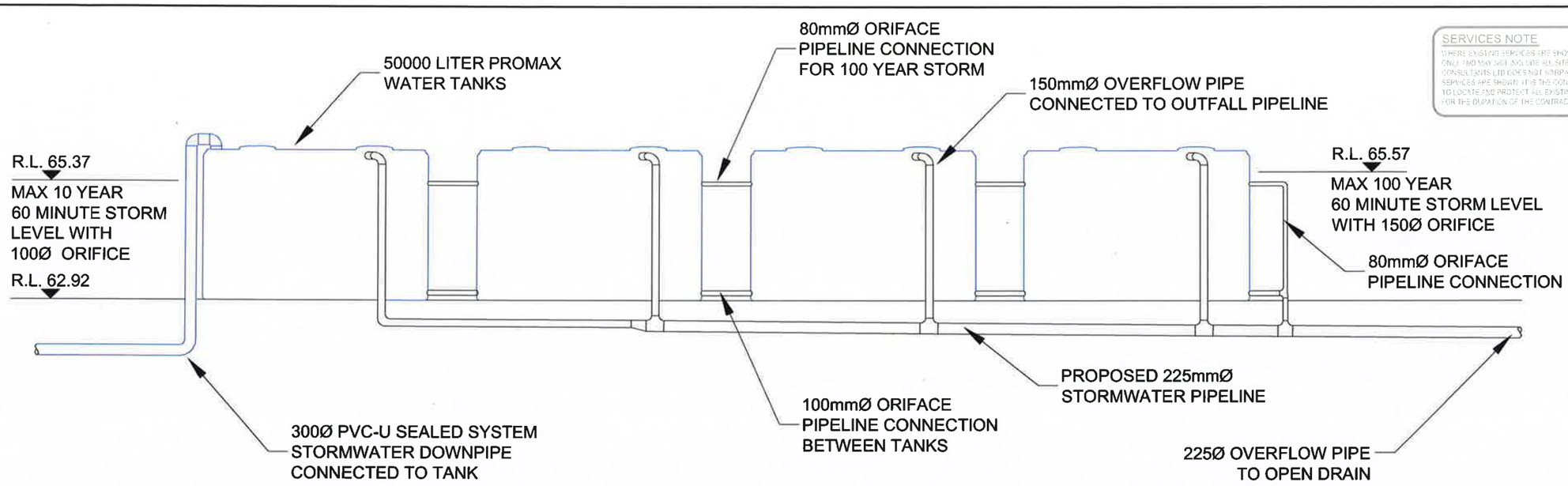
SCALE: 1:1000	ORIGINAL DWG. SIZE A3	
DRAWING No. 638080-M-E-D001	SHEET No. 06	ISSUE C

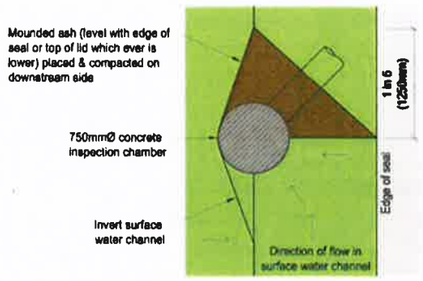


SERVICES NOTE

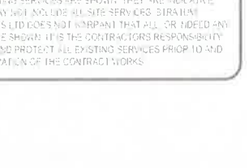
WHERE EXISTING SERVICES ARE SHOWN, THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. STRATUM CONSULTANTS LTD DOES NOT WARRANT THAT ALL OR INDEED ANY SERVICES ARE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING SERVICES PRIOR TO AND FOR THE DURATION OF THE CONTRACT WORKS.

STORMWATER PROMAX TANKS

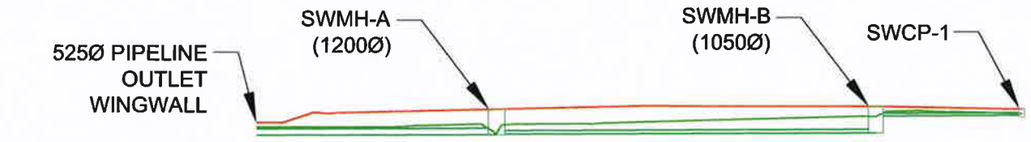
SCALE 1:100 (HORIZ & VERT)



PLAN



SECTION A

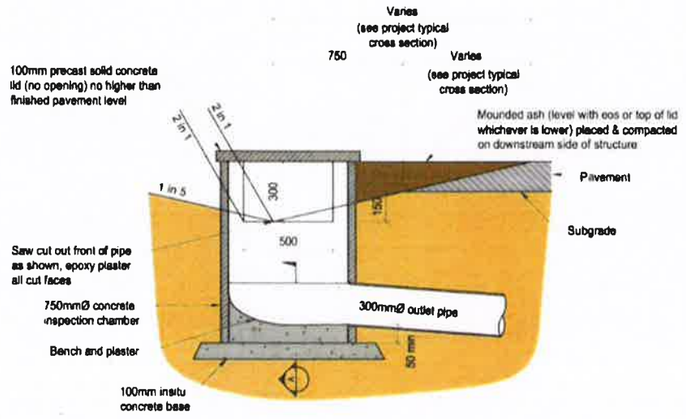


DATUM: 58.00

DEPTH TO INVERT			2.05			2.13		
INVERT LEVEL	61.08		61.18	61.21		61.36	62.74	62.80
LID LEVEL	62.09		63.23			63.49		63.34
CHAINAGE	0.00		19.40			50.00		61.77
PIPE SIZE & GRADIENT	19.4m of Ø 525 mm RCRRJ @ -0.50%			30.6m of Ø 300 mm RCRRJ @ -0.50%			11.8m of Ø 225 mm RCRRJ @ -0.50%	

STORMWATER LONGSECTION

SCALE 1:500 (HORIZ & VERT)



STORMWATER DROP STRUCTURE

DRAWN: ADP	DESIGNED: -
CHECKED: -	SURVEYED BY: -

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	02-08-18	ADP	DRAFT
B	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL
C	-	-	-

NOTES/KEY:

Key

- sw - Existing Stormwater
- sw - Proposed Stormwater
- sw - Proposed Roof Drain

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STORMWATER DETAILS

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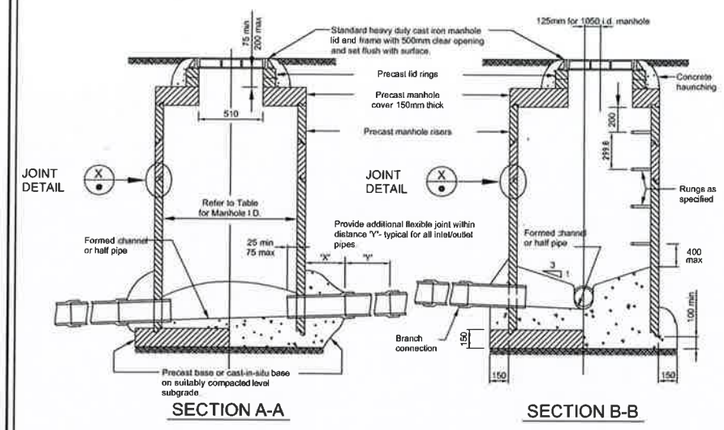
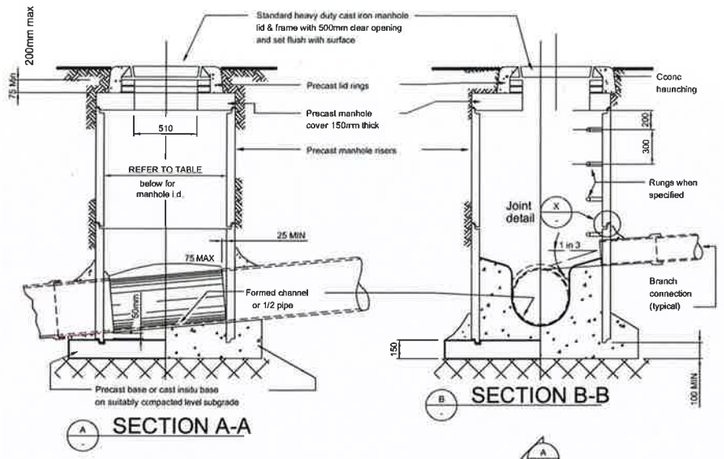
SCALE: 1:1000 ORIGINAL DWG. SIZE A3

DRAWING No. 638080-M-E-D001 SHEET No. 07 ISSUE B



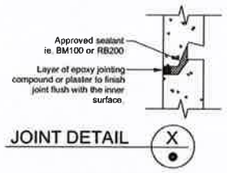
SECTION A-A

SECTION B-B



A SECTION A-A

B SECTION B-B



JOINT DETAIL X

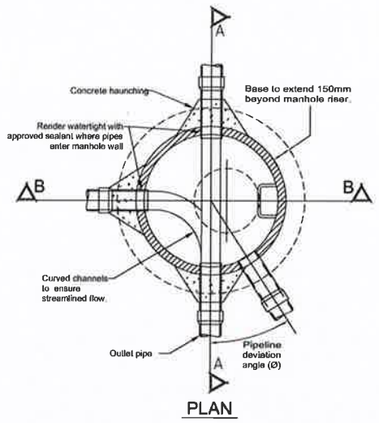
MINIMUM MANHOLE INTERNA.. DIA (mm) *						
OUTLET PIPE DIA (mm)	PIPELINE DEVIATION ANGLE (Ø) 0°-15°	16°-45°	46°-75°	76°-90°	'X' (mm)	'Y' (mm)
Up to 300	1050	1050	1050	1050	300	500
375 to 600	1050	1050	1050	1050	500	700
675 to 750	1050	1200	1500	1500	600	750
825 to 900	1500	1500	1800	1800	600	900

* To be used as a guide only. Larger diameters may be required where more than 1 inlet pipe is to be constructed

NOTES:

1. All in-situ concrete other than site concrete shall have a minimum compressive strength of 20 MPa at 28 days.
2. All precast manhole units (shown shaded) are standard manufactured concrete units (ie. HUMES or similar approved.)

Where pipes pass through walls they shall be watertight. Extreme care shall be taken to ensure that the pipe is free of all dirt and grease. All pipes through walls shall conform to the appropriate detail shown on the drawings or in the appropriate NZ Standard. All uPVC sewer pipe shall be connected to concrete structures via a proprietary uPVC manhole connector supplied by the pipe manufacturerr.



PLAN

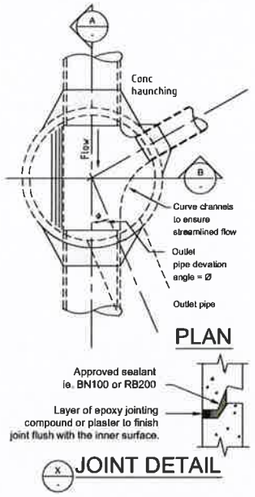
MINIMUM MANHOLE INSIDE DIA *				
OUTLET PIPE DIA., (mm)	PIPELINE DEVIATION ANGLE (Ø) 0°-15°	16°-45°	46°-75°	76°-90°
UP to 300	1050	1050	1050	1050
375 to 575	1050	1050	1050	1050
600 to 750	1200	1200	1500	1500
825 to 900	1500	1500	1800	1800

* To be used as guide only

* Larger diameters may be required where more than 1 inlet pipe is to be constructed

NOTES:

1. All insitu concrete other than site concrete shall have a minimum compressive strength of 20 mpa @ 28 days.
2. All manhole precast units (shaded) are standard manufactured concrete units (i.e. "humes" osa)
3. All figured dimensions are in millimetres.



PLAN

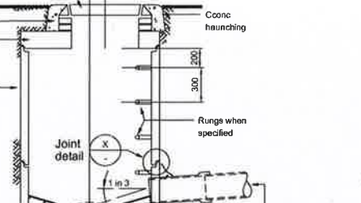
X JOINT DETAIL

NOTE: all fittings non ferrous

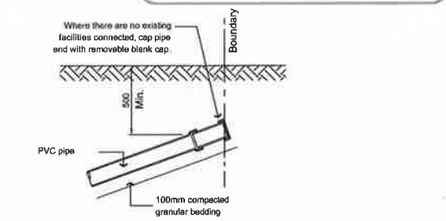
SERVICE CONNECTION

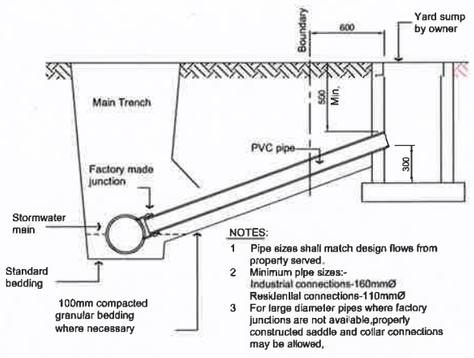
NOTE: all fittings non ferrous

SERVICE CONNECTION

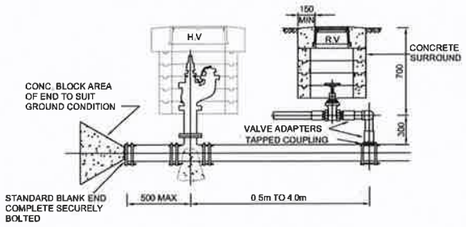


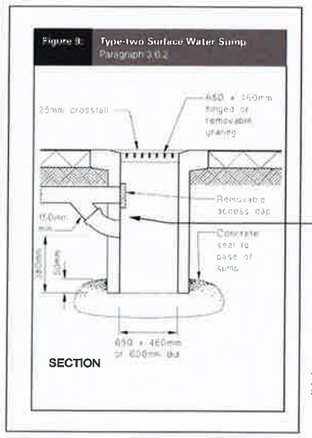
SLUICE VALVE INSTALLATION



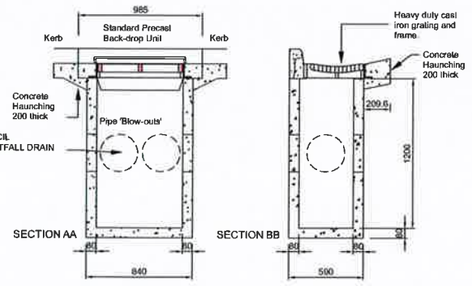


NOTES:
1. Pipe sizes shall match design flows from property served.
2. Minimum pipe sizes:-
   Industrial connections-160mmØ
   Residential connections-110mmØ
3. For large diameter pipes where factory junctions are not available,properly constructed saddle and collar connections may be allowed,

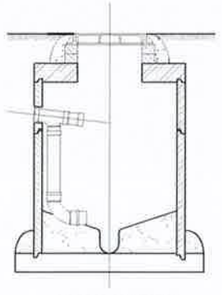




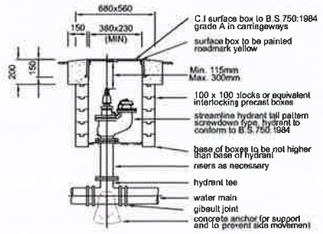
ALL 150Ø OUTLETS TO BE SUBMERGED IN ACCORDANCE WITH THE NZBC.



PRECAST CONCRETE CESSPIT SUMP UNIT

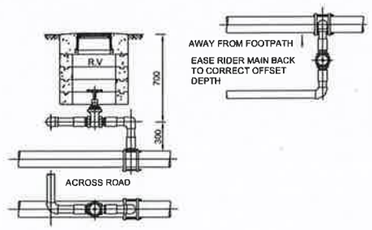


S/S DROP CONNECTION INTO MANHOLE



NOTES
frost drain point to be plugged when mains are constructed in PVC, use standard cast iron hydrant tee and step gibault joint

HYDRANT INSTALLATION



RIDERMAIN CONNECTION TO MAIN

SERVICES NOTE

WHERE EXISTING SERVICES ARE SHOWN, THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. STRATUM CONSULTANTS 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

DRAWN: ADP	DESIGNED: -
CHECKED: -	SURVEYED BY: -

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	02-08-18	ADP	DRAFT
B	07-08-18	ADP	ISSUED FOR RESOURCE CONSENT
C	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL

NOTES/KEY:

Seeka
SELECT EXCELLENCE

SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

SERVICE CONNECTION DETAILS

Stratum CONSULTANTS
Experience, Knowledge, Better Outcomes.
Planners | Engineers | Surveyors

SCALE: 1:1000 ORIGINAL DWG. SIZE A3

DRAWING No. **638080-M-E-D001** SHEET No. **11** ISSUE **C**

Building Code Clause(s).....B1 / B2.....

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance notes on the use of this form are printed on page 2)

ISSUED BY:.....STRATUM CONSULTANTS LTD .....
(Design Firm)

TO:.....SEEKA LTD.....
(Owner/Developer)

TO BE SUPPLIED TO:.....FAR NORTH DISTRICT COUNCIL .....
(Building Consent Authority)

IN RESPECT OF:.....STORMWATER DESIGN WORKS.....
(Description of Building Work)

AT:.....153 WAIPAPA ROAD, KERIKERI.....
(Address)
..... **LOT**.....3..... **DP** ...196433.. **SO** .....

We have been engaged by the owner/developer referred to above to provide .....ENGINEERING DESIGN services in respect of the requirements of
(Extent of Engagement)
Clause(s) .....E1.....of the Building Code for
All ☐ or Part only ☒ (as specified in the attachment to this statement), of the proposed building work.

The design carried out by us has been prepared in accordance with:

☒ Compliance Documents issued by the Ministry of Business, Innovation & Employment.....E1 / VM 1.....or
(verification method / acceptable solution)

☐ Alternative solution as per the attached schedule.....

The proposed building work covered by this producer statement is described on the drawings titled .....

SEEKA LTD.....and numbered .....638080-M-E-C001.....;
together with the specification, and other documents set out in the schedule attached to this statement.
On behalf of the Design Firm, and subject to:
(i) Site verification of the following design assumptions ... ...
(ii) All proprietary products meeting their performance specification requirements;

I **believe on reasonable grounds** that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:
☐CM1 ☐CM2 ☒CM3 ☐CM4 ☐CM5 (Engineering Categories) or ☐ as per agreement with owner/developer (Architectural)

I, ...STEPHEN BOS..... am:
(Name of Design Professional)

☒CPEng .....154367.....#

☐Reg Arch ..... .#

I am a Member of : ☒ IPENZ ☐NZIA and hold the following qualifications:...NZCE, BE, MIPENZ, CPEng.....
The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than $200,000*.
The Design Firm is a member of ACENZ: ☐

SIGNED BY .....STEPHEN BOS..... ON BEHALF OF .....STRATUM CONSULTANTS LTD...
(Design Firm)

Date.....24/09/18..... (signature).....

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of $200,000.*

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.

Appendix E

Geotechnical Assessment

636080-GEO-C002

12 June 2025

Seeka Ltd
PO Box 47
Te Puke, 3153

Geotechnical Plan Review of Proposed Stage 1B Canopy Extension and Packaging Lean-to 153 Waipapa Road, Kerikeri

1. Introduction

Stratum Consultants Ltd (Stratum) has been engaged by Seeka Ltd to carry out a geotechnical plan review in relation to the building consent application for the proposed Stage 1B bin curing canopy extension and future packaging lean-to at Seeka Kerikeri, 153 Waipapa Road, Kerikeri, legally described as Lot 3 DP 196433.

This plan review is based on the existing information from the most relevant geotechnical assessment report (GAR) and geotechnical completion report (GCR), as referenced below.

2. Proposed Development

The following documents were reviewed as part of the geotechnical plan review:

- GAR: Geotechnical Assessment Report. Proposed Packhouse, Coolstore and Curing Canopy. 153 Waipapa Road, Kerikeri. Report prepared by Stratum for Seeka Ltd. Dated 11 September 2018. Reference 638080-M-E-C005.
- GCR: Geotechnical Completion Report. Stage 1 Ground Works. 153 Waipapa Road, Kerikeri. Report prepared by Stratum for Seeka Ltd. Dated 2 May 2020. Reference 638080-M-E-C007.
- Structural building plans for resource consent prepared by BCD Group Ltd, "Seeka Stage 1B – Packhouse Canopy Extension" Ref: 25-0030, Dated 6 June 2025, 9 pages.
- Structural building plans for building consent prepared by BCD Group Ltd, "Seeka Stage 1B – Packhouse Canopy Extension" Ref: 25-0030, Dated 6 June 2025, 25 pages.

The proposed development involves constructing the Stage 1B bin curing canopy extension to the east and a packaging lean-to canopy to the south of the existing Seeka packhouse located at 153 Waipapa Road, Kerikeri. The proposed canopy extension will extend approximately 20m eastward off the existing bin tip canopy and curing canopy. The proposed packaging lean-to is to be attached to the southern end of the existing bin tip and curing canopy and extend approximately 11.5m to the south. The canopy extension and lean-to will cover approximately 1,440m^2 and 436m^2 respectively.

The foundations for the eastward canopy extension will consist of eight concrete pad footings measuring 2m by 2m and 0.5m deep. A new foundation beam will also be required which will be cut 0.6m wide and 0.5m in depth. The foundations for the packaging lean-to are expected to consist of strip footings.

No design bearing capacity for the foundations or soil parameters were given on the structural plans available to us. It is assumed that the foundations have been designed for 'good ground' using a geotechnical ultimate bearing capacity of 300kPa (100kPa allowable bearing capacity).

3. Previous Reports

The GAR found that the ground conditions typically allowed the use of shallow foundations utilising a bearing capacity of 300kPa (100kPa allowable bearing capacity) after removal of any uncontrolled filling. Earthworks were completed and documented in the GCR which included the area of the proposed canopy extension. The platform in this area has been prepared by undercutting any weak natural silts or uncontrolled filling and backfilling with hardfill and a layer of Duragrid 30/30 geogrid. At completion of the earthworks the building platform was certified as suitable for foundations utilising a bearing capacity of 300kPa (100kPa allowable bearing capacity).

Earthworks have also been completed within the area of the packaging lean-to to the south and therefore the recommendations in the GCR are relevant for the lean-to also. It is understood that the proposed lean-to extends up to 11.5m south of the existing structure. The attached as-built plans indicate that the previous site preparation earthworks extended across the majority of the proposed lean-to except for the south-eastern corner. Site records indicate that geo-grid has only been placed in the western part of the proposed lean-to.

If the lean-to extends outside the previously earthworked area further earthworks will have to be completed to match. We expect geogrid may be required to be placed across the eastern portion of the lean-to to create consistency across all foundations. For any part of the building platform that has not yet been subject to ground improvements, undercuts would be required with geocloth and geogrid to match the existing works completed as detailed in the GCR.

Any earthworks required should follow the recommendations in the GAR.

The subgrade of the building platform is to be inspected by a suitably qualified engineer to verify the ground conditions, prior to constructing the foundations or backfilling.

4. Geotechnical Plan Review

Based on the GAR and GCR discussed above in Section 3 we expect the proposed Stage 1B canopy extension will found within a previously prepared earthworked platform which has been certified within the GCR. The prepared fill platforms located under both the Stage 1B bin curing canopy extension and packaging lean-to are suitable to provide a geotechnical ultimate bearing capacity of 300kPa (100kPa allowable bearing capacity). As the canopy extension to the east is being

constructed within an earthworked platform which has already been certified no construction monitoring is required for this area.

Based on our understanding of the site the packaging lean-to structure will generally found within a prepared platform. For any area outside of the prepared platform it is expected that any earthworks will include a layer of geocloth and geogrid as per the works completed as part of the prepared platform in the GCR. This will prevent differential settlements across the building.

Geotechnical testing and construction monitoring should be undertaken during excavation of the foundations for the packaging lean-to to the south to verify the extent of the previous ground improvements and ensure the site conditions are suitable for the proposed foundations. Any uncontrolled fill or other unsuitable material is to be removed and replaced with engineered fill. Foundations for the proposed Stage 1B bin curing canopy and packaging lean-to should not extend past 0.5m depth to align with the GAR requirements.

The building platform subgrade for the proposed Stage 1B canopy extension and packaging lean-to is expected have a geotechnical ultimate bearing capacity of at least 300kPa (100kPa allowable bearing capacity).

Stormwater flows for both the Stage 1B canopy extension and packaging lean-to are expected to be directed into a stormwater detention tank system, which is considered geotechnically suitable.

5. Conclusions

The site conditions in the area of the proposed Stage 1B canopy extension and future packaging lean-to are expected to be consistent with the referenced GAR and GCR. The recommendations given in the existing reports are considered to be applicable for the canopy and lean-to extensions.

Overall, the provided design for the Stage 1B canopy extension and future packaging lean-to is considered to be suitable to address the geotechnical restrictions of the site provided the recommendations in the GCR and GAR are adhered to. Geotechnical testing and inspections should be completed to confirm the ground conditions within any areas which have not been previously earthworked and certified in the GCR.

6. Limitations

This report has been prepared for the sole benefit of Seeka Ltd for the proposed Stage 1B canopy extension and future packaging lean-to at 153 Waipapa Road, Kerikeri. It is not to be relied upon or used out of context by any other person without reference to Stratum Consultants Ltd. The reliance by other parties on the information or opinions contained in the report shall, without prior review and agreement in writing, be at such party's sole risk.

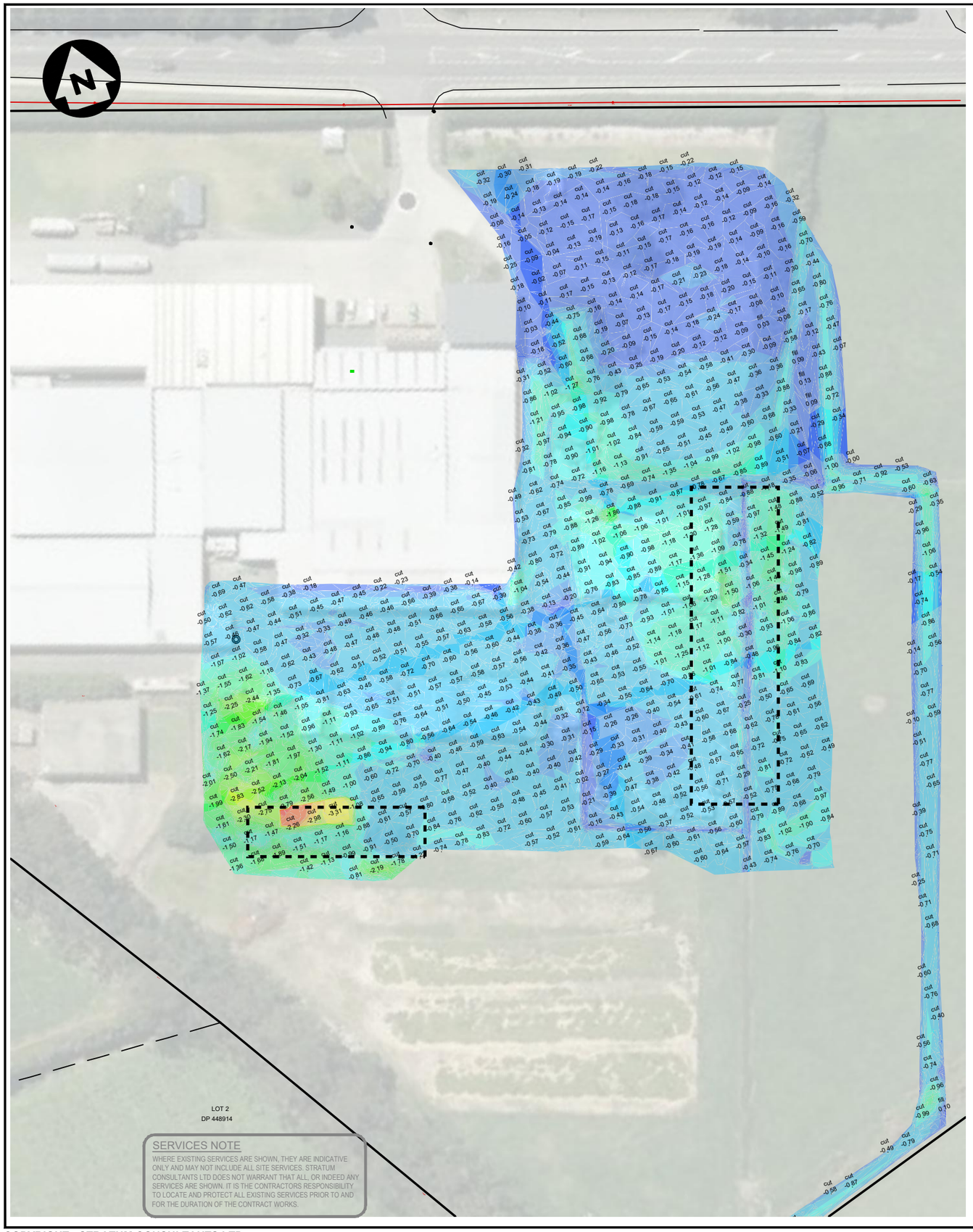
Yours faithfully

Stratum Consultants Ltd

Prepared by:
Thomas Stemmer
Engineering Geologist

Reviewed and Approved by:
Elles Pearse-Danker
CPEng Geotechnical Engineer

encl. Selected plans.



Cut Fill Banding Details

Number	Color	Minimum Elevation (m)	Maximum Elevation (m)	2D Area (m^2)	Volume (m^3)
1		-5.000	-4.800	0.0	0.0
2		-4.800	-4.600	0.0	0.0
3		-4.600	-4.400	2.6	0.1
4		-4.400	-4.200	11.0	1.8
5		-4.200	-4.000	8.5	3.5
6		-4.000	-3.800	5.9	5.1
7		-3.800	-3.600	4.4	6.0
8		-3.600	-3.400	5.1	6.9
9		-3.400	-3.200	33.0	10.6
10		-3.200	-3.000	12.2	15.8
11		-3.000	-2.800	17.7	17.3
12		-2.800	-2.600	53.0	25.5
13		-2.600	-2.400	50.1	34.9
14		-2.400	-2.200	70.6	46.9
15		-2.200	-2.000	135.6	66.9
16		-2.000	-1.800	191.3	102.0
17		-1.800	-1.600	196.3	139.4
18		-1.600	-1.400	346.0	191.7
19		-1.400	-1.200	625.5	282.4
20		-1.200	-1.000	1074.7	451.2
21		-1.000	-0.800	1972.9	748.8
22		-0.800	-0.600	3334.1	1275.2
23		-0.600	-0.400	3840.9	2025.8
24		-0.400	-0.200	1946.0	2607.7
25		-0.200	0.000	2732.1	3152.4
26		0.000	0.200	147.2	10.6
27		0.200	0.400	3.6	0.8
28		0.400	0.600	1.2	0.4
29		0.600	0.800	0.9	0.2
30		0.800	1.000	0.7	0.1
31		1.000	1.200	0.0	0.0

DRAWN:	ADP	DESIGNED:	-
CHECKED:	-	SURVEYED BY:	-

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	02-0818	ADP	DRAFT
B	07-08-18	ADP	ISSUED FOR RESOURCE CONSENT
C	03-09-18	ADP	BUILDING UPDATE CHANGES
D	20-05-20	ADP	FINAL UNDERCUT LEVELS

NOTES/KEY:

Cut Volume
Undercut Base Surface to Natural Surface - Unsuitable Material Removed

Cut - 11,218.00m³ (SOLID VOLUME)
Area - 16822.92m²

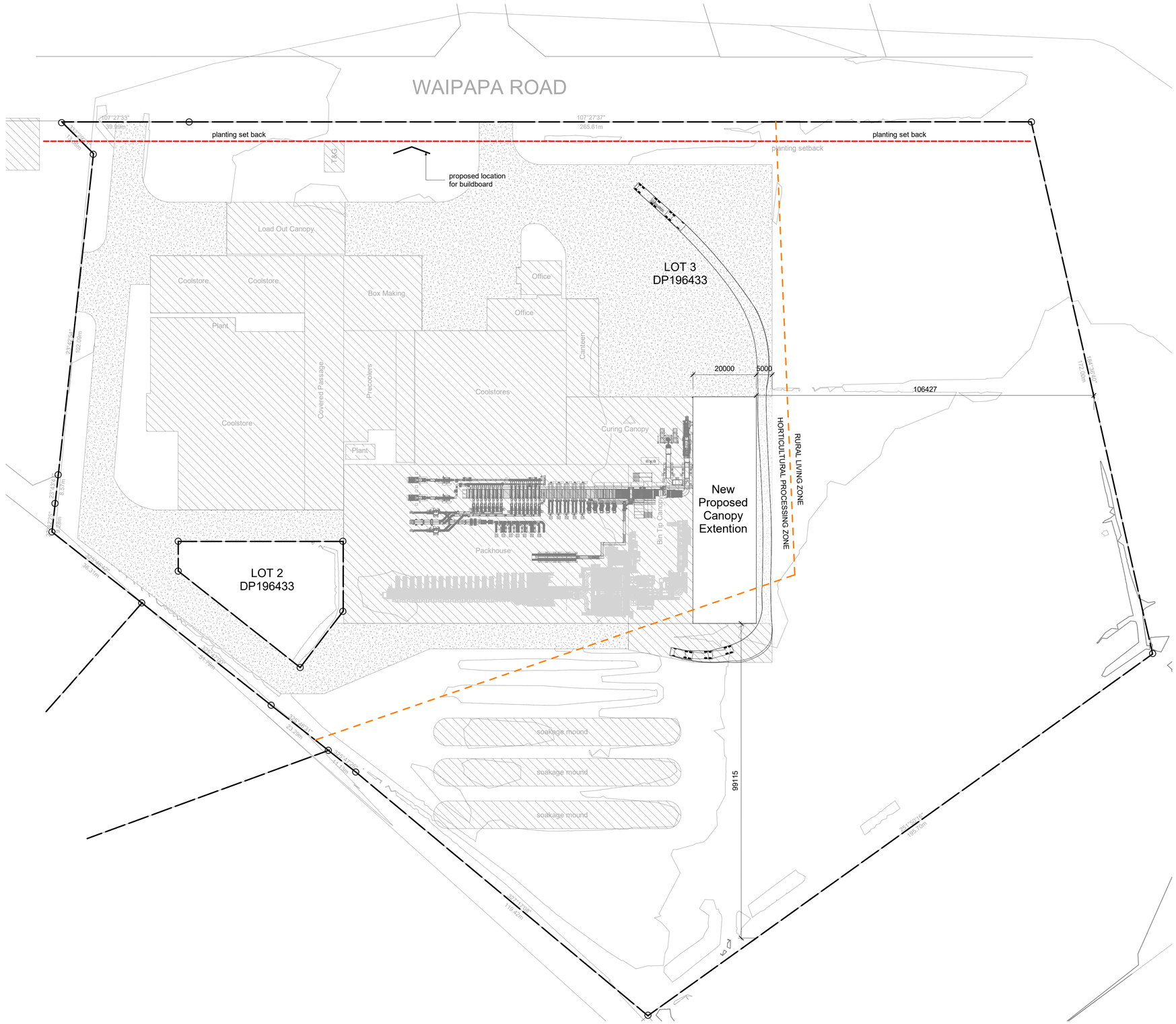
Seeka
SELECT EXCELLENCE

SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

CUT FILL PLAN
3 METERS OUTSIDE NEW BUILDING PLATFORM

Stratum CONSULTANTS
Experience. Knowledge. Better Outcomes.
Planners | Engineers | Surveyors

SCALE: 1:1000	ORIGINAL DWG. SIZE A3	
DRAWING No.	SHEET No.	ISSUE
638080-M-E-D001	T01	D



Site Information & Requirements

Street Address: 153 Waipapa Road, Kerikeri

DP & Lot Number: DP 196433, Lot 3

Local Council: Far North District Council

Zone: Horticulural Processing / Rural Living Zone

Site Area: 68,752m²

Zone Information:
EQ Zone: Zone 1
Wind Zone: H
Corrosion Zone: Zone c

Notes:

- Site boundaries/ levels nominal and subject to survey.
- Easements not shown.
- Dimensions approximate and subject to confirmation.
- Structure and grid setout indicative only and subject to calculation.
- Stormwater detention/ soakage/ treatment/ discharge not yet checked.
- Resource Consent not expected/ expected.

Client: Seeka

Contractor: form

BCD GROUP

Sheet: **PROPOSED SITE PLAN**

Project Title: **SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION**

153 WAIPAPA ROAD, KERIKERI

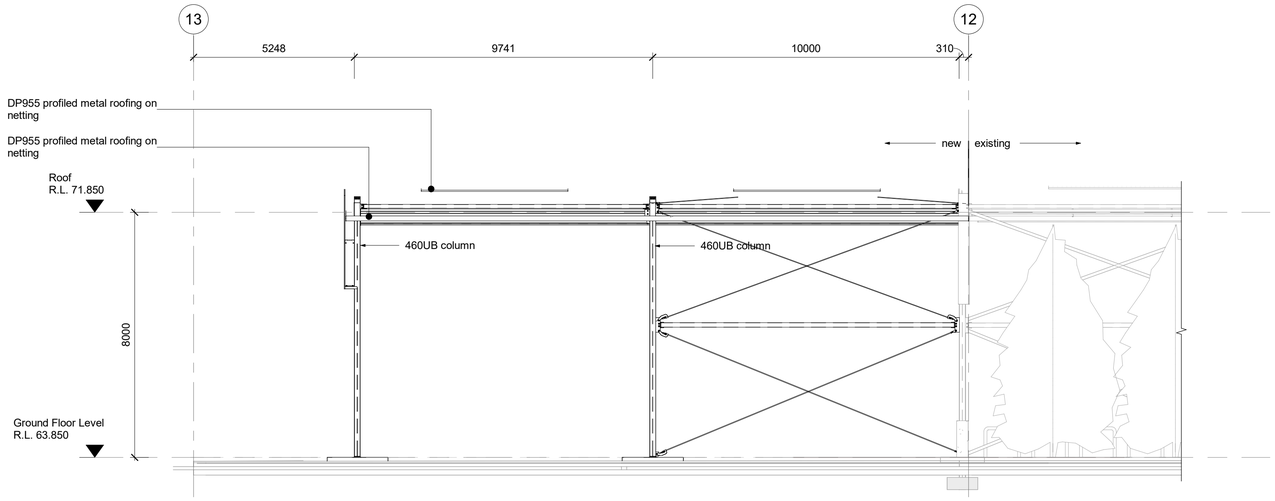
Rev	Date	by	Reason
5	06-06-2025	MT	FOR BUILDING CONSENT
4	23-05-2025	MT	FOR INFORMATION
3	16-05-2025	MT	FOR INFORMATION
2	06-02-2025	MT	FOR INFORMATION
1	23-01-2025	MT	FOR INFORMATION

Drawn: MT | Scale: As indicated | at A1

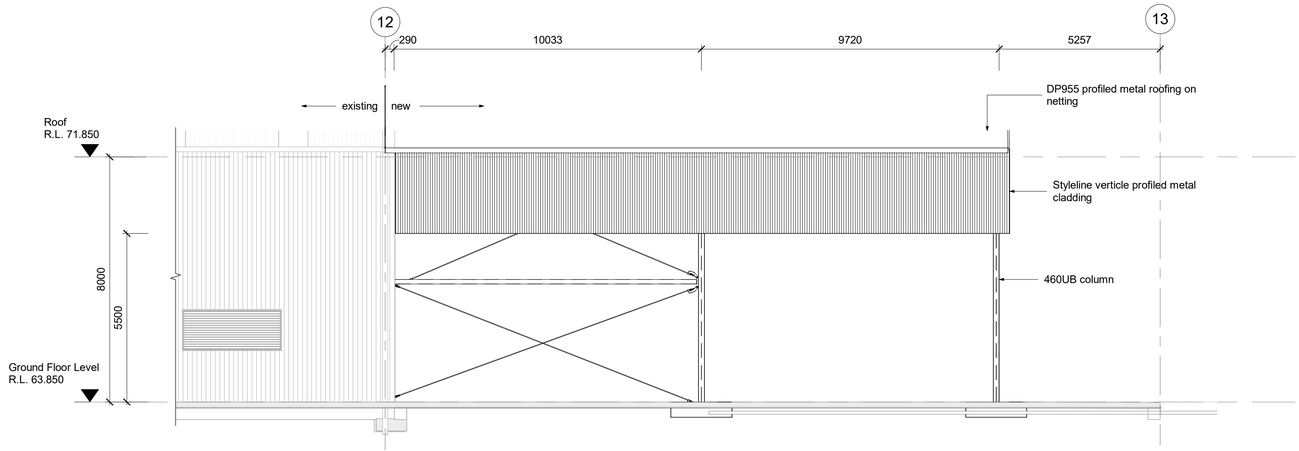
Reviewer: SJ

Job No: 25-0030 | Sheet No: A-100 | Revision: 5

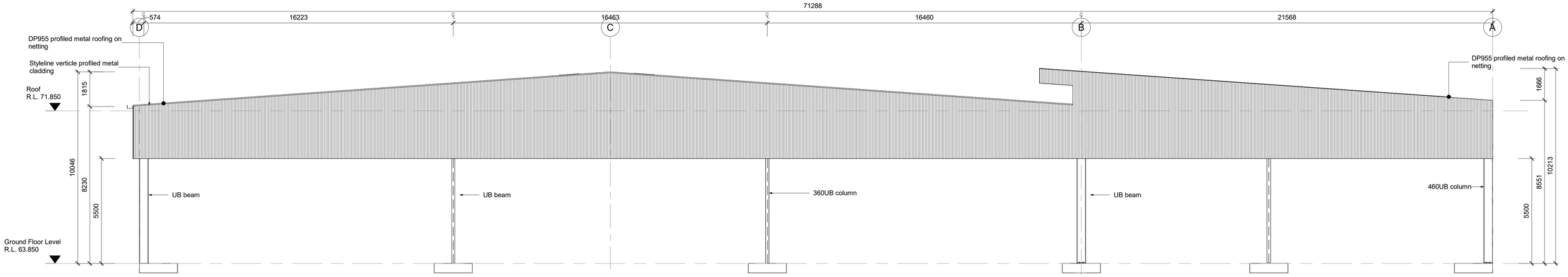
all dimensions to be verified on site before making any shop drawings or commencing any work.



Architectural Elevation North
1 : 100



Architectural Elevation West
1 : 100



Architectural Elevation East
1 : 100

Client: Seeka

Contractor: form

BCD GROUP

Sheet: EXTERIOR ELEVATIONS

Project Title: SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION

153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
3	06-06-2025	MT	FOR BUILDING CONSENT
2	23-05-2025	MT	FOR INFORMATION
1	06-02-2025	MT	FOR INFORMATION

Drawn: MT | Scale: 1 : 100 | at A1

Reviewer: SJ

Job No:	Sheet No:	Revision
25-0030	A-200	3

all dimensions to be verified on site before making any shop drawings or commencing any work.

Stratum
CONSULTANTS

TAURANGA
Rydal House, 29 Grey Street
PO Box 13651, Tauranga 3141
Ph: (07) 571 4500
tauranga@stratum.nz

ROTORUA
Trinity House, 1268 Haupapa Street
PO Box 878, Rotorua 3040
Ph: (07) 347 7840
rotorua@stratum.nz

TE PUKE
NZ Post Building, 81A Jellicoe Street
PO Box 301, Te Puke 3153
Ph: (07) 573 7717
tepuke@stratum.nz

ENGINEERS • PLANNERS • SURVEYORS

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **NA124C/509**

Land Registration District **North Auckland**

Date Issued 09 February 2000

Prior References
NA48A/1264

Estate Fee Simple

Area 6.8752 hectares more or less

Legal Description Lot 3 Deposited Plan 196433

Registered Owners
Seeka Limited

Interests

Appurtenant hereto is a water right specified in Easement Certificate 608613.4 - 2.4.1976 at 10.51 am

Subject to a right of way and rights to transmit electricity and telecommunications and convey water over parts marked A & B and a right to drain water over parts marked B & C on DP 196433 specified in Easement Certificate D477115.7 - 9.2.2000 at 2.25 pm

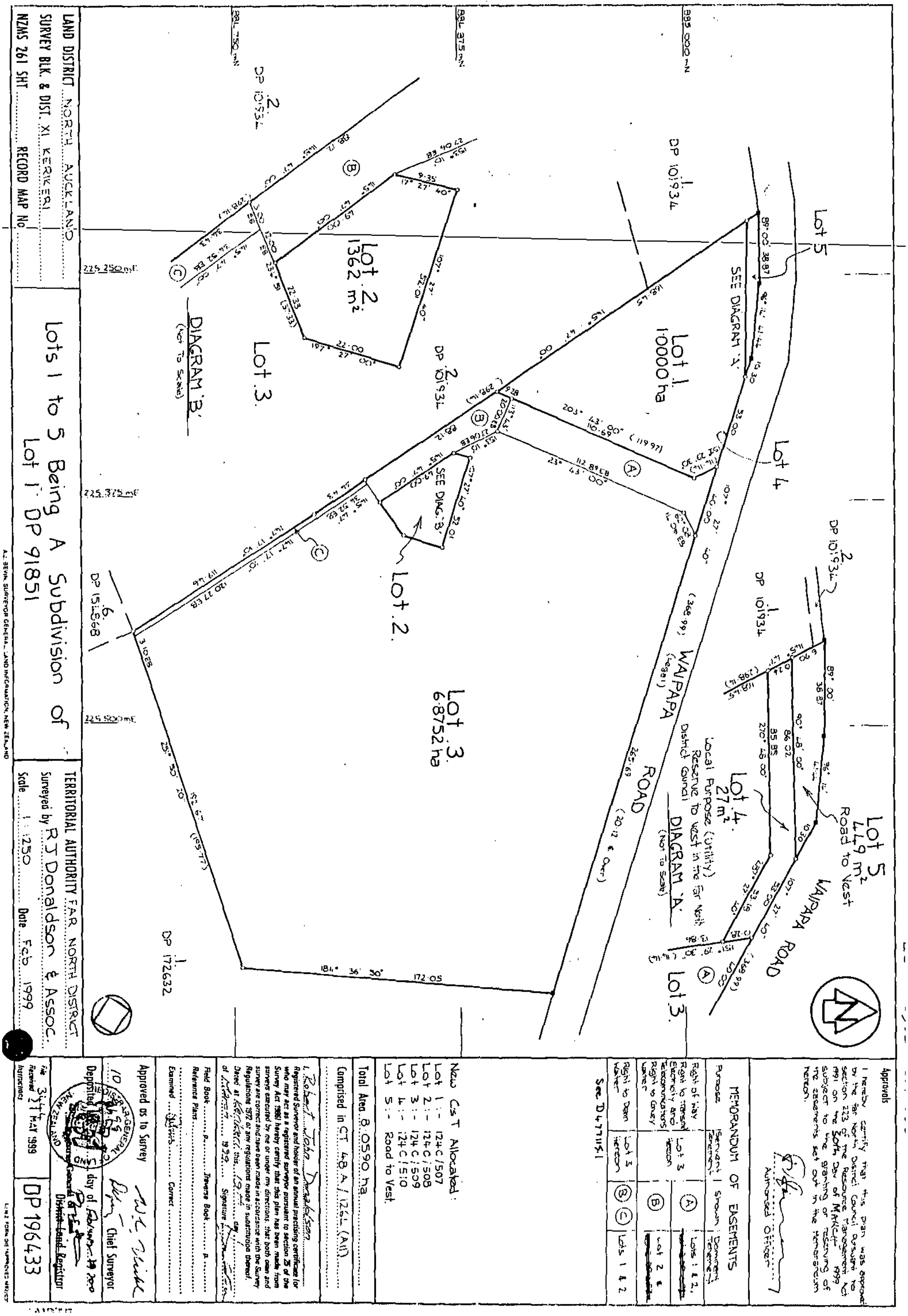
The easements specified in Easement Certificate D477115.7 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right of way over part marked A DP 196433 created by Transfer 5380338.3 - 23.10.2002 at 9:00 am

11100128.2 Mortgage to Westpac New Zealand Limited - 30.4.2018 at 4:50 pm

11289501.1 Notification that a building consent issued pursuant to Section 72 Building Act 2004 identifies Inundation as a natural hazard- 20.11.2018 at 7:00 am

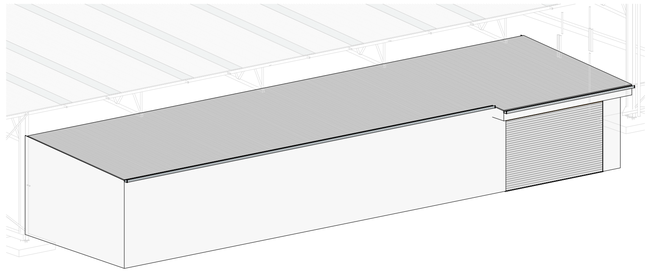
12285500.9 Variation of Mortgage 11100128.2 - 10.11.2021 at 2:49 pm

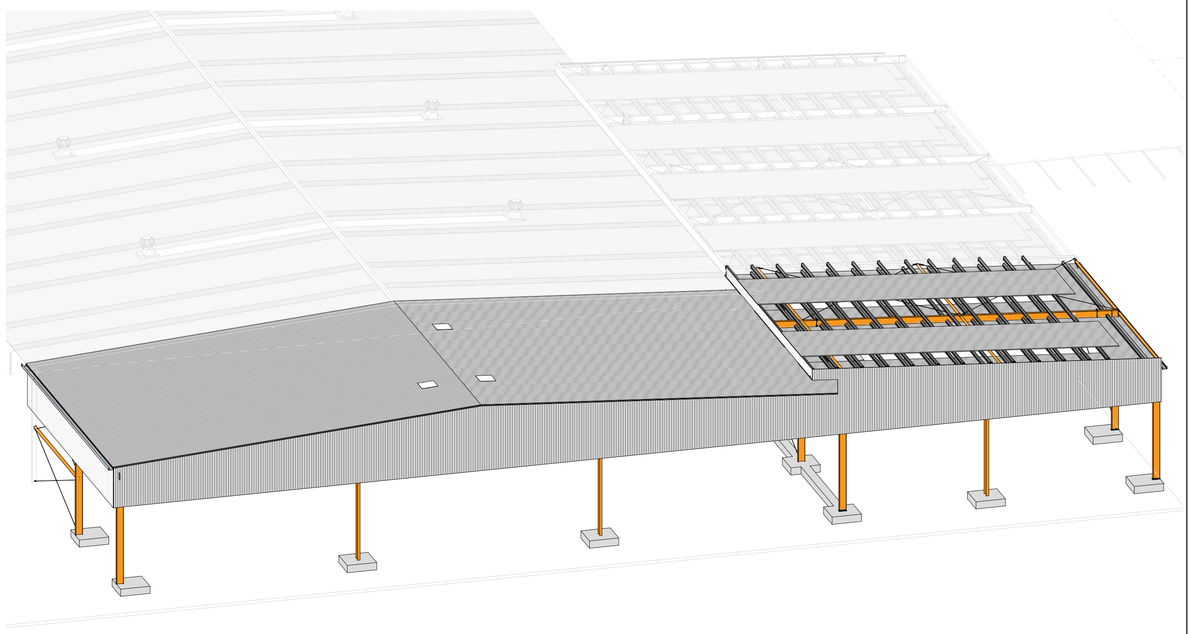

Lots 1 to 5 Being A Subdivision of
Lot 1 DP 91851
LAND DISTRICT NORTH AUCKLAND
SURVEY BLK. & DIST. XI KERIKERI
NZMS 261 SHT .... RECORD MAP No ....
TERRITORIAL AUTHORITY FAR NORTH DISTRICT
Surveyed by R J Donaldson & Assoc.
Scale 1:1250 Date Feb 1999
Lot 1 1·0000 ha
Lot 2 1362 m²
Lot 3 6·8752 ha
Lot 4 27 m² Local Purpose (Utility) Reserve to vest in the Far North District Council
Lot 5 449 m² Road to Vest
WAIPAPA ROAD
DIAGRAM 'A' (Not To Scale)
DIAGRAM 'B' (Not To Scale)
SEE DIAGRAM 'A'
SEE DIAG. 'B'
DP 101934
DP 172632
DP 151868
Approvals
I hereby certify that this plan was approved by the Far North District Council pursuant to section 223 of the Resource Management Act 1991 on the 30th Day of MARCH 1999 subject to the granting or reserving of the easements set out in the Memorandum hereon.
Authorised Officer
MEMORANDUM OF EASEMENTS
Purpose | Servient Tenement | Shown | Dominant Tenement
Right of Way, Right to transmit Electricity and Telecommunications, Right to Convey Water | Lot 3 hereon | A | Lots 1 & 2
B | Lot 2 &
Right to Drain Water | Lot 3 hereon | B C | Lots 1 & 2
See D477115.1
New CsT Allocated:
Lot 1 :- 124C/507
Lot 2 :- 124C/508
Lot 3 :- 124C/509
Lot 4 :- 124C/510
Lot 5 :- Road to Vest.
Total Area 8.0590 ha
Comprised in CT 48A/1264 (All)
I, Robert John Donaldson
Registered Surveyor and holder of an annual practising certificate (or who may act as a registered surveyor pursuant to section 25 of the Survey Act 1986) hereby certify that this plan has been made from surveys executed by me or under my directions, that both plan and survey are correct and have been made in accordance with the Survey Regulations 1972 or any regulations made in substitution thereof.
Dated at Kerikeri this 19th day of March 1999 Signature
Field Book ..... p ..... Traverse Book ..... p .....
Reference Plans
Examined ..... Correct
Approved as to Survey
Chief Surveyor
Deposited
District Land Registrar
File 3144
Received 21 MAY 1999
Instructions
DP 196433

JOB NUMBER: 25-0030

SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION
153 WAIPAPA ROAD, KERIKERI

bcdgroup.nz





DRAWING LIST

SHEET NUMBER	SHEET NAME	CURRENT REVISION DATE	REVISION
000	INDEX & STANDARD NOTES	06-06-2025	4
A-100	PROPOSED SITE PLAN	06-06-2025	6
A-101	PROPOSED FLOOR PLAN	06-06-2025	4
A-150	ROOF PLAN	06-06-2025	3
A-200	EXTERIOR ELEVATIONS	06-06-2025	4
A-200a	EXTERIOR ELEVATIONS	06-06-2025	1
A-205	CROSS SECTIONS	06-06-2025	4
A-206	CROSS SECTIONS	06-06-2025	3

Notes

1. Drawings issued prior to the completion of Construction issue are for the purpose of enabling the client/contractor to prepare, submit and negotiate a cost competitive and compliant tender for the project only.
2. The client must act in good faith and use all reasonable endeavours to work on a regular basis with the consultant to minimise the risk of error to develop solutions that fulfil the project requirements and embrace the clients preferred construction methodologies and practices.
3. The building consent/tender documentation has been prepared such that a suitably competent contractor can prepare tender documentation. The documents are still subject to change as a result of structural peer review/ council RFI's and final pre-construction coordination between design disciplines and as such BCD recommend that the contractor allows suitable construction contingencies within their tender to satisfy the potential of design changes.

Standard Abbreviations

General Abbreviations

appr.	approved
bldg	building
CL	centre line
cnr	corner
COS	confirm on site
Ø	diameter
dim.	dimension
DTF	document transmittal form
ex.	existing
FFL	finish floor level
m	metre
max.	maximum
min.	minimum
misc.	miscellaneous
mm	millimetre
No.	number
NTS	not to scale
NZS	New Zealand Standard
OD	outside diameter
R	radius
ref.	reference
RL	reduced level
SK	sketch
spec.	specification
SQ	square
TBC	to be confirmed
typ.	typical

Structural Abbreviations

alt.	alternating
FSBW	full strength butt weld
CHS	circular hollow section
CJ	control joint
conc.	concrete
crs	centres
cvr	cover
D	deformed bars (grade 300E)
db	nominal bar diameter in mm
DT	drossbach tube
EA	equal angle
EF	each face
EJ	expansion joint
EW	each way
FF	far face
FP	full penetration
FT	flat
FWAR	fillet weld all round
G	grade
galv.	galvanised
HDG	hot dip galvanised
HD	deformed bars (grade 500E)
horiz.	horizontal
HR	round bars (grade 500E)
IF	inside face
MS	mild steel
NF	near face

Structural Abbreviations continued

OF	outside face
PC	precast concrete panel
PFC	parallel flange channel
PLY	plywood
R	round bars (grade 300E)
RB	reidbars
RC	reinforced concrete
RHS	rectangle hollow section
SHS	square hollow section
SOG	slab on grade
SP	splice
SS	stainless steel
SSL	structural slab level
TFB	tapered flange beam
TOS	top of steel
T&B	top and bottom
UA	unequal angle
UB	universal beam
UC	universal column
vert.	vertical
WB	welded beam

Architectural Abbreviations

BMT	base metal thickness
DPC	damp proof course
DPM	damp proof membrane

Civl & Plumbing Abbreviations

BC	base course
CP	catch pit
IC	inspection chamber
IL	invert level
LL	lid level
MH	manhole
ROW	right of way
SB	sub base
SG	sub grade
SS	sanitary sewer
SW	stormwater
WM/S	water main/supply
WW	waste water
dia.	diameter
DP	down pipe
FWG	floor waste gully
GT	gully trap
HT	hose tap
ID	inside diameter
OD	outside diameter
OF	over flow
OFO	over flow outlet
ORG	over flow relief gully
TV	terminal vent
WC	water closet
IJ	inspection junction
IB	inspection bend
AAV	air admittance valve

Sheet Setouts

C-001 series - civil drawings
A-100 series - architectural plans
A-200 series - architectural elevations & sections
A-300 series - architectural details
A-400 series - door & window schedule and details
A-450 series - joinery details
A-460 series - interior finishes schedules

S-500 series - structural ground floor and mid floor plans
S-550 series - foundation details
S-560 series - mid floor details
S-600 series - precast & masonry elevations & details
S-620 series - precast stairs & details
S-700 series - holding down bolt plans
S-705 series - structural roof framing plans
S-800 series - structural elevations and sections
S-900 series - structural details
S-1000 series - 3D views

Hamilton Auckland
Tauranga Napier
New Plymouth
Ph: 0508 BCD GROUP (223 47687) Website: bcdgroup.nz

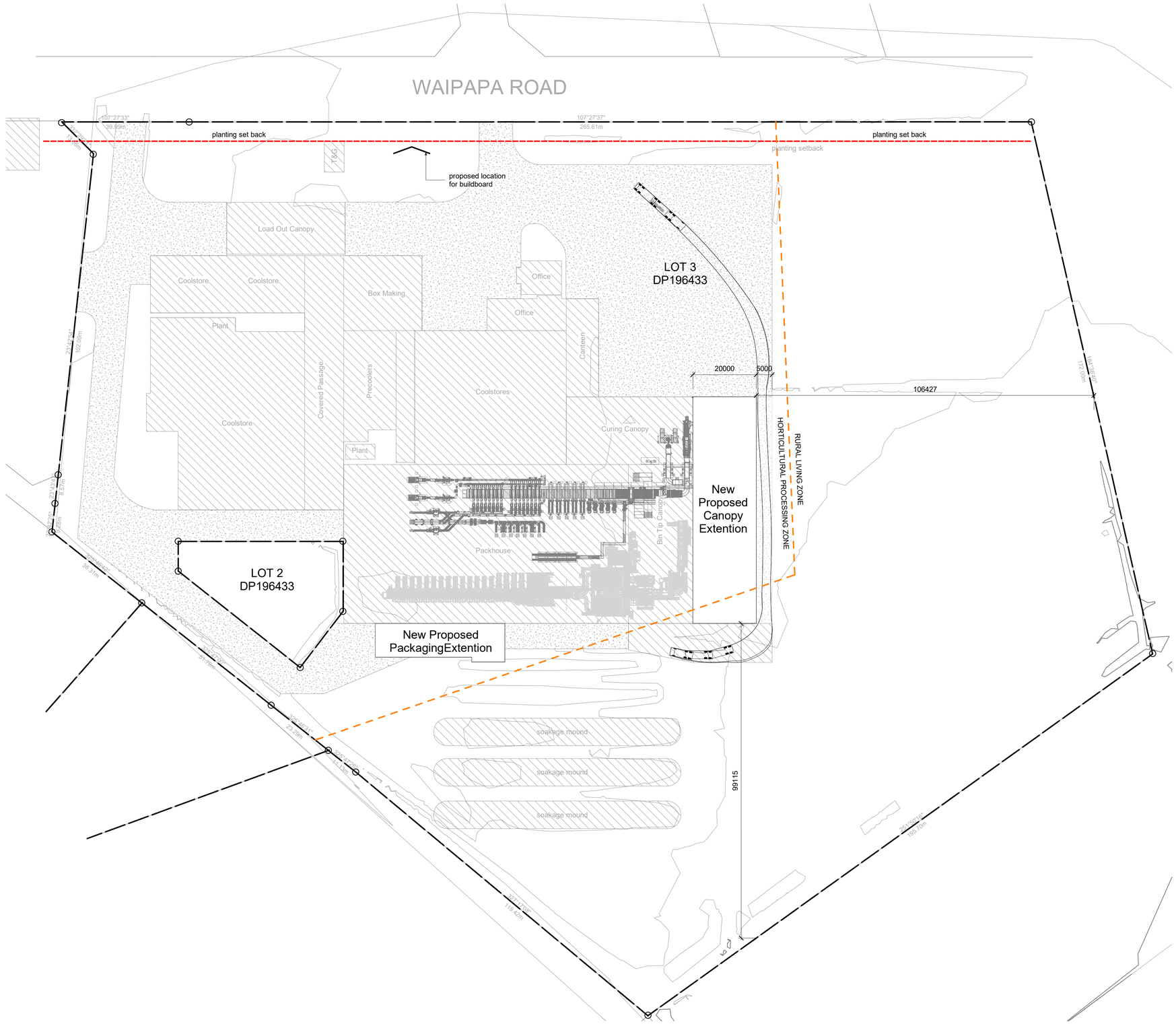
original in colour

Client: Seeka
Contractor: form
BCD GROUP

Sheet: INDEX & STANDARD NOTES
Project Title: SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION
153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
4	06-06-2025	MT	RESOURCE CONSENT
3	06-06-2025	MT	FOR BUILDING CONSENT
2	06-02-2025	MT	FOR INFORMATION
1	23-01-2025	MT	FOR INFORMATION

Drawn: MT Scale: 1 : 10 at A1
Engineer: SJ
Job No: 25-0030 Sheet No: 000 Revision: 4



Site Information & Requirements

Street Address: 153 Waipapa Road, Kerikeri

DP & Lot Number: DP 196433, Lot 3

Local Council: Far North District Council

Zone: Horticulural Processing / Rural Living Zone

Site Area: 68,752m²

Zone Information:
EQ Zone: Zone 1
Wind Zone: H
Corrosion Zone: Zone c

Notes:

- Site boundaries/ levels nominal and subject to survey.
- Easements not shown.
- Dimensions approximate and subject to confirmation.
- Structure and grid setout indicative only and subject to calculation.
- Stormwater detention/ soakage/ treatment/ discharge not yet checked.
- Resource Consent not expected/ expected.

Client

Seeka

Contractor

form

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Sheet

PROPOSED SITE PLAN

Project Title

SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION

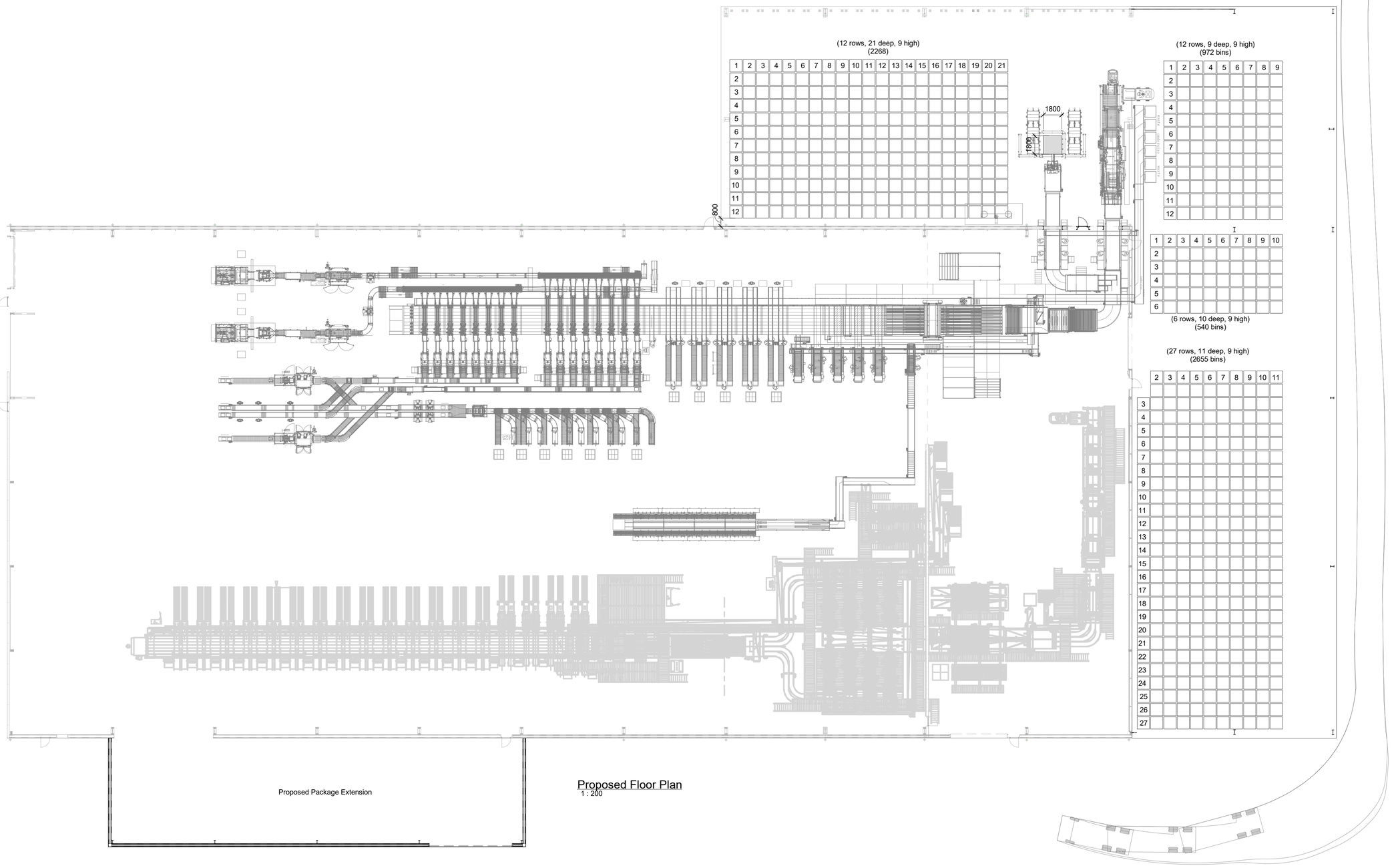
153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
6	06-06-2025	MT	RESOURCE CONSENT
5	06-06-2025	MT	FOR BUILDING CONSENT
4	23-05-2025	MT	FOR INFORMATION
3	16-05-2025	MT	FOR INFORMATION
2	06-02-2025	MT	FOR INFORMATION
1	23-01-2025	MT	FOR INFORMATION

Drawn: MT
Scale: As indicated at A1
Reviewer: SJ

Job No:	Sheet No:	Revision
25-0030	A-100	6

all dimensions to be verified on site before making any shop drawings or commencing any work.



Proposed Floor Plan
1 : 200

6435 total bins

Client: Seeka

Contractor: form

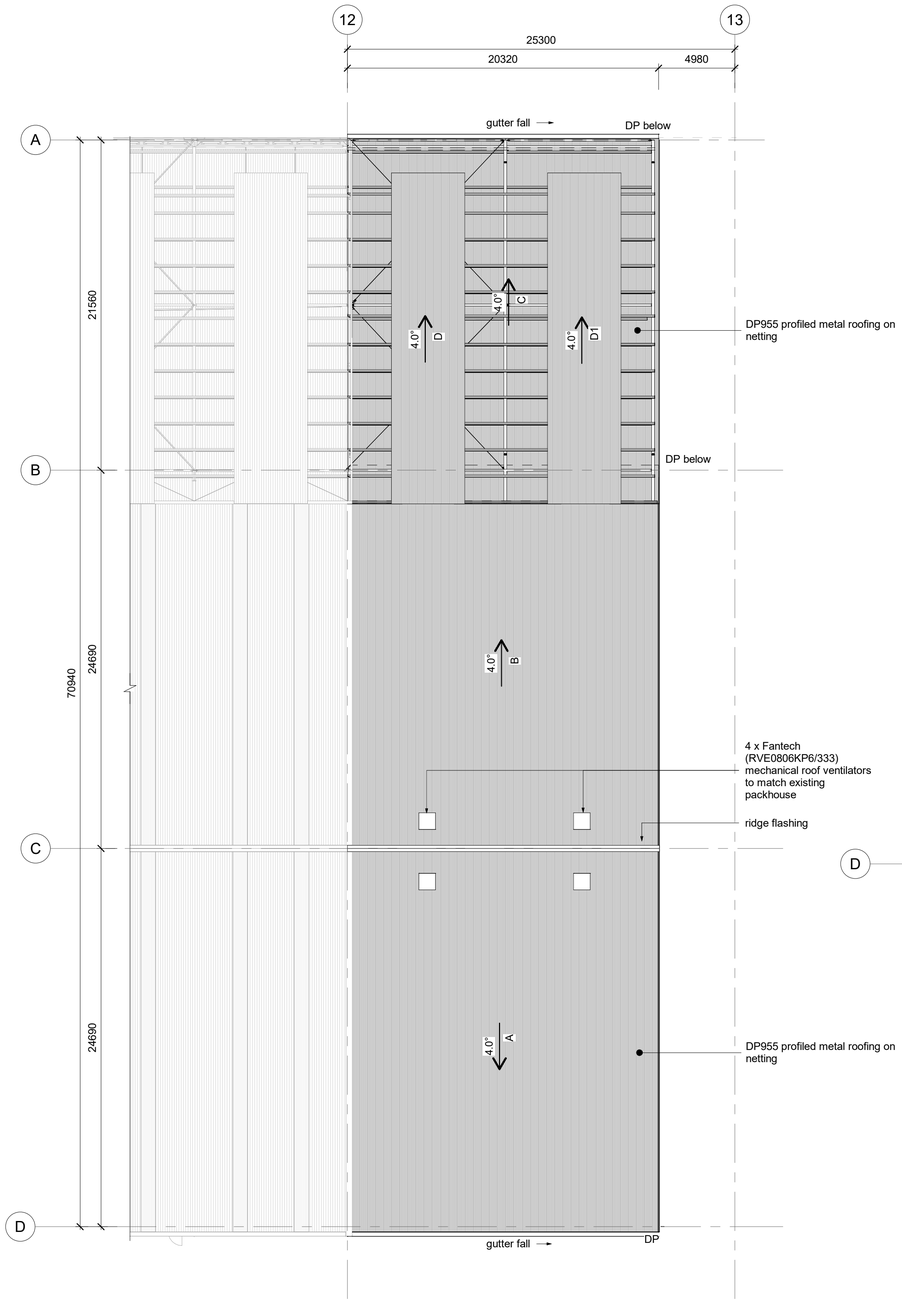
BCD GROUP

Sheet
PROPOSED FLOOR PLAN

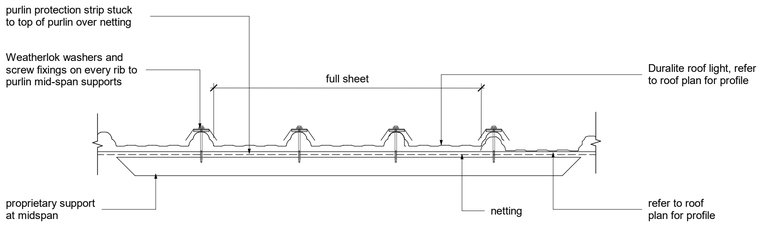
Project Title
SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION
153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
4	06-06-2025	MT	RESOURCE CONSENT
3	06-06-2025	MT	FOR BUILDING CONSENT
2	23-05-2025	MT	FOR INFORMATION
1	06-02-2025	MT	FOR INFORMATION

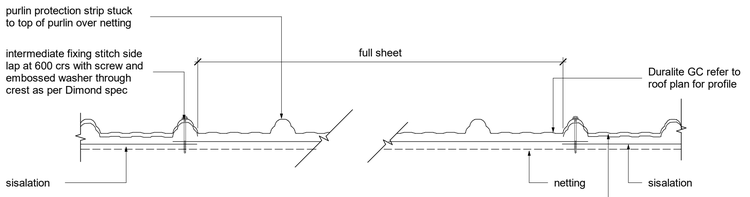
Drawn: MT | Scale: As indicated | at A1
Reviewer: SJ
Job No: 25-0030 | Sheet No: A-101 | Revision: 4



Roof Plan - Canopy Extension
1 : 200

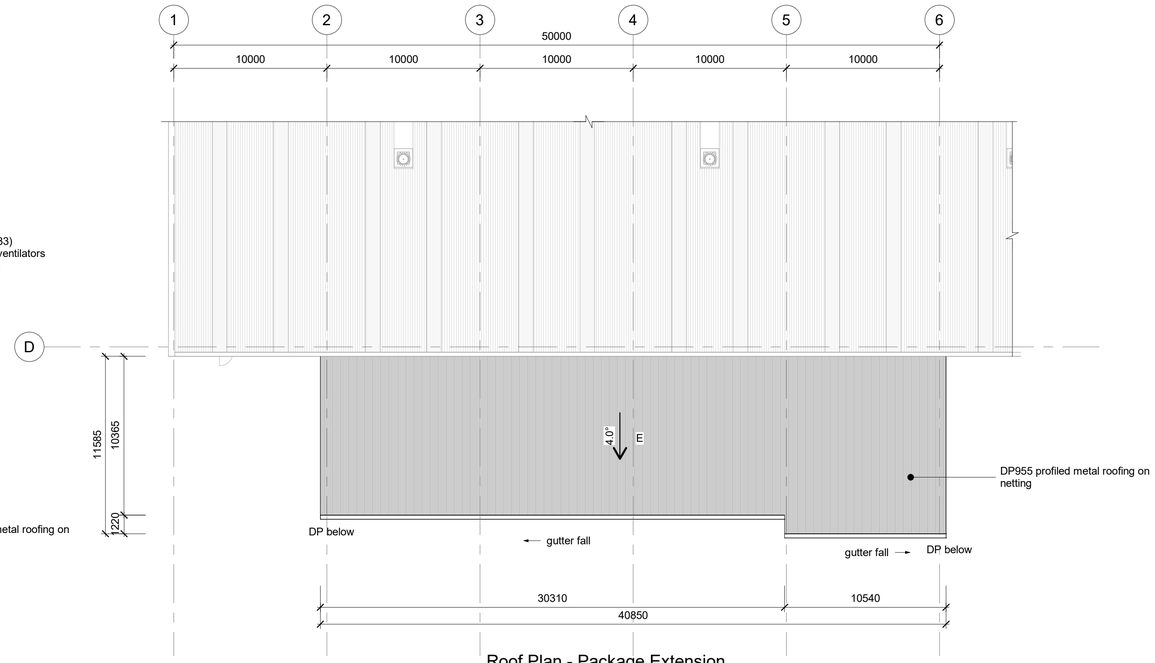


Typical Roof Light Section at DHS Purlins and Mid Span Supports



Typical Roof Light Section

Note:
refer to Dimond natural lighting systems specification for fixing requirements



Roof Plan - Package Extension
1 : 200

Roof Notes

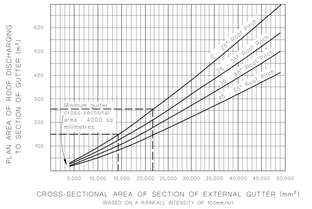
- All roofing work is to be carried out by suitably qualified and experienced tradespeople.
- All work is to be carried out in accordance with NZ Metal Roof & Wall Cladding Code of Practice.
- All work is to be carried out in accordance with the NZ Building Code.
- Any details that the contractor does not consider to be good trade practice are to be noted to the designer at time of tender.
- All flashings are to be fitted to allow for thermal expansion as per NZBC E2/AS1 clause 4.5
- Screw fixing set out is to comply with NZ Metal Roof & Wall Cladding Code of Practice.
- All roofing and flashings are to be a minimum thickness of 0.55mm BMT gauge.
- Metal Flashings - general dimensions as per NZBC E2/AS1 Table 7
- Allow for compatibility of materials in contact as per NZBC E2/AS1 Table 20.
- Allow for one piece welded under flashings at all complex junctions.
- Allow for all nogging required for support of flashings and penetrations.
- Roof trusses shall be designed by a truss manufacturer and shall be supported on exterior walls only. The truss manufacturer shall design all lintels supporting girder trusses.

DOWN PIPE SIZE FOR GIVEN ROOF PITCH & AREA

Max plan area of roof served by the downpipe (m²)

Dia	0-25°	25-35°	35-45°	45-55°
63mm Ø	60	50	40	35
74mm Ø	85	70	60	50
100mm Ø	155	130	110	90
150mm Ø	350	290	250	200

External Gutter



NZBC E1/AS1 - Surface Water
Paragraphs 5.1.2 and 5.1.3
Figure 15 - Cross-sectional Area of External Gutter

Roof Areas

Roof area **A** 507m²
as per NZBC E2/AS1 Figure 16
minimum internal gutter cross-sectional area = 18500m²
as per NZBC E2/AS1 Table 5, minimum downpipe size = 100 Ø

Roof area **B** 507m²
as per NZBC E2/AS1 Figure 16
minimum internal gutter cross-sectional area = 18500m²
as per NZBC E2/AS1 Table 5, minimum downpipe size = 100 Ø

Roof area **C** 349m²
as per NZBC E2/AS1 Figure 16
minimum internal gutter cross-sectional area = 18500m²
as per NZBC E2/AS1 Table 5, minimum downpipe size = 100 Ø

Roof area **D&D1** 103m²
as per NZBC E2/AS1 Figure 16
minimum internal gutter cross-sectional area = 18500m²
as per NZBC E2/AS1 Table 5, minimum downpipe size = 100 Ø

Roof area **C,D & D1** 555m²
as per NZBC E2/AS1 Table 5
minimum external gutter cross-sectional area = 18500m²
minimum downpipe size = 100 Ø

Roof area total 1918m²

Roof area **E** 437m²
as per NZBC E2/AS1 Table 5
minimum external gutter cross-sectional area = 18500m²
minimum downpipe size = 100 Ø

Client: Seeka
Contractor: form
BCD GROUP

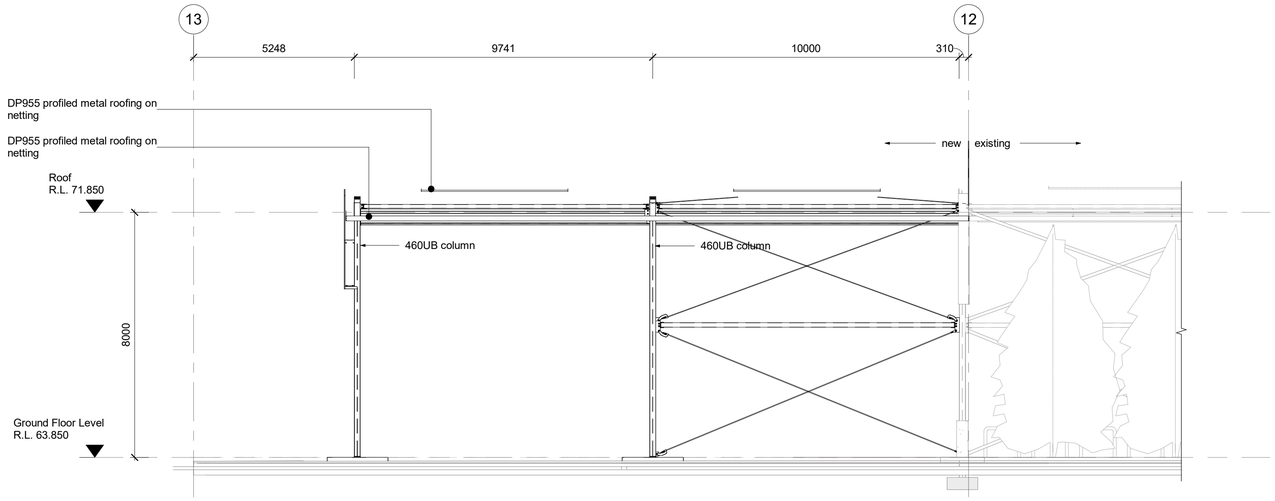
Sheet: **ROOF PLAN**

Project Title: **SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION**
153 WAIPAPA ROAD, KERIKERI

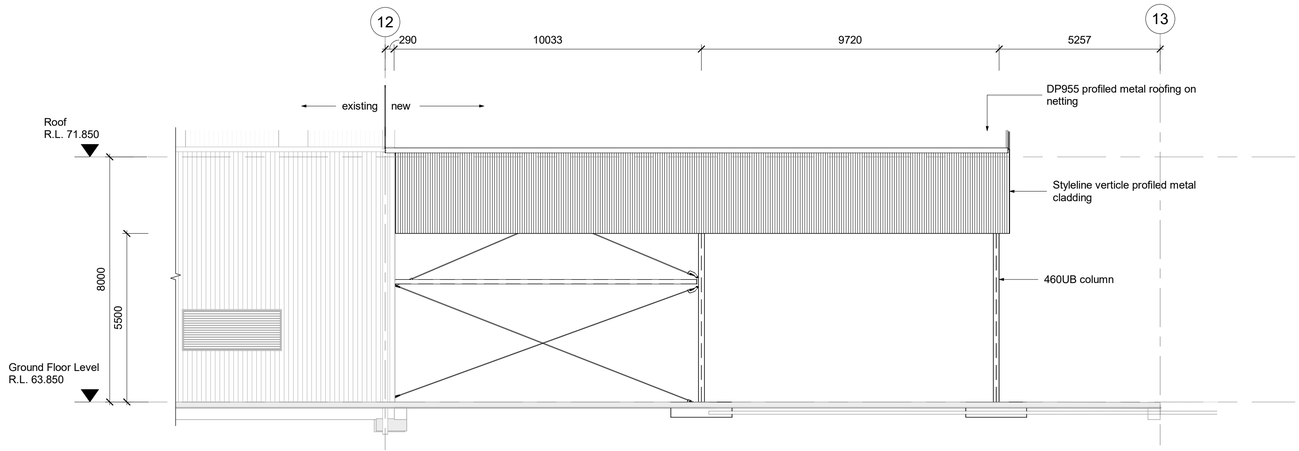
Rev	Date	by	Reason
3	06-06-2025	MT	RESOURCE CONSENT
2	06-06-2025	MT	FOR BUILDING CONSENT
1	23-05-2025	MT	FOR INFORMATION

Drawn: MT | Scale: As indicated | at A1
Reviewer: SJ
Job No: 25-0030 | Sheet No: A-150 | Revision: 3

all dimensions to be verified on site before making any shop drawings or commencing any work.



Architectural Elevation North
1 : 100



Architectural Elevation West
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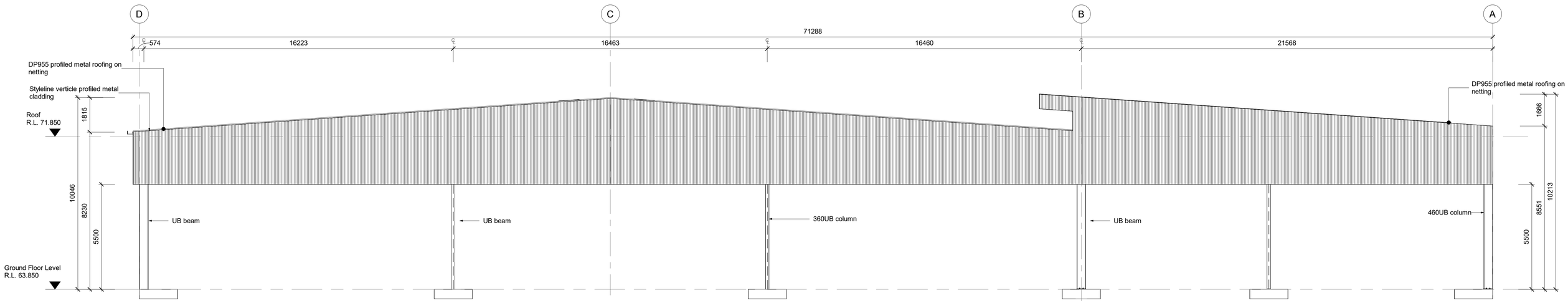


Architectural Elevation East
1 : 100

Client: Seeka

Contractor: form

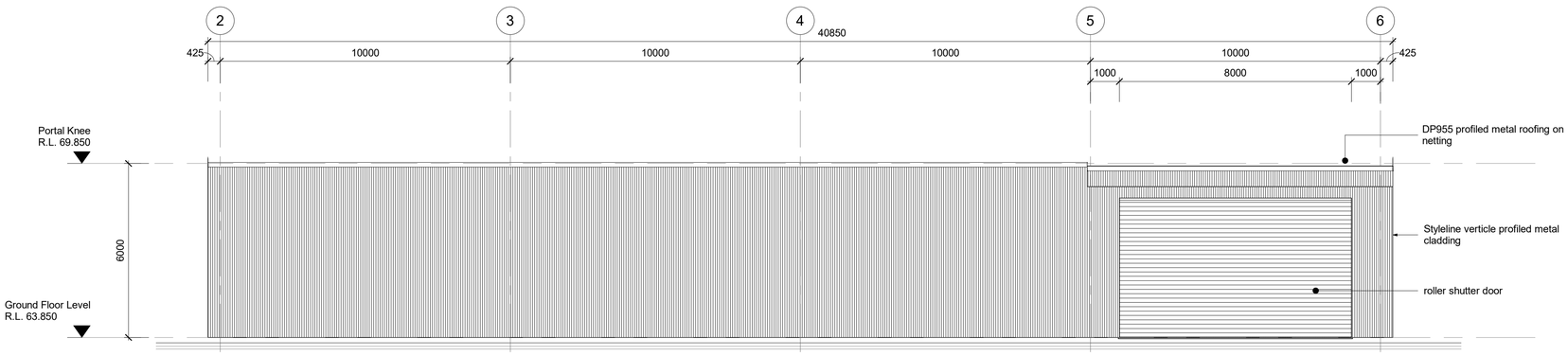
BCD GROUP

Sheet
EXTERIOR ELEVATIONS

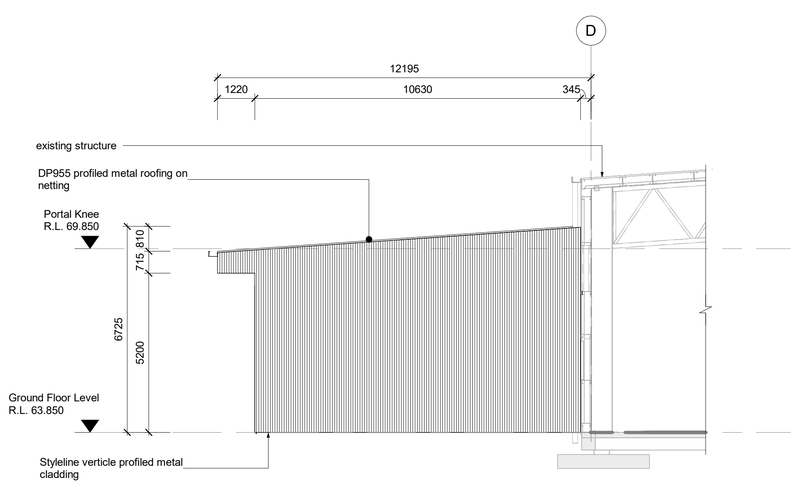
Project Title
SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION
153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
4	06-06-2025	MT	RESOURCE CONSENT
3	06-06-2025	MT	FOR BUILDING CONSENT
2	23-05-2025	MT	FOR INFORMATION
1	06-02-2025	MT	FOR INFORMATION

Drawn: MT | Scale: 1 : 100 | at A1
Reviewer: SJ
Job No: 25-0030 | Sheet No: A-200 | Revision: 4



Archiectural Elevation - Gridline D
1 : 100



Archiectural Elevation - Gridline 6
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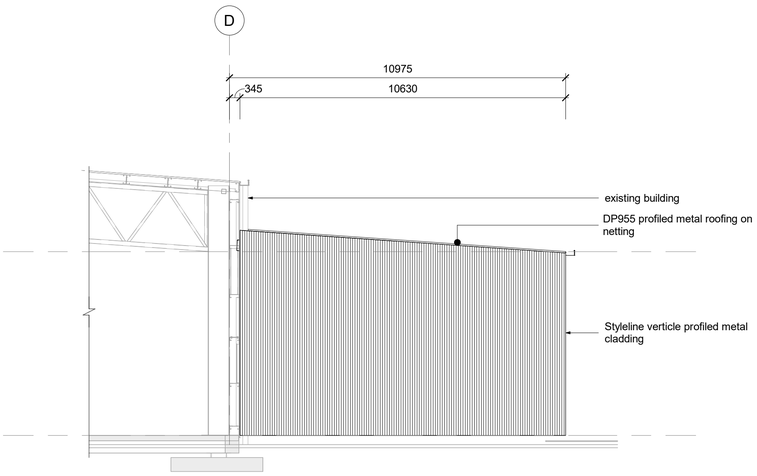


Architectural Elevation - Gridline 2
1 : 100

original in colour

Client: Seeka

Contractor: form

BCD GROUP

Sheet: EXTERIOR ELEVATIONS

Project Title: SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION

153 WAIPAPA ROAD, KERIKERI

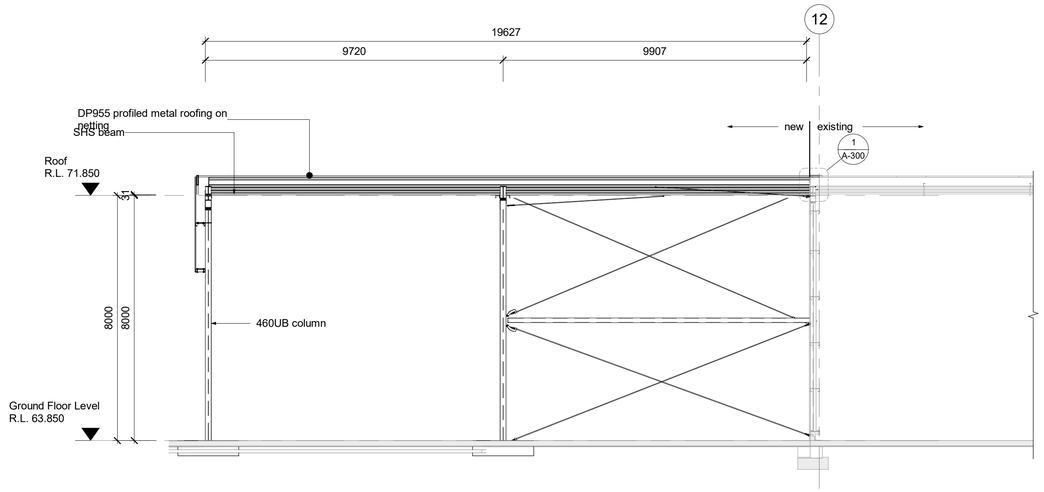
Rev	Date	by	Reason
1	06-06-2025	MT	RESOURCE CONSENT

Drawn: Author | Scale: 1 : 100 | at A1

Engineer: Designer

Job No:	Sheet No:	Revision
25-0030	A-200a	1

all dimensions to be verified on site before making any shop drawings or commencing any work.



Architectural Section A
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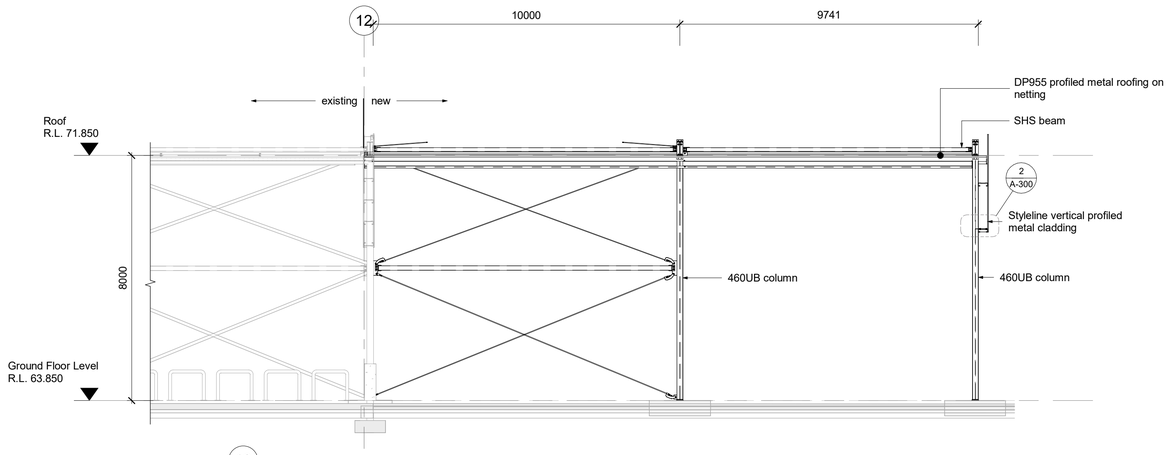
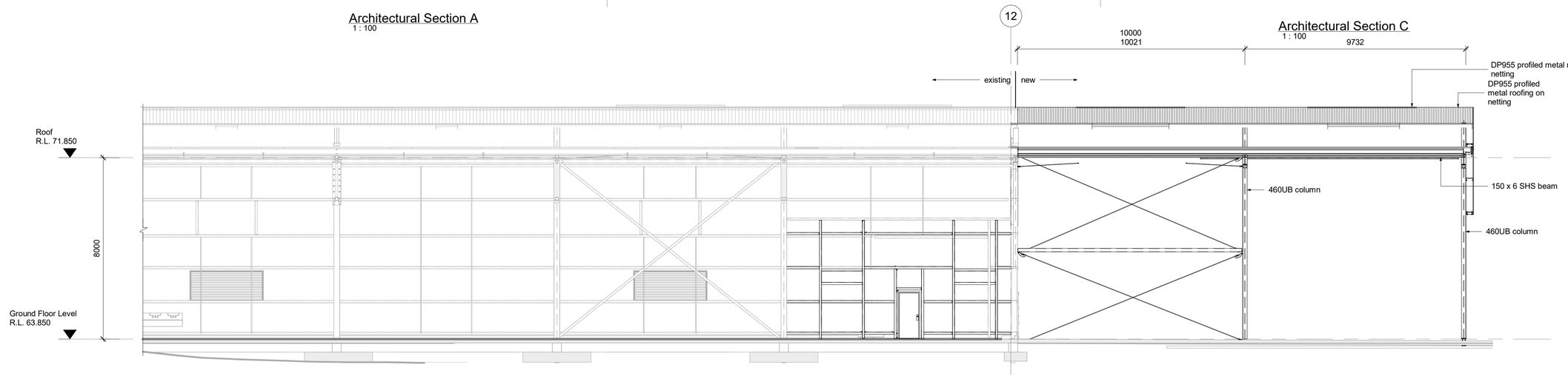


Architectural Section C
1 : 100



Architectural Section B
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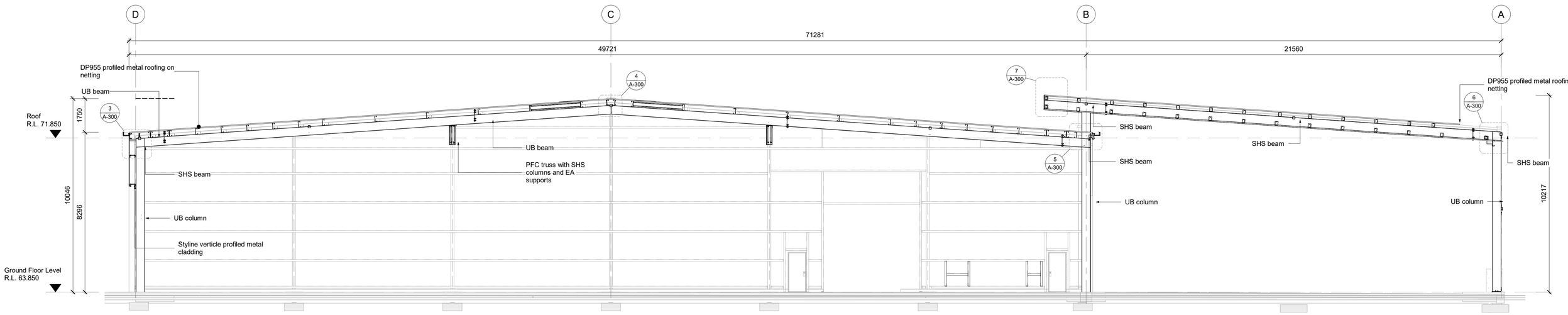


Architectural Section D
1 : 100

Client: Seeka

Contractor: form

BCD GROUP

Sheet: **CROSS SECTIONS**

Project Title: **SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION**

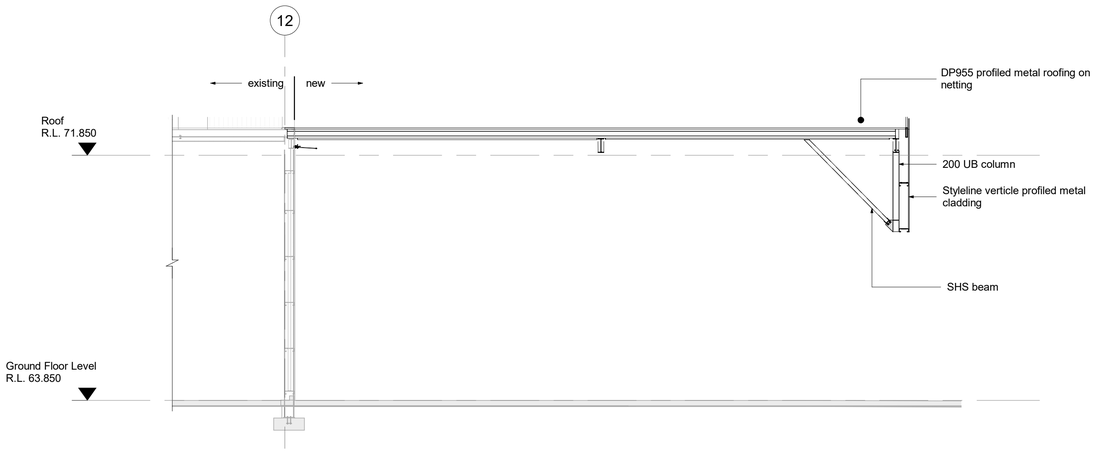
153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
4	06-06-2025	MT	RESOURCE CONSENT
3	06-06-2025	MT	FOR BUILDING CONSENT
2	23-05-2025	MT	FOR INFORMATION
1	06-02-2025	MT	FOR INFORMATION

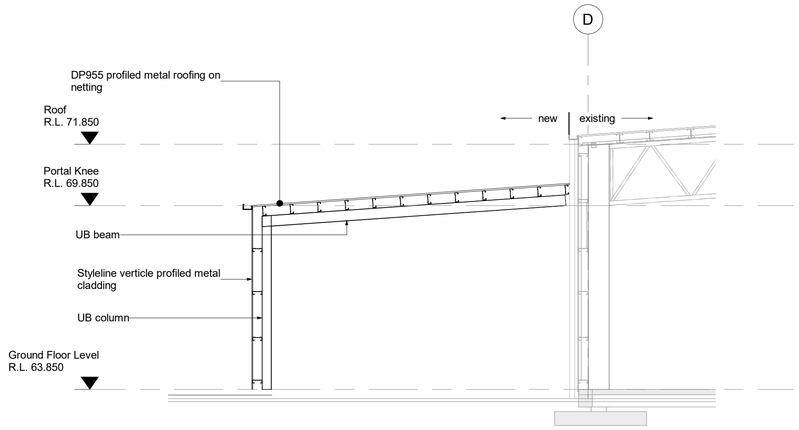
Drawn: MT | Scale: 1 : 100 | at A1

Reviewer: SJ

Job No:	Sheet No:	Revision
25-0030	A-205	4



Architectural Section Between Gridline C and D
1 : 100



Architectural Section Gridline 4
1 : 100

original in colour

Client: Seeka

Contractor: form

BCD GROUP

Sheet: CROSS SECTIONS

Project Title: SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION

153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
3	06-06-2025	MT	RESOURCE CONSENT
2	06-06-2025	MT	FOR BUILDING CONSENT
1	23-05-2025	MT	FOR INFORMATION

Drawn: MT | Scale: 1 : 100 | at A1

Engineer: PP

Job No:	Sheet No:	Revision
25-0030	A-206	3

x1 'V' Shape Billboard

x2 changeable printed canvas sign panels @ 3000mm x 6000mm

Total Height 5m ground to top of sign panel

Memorandum

To: Seeka Ltd File No: 638080-CLV -SW memo
Attention:
From: S Bos
Date: 11 June 2025
Subject: 153 Waipapa Road, Kerikeri
Additional Canopy Extension – Stormwater mitigation

As per Seeka's advice we confirm the following:

- It is proposed to provide for an additional area of canopy on the southeast corner of the existing main building.
- The new canopy will add an additional 1428 sq metres of roof area.
- There is also a requirement to cater for an additional 205 sq metres of additional development elsewhere on the site.
- Currently the site stormwater flow is mitigated with initial discharge to 4 x 50,000 litre retention tanks that then release the flow to the site boundary.
- The tanks are controlled by a 100 and 80 mm diameter orifice outlets with a high level 150 mm outlet.
- To account for the additional discharge area, it is recommended that a further 2 x 50,000 litre tanks are added to the retention tanks 'farm'.
- We have provided calculations , PS 1 and drawings outlining the requirements and confirming the derivation of the additional storage volume requirement.

Based on the provision of the additional storage mitigation we confirm that the site discharge remains as per the existing outflows, with no increase or change of effects at the boundary.

Should you have any queries on the information supplied please contact the undersigned.
Yours faithfully,

Stratum Consultants Ltd

Stephen Bos
CPEng, CMEngNZ, BE, NZCE

PRODUCER STATEMENT – PS1
DESIGN

BUILDING CODE CLAUSE(S): E1 **JOB NUMBER:** 638080
ISSUED BY: STRATUM CONSULTANTS LTD
(Engineering Design Firm)
TO: SEEKA LIMITED
(Owner/Developer)
TO BE SUPPLIED TO: FAR NORTH DISTRICT COUNCIL
(Building Consent Authority)
IN RESPECT OF: DESIGN OF STORMWATER CAPTURE AND RETENTION FOR CANOPY EXTENSION
(Description of Building Work)
AT: 153 Waipapa Road, Kerikeri
(Address, Town/City)
LEGAL DESCRIPTION: LLot 3 DP 196433 **N/A** ☐

We have been engaged by the owner/developer referred to above to provide *(Extent of Engagement)*:
DESIGN OF RETENTION TANKS AND STORMWATER DRAINAGE FOR NEW CANOPY EXTENSION
in respect of the requirements of the Clause(s) of the Building Code specified above for Part only , as specified in the Schedule, of the proposed building work.

The design carried out by us has been prepared in accordance with:

- ☑ Compliance documents issued by the Ministry of Business, Innovation & Employment *(Verification method/acceptable solution)* NZBC E1 / AS 1 / VM1 and/or;
- ☐ Alternative solution as per the attached Schedule.

The proposed building work covered by this producer statement is described on the drawings specified in the Schedule, together with the specification, and other documents set out in the Schedule.

On behalf of the Engineering Design Firm, and subject to:

- Site verification of the following design assumptions: Ground conditions / loading as per the Geotechnical report .
- All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that:

- the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the Schedule, will comply with the relevant provisions of the Building Code and that;
- the persons who have undertaken the design have the necessary competency to do so.

I recommend the CM 3 level of **construction monitoring**.

I, *(Name of Engineering Design Professional)* STEPHEN BOS , am:

- ☑ CPEng number 154367

and hold the following qualifications BE (hons), CPEng, CMEngNZ, NZCE (civil)

The Engineering Design Firm holds a current policy of Professional Indemnity Insurance no less than $200,000
The Engineering Design Firm Choose one a member of ACE New Zealand.

SIGNED BY *(Name of Engineering Design Professional)*: STEPHEN BOS
(Signature below):

ON BEHALF OF *(Engineering Design Firm)*: STRATUM CONSULTANTS LTD Date: 11/06/2025

Note: This statement has been prepared solely for the Building Consent Authority named above and shall not be relied upon by any other person or entity. Any liability in relation to this statement accrues to the Engineering Design Firm only. As a condition of reliance on this statement, the Building Consent Authority accepts that the total maximum amount of liability of any kind arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in tort or otherwise, is limited to the sum of $200,000.

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.

SCHEDULE to PS1

Please include an itemised list of all referenced documents, drawings, or other supporting materials in relation to this producer statement below:

DESIGN VERIFICATION OF STORMWATER PIPE SIZIGN AND NEW RETENTION TANKS FOR SITE EXPANSION WORKS

GUIDANCE ON USE OF PRODUCER STATEMENTS

Information on the use of Producer Statements and Construction Monitoring Guidelines can be found on the Engineering New Zealand website
https://www.engineeringnz.org/engineer-tools/engineering-documents/producer-statements/

Producer statements were first introduced with the Building Act 1991. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute of Architects (NZIA), Institution of Professional Engineers New Zealand (now Engineering New Zealand), Association of Consulting and Engineering New Zealand (ACE NZ) in consultation with the Building Officials Institute of New Zealand (BOINZ). The original suite of producer statements has been revised at the date of this form to ensure standard use within the industry.

The producer statement system is intended to provide Building Consent Authorities (BCAs) with part of the reasonable grounds necessary for the issue of a Building Consent or a Code Compliance Certificate, without necessarily having to duplicate review of design or construction monitoring undertaken by others.

PS1 DESIGN Intended for use by a suitably qualified independent engineering design professional in circumstances where the BCA accepts a producer statement for establishing reasonable grounds to issue a Building Consent;

PS2 DESIGN REVIEW Intended for use by a suitably qualified independent engineering design review professional where the BCA accepts an independent design professional's review as the basis for establishing reasonable grounds to issue a Building Consent;

PS3 CONSTRUCTION Forms commonly used as a certificate of completion of building work are Schedule 6 of NZS 3910:2013 or Schedules E1/E2 of NZIA's SCC 2011[2]

PS4 CONSTRUCTION REVIEW Intended for use by a suitably qualified independent engineering construction monitoring professional who either undertakes or supervises construction monitoring of the building works where the BCA requests a producer statement prior to issuing a Code Compliance Certificate.

This must be accompanied by a statement of completion of building work (Schedule 6).

The following guidelines are provided by ACE New Zealand and Engineering New Zealand to interpret the Producer Statement.

Competence of Engineering Professional
This statement is made by an engineering firm that has undertaken a contract of services for the services named, and is signed by a person authorised by that firm to verify the processes within the firm and competence of its personnel.

The person signing the Producer Statement on behalf of the engineering firm will have a professional qualification and proven current competence through registration on a national competence-based register such as a Chartered Professional Engineer (CPEng).

Membership of a professional body, such as Engineering New Zealand provides additional assurance of the designer's standing within the profession. If the engineering firm is a member of ACE New Zealand, this provides additional assurance about the standing of the firm.

Persons or firms meeting these criteria satisfy the term "suitably qualified independent engineering professional".

Professional Indemnity Insurance
As part of membership requirements, ACE New Zealand requires all member firms to hold Professional Indemnity Insurance to a minimum level.

The PI Insurance minimum stated on the front of this form reflects standard practice for the relationship between the BCA and the engineering firm.

Professional Services during Construction Phase
There are several levels of service that an engineering firm may provide during the construction phase of a project (CM1-CM5 for engineers[3]). The building Consent Authority is encouraged to require that the service to be provided by the engineering firm is appropriate for the project concerned.

Requirement to provide Producer Statement PS4
Building Consent Authorities should ensure that the applicant is aware of any requirement for producer statements for the construction phase of building work at the time the building consent is issued as no design professional should be expected to provide a producer statement unless such a requirement forms part of the Design Firm's engagement.

Refer Also:

1. Conditions of Contract for Building & Civil Engineering Construction NZS 3910: 2013
2. NZIA Standard Conditions of Contract SCC 2011
3. Guideline on the Briefing & Engagement for Consulting Engineering Services (ACE New Zealand/Engineering New Zealand 2004)
4. PN01 Guidelines on Producer Statements

www.acenz.org.nz
www.engineeringnz.org

Job Title	SEEKA Ltd	***Page***	
Site Address	153 Waipapa Road	***No of Pages***	
City	Kerikeri	***Date***	June 25
Job No.	638080	***By***	SB

TGA REV 3 - 13/08/2019

Stormwater Catchment Data

Existing Site Area = 7988 m^2

Existing runoff coeff 0.5 From Original Calc

Rainfall Intensities mm/hr HIRDS

Return		Duration (minutes)					
Period	10	20	30	60	120	360	720
10	132.0	95.6	79.1	56.8	39.9	21.3	13.7
50	178.0	129.0	107.0	77.3	54.4	29.2	18.8
100	199.0	144.0	120.0	86.2	60.8	32.8	21.1

Revised runoff coeff

		Runoff coeff	Total
Building Coverage	6355	0.9	5720
Canopy	1428	0.9	1285
Future Roof area	205	0.9	184.5
wastewater		0.3	0
Balance		0.3	0
			7189
Average runoff coeff =			**0.9**

Existing Site Discharge (Q = CIA) l/s

Return		Duration (minutes)					
Period	10	20	30	60	120	360	720
10	146.4	106.1	87.8	63.0	44.3	23.6	15.2
50	197.5	143.1	118.7	85.8	60.4	32.4	20.9
100	220.8	159.8	133.1	95.6	67.5	36.4	23.4

Developed Site Discharge (Q = CIA) l/s

Return		Duration (minutes)					
Period	10	20	30	60	120	360	720
10	263.6	190.9	158.0	113.4	79.7	42.5	27.4
50	355.5	257.6	213.7	154.4	108.6	58.3	37.5
100	397.4	287.6	239.6	172.1	121.4	65.5	42.1

Orifice Plate sizing

$Q = cA\ (2gH)^{0.5}$

c= 0.609 H = 3.1 Existing Tank and Orifice Bae Level Outlet

Orifice Plate diameter = 100 mm Area = 0.008

Q @ max head = 37.3 l/s (less than peak non developed flow)

Storage Required - m^3 - (inflow less outflow x storm duration

Return		Duration (minutes)					
Period	10	20	30	60	120	360	720
10	135.8	184.3	217.2	274	305	113	-429.6
50	190.9	264.4	317.5	421	514	454	10.4
100	216.1	300.3	364.2	485.4	605.6	609	208.8

USE 6 x PROMAX WATER TANK (50,000 LITRES) PLUMBED INTO SW DOWNPIPES (FROM HIGH LEVEL) WITH 100mm DIAMETER OUTLET TO SW DRAIN

TANK TO BE NOMINALLY EMPTY AND TO FILL DURING RAINFALL EVENTS

Stratum Consultants Ltd	JOB TITLE	Seeka Katikati				PAGE	1
	ADDRESS						
	JOB No.	638080		DATE	June 25	BY	SJB

Stormwater pipe sizing

Location 153 Waipapa Road, Kerikeri 2095

Design rate is 1 in 10 year Tc = 10min

LINE	Contributing Lot	Contributing Area m^2	C	I mm/Hr	Q l/s Q = CIA l/s	**Sum Q l/s**	IL 1st point m	IL 2nd point m	Diff m	Dist Between m	**GRADIENT**	PIPE Roughness K	Pipe Dia Rqd mm	Pipe Capacity l/s	
DP set 1	Canopy 1	928.00	0.9	132	30.62	**31**					**0.50%**	1.5	**250**	35	OK
DP set 2	Canopy 2	500.00	0.9	132	16.50	**17**					**0.50%**	1.5	**200**	20	OK
		combined				**47**					**0.50%**		**300**	65	OK

0.00 m^2 m^2 TOTAL CONTRIBUTING AREA

HIRDS V4 Intensity-Duration-Frequency Results

Sitename: 1 Kerikeri 2095

Coordinate system: WGS84

Longitude: 173.948

Latitude: -35.2091

DDF Model Parameters	c	d	e	f	g	h	i
Values:	0.002375	0.509989	-0.014502	-0.003816	0.253522	-0.011696	3.23771

Example:	Duration (h	ARI (yrs)	x	y	Rainfall Rate (mm/hr)
	24	100	3.178054	4.600149	10.64305

Rainfall intensities (mm/hr) :: Historical Data

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
10	0.1	98.8	71.5	59.1	42.5	30.1	16.6	11	6.96	4.2	3.04	2.39	1.97
50	0.02	132	96	79.6	57.3	40.7	22.6	15	9.51	5.75	4.17	3.29	2.71
100	0.01	147	107	88.5	63.8	45.4	25.3	16.7	10.6	6.44	4.68	3.69	3.04

Rainfall intensities (mm/hr) :: RCP8.5 for the period 2031-2050

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
10	0.1	110	79.4	65.7	47.2	33.3	18.2	11.9	7.44	4.45	3.21	2.51	2.06
50	0.02	148	107	88.7	63.9	45.3	24.8	16.2	10.2	6.11	4.42	3.46	2.85
100	0.01	164	119	98.7	71.2	50.5	27.7	18.2	11.4	6.85	4.96	3.89	3.2

Rainfall intensities (mm/hr) :: RCP8.5 for the period 2081-2100

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
10	0.1	132	95.6	79.1	56.8	39.9	21.3	13.7	8.41	4.95	3.55	2.76	2.26
50	0.02	178	129	107	77.3	54.4	29.2	18.8	11.6	6.85	4.91	3.83	3.13
100	0.01	199	144	120	86.2	60.8	32.8	21.1	13	7.69	5.52	4.3	3.52

planting set back

265.61m

planting set back

planting setback

T&G Office

153

New Concrete

Loadout Canopy

Coolstore

Box Making Shed

Office

Forklift Recharge

Offices

Plantroom

Coolstore

Coolstore

Covered Passage

Coolstore

Coolstore

Coolstore

Room

Coolstore

Coolstore

Coolstore

Plantroom

Plant

Coolstore

Coolstore

Coolstore

Repack

LOT 3
DP196433

SWMH (existing)
LL = 62.97m
IL 61.69m

SWPIT
LL = 62.51m
OUT IL = 61.64m

23,28
225Ø @ 0.52%

SW OUTLET
IL 61.52m

Car Park
metalled

SWPIT
LL = 62.42m
OUT IL = 61.69m

22,99
225Ø @ 0.43%

SW OUTLET
IL 61.59m

Canteen

Car Park
metalled

RURAL LIVING ZONE
HORTICULTURAL PROCESSING ZONE

SWMH
LL = 63.42m
OUT IL = 62.12m
INV 1 = 62.23m

SWMH
LL = 63.40m
OUT IL = 61.85m
INV 1 = 61.88m

SWMH
LL = 63.67m
OUT IL = 61.21m
INV 1 = 61.29m
INV 2 = 61.31m

20000

Ramp

5000

13,31
150Ø @ 1.80%

30,04
300Ø @ 1.80%

18,49
450Ø @ 0.54%

SW OUTLET
IL 61.11m

106427

35,66
200Ø @ 0.52%

Curing Canopy

19,98
200Ø @ 1.43%

Conc Pad

20,15
150Ø @ 0.56%

30,02
200Ø @ 0.54%

63,85
250Ø @ 0.50%

New
Proposed
Canopy
Extention
1428 m²

71.4

50,52
250Ø @ 1.43%

OPEN DRAIN

EXISTING SWMH
LL = 63.69m
OUT IL = 62.54m
INV 1 = 63.03m

SWMH C
LL = 63.63m
OUT IL = 62.28m
INV 1 = 62.37m
INV 2 = 62.54m
INV 3 = 62.33m

New Pack House
FFL 63.82m

EXISTING SERVICED
AREA = 6355 sq m

450Ø @ 0.40%

24,74

SWMH D
LL = 63.38m
OUT IL = 62.16m
INV 1 = 62.60m
INV 2 = 62.18m

20,05
150Ø @ 0.55%

40,07
200Ø @ 0.55%

54,35
250Ø @ 0.55%

20.0

26,39
300Ø @ 0.5%

31,51
450Ø @ 1.43%

325°47'00"
51.79m

Levels and Coordinates are in terms of
Thomson and Survey Topographical Plan
9361 180618 TOPO MERG

225mmØ PVC-U
STORMWATER TANK
OUTLET TO DRAIN

SW OUTLET-B
IL = 61.93m

EXISTING
STORMWATER
DRAIN

OPEN DRAIN

325°46'51"
23.29m

325°47'26"

STORMWATER ROOF
50000 LITRE PROMAX
WATER DETENTION TANKS

soakage mound

SW OUTLET
IL 61.09m

SERVICES NOTE

WHERE EXISTING SERVICES ARE SHOWN, THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. STRATUM CONSULTANTS 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.

DRAWN:	ADP	DESIGNED:	ADP
CHECKED:	SC	SURVEYED BY:	PH

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	05.11.19	ADP	ISSUED TO FORM B & D Ltd
B	-	-	-
C	-	-	-

NOTES:

SW EXIST. STORMWATER PIPELINE

SW NEW STORMWATER PIPELINE

SEEKA LTD
WAIPAPA ROAD
KERIKERI

STORMWATER ASBUILT

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SCALE: 1:750 ORIGINAL DWG. SIZE A3

DRAWING No. **638080-M-E-C005** SHEET No. **AB1** ISSUE **A**

C:\work - projects\600000 PROJECTS\638080 - Seeka\2025 Civil SW assessment\638080-M-E-C005 - ASBUILT+new drainage.dwg - Plotted: 12/06/2025

planting set back

265.61m

planting set back

planting setback

T&G Office

Future roof area ~205 Sq m

New Concrete

Loadout Canopy

153

LOT 3
DP196433

Coolstore

Box Making Shed

Office

Forklift Recharge

Offices

Plantroom

Coolstore

Coolstore

Coolstore

Room

Coolstore

Covered Passage

Coolstore

Coolstore

Coolstore

Coolstore

Plantroom

Plant

Coolstore

Coolstore

Coolstore

Repack

Canteen

Car Park metalled

Car Park metalled

Ramp

RURAL LIVING ZONE
HORTICULTURAL PROCESSING ZONE

106427

SWMH (existing)
LL = 62.97m
IL 61.69m

SWPIT
LL = 62.51m
OUT IL = 61.64m

23,28
225Ø @ 0.52%

SW OUTLET
IL 61.52m

SWPIT
LL = 62.42m
OUT IL = 61.69m

22,99
225Ø @ 0.43%

SW OUTLET
IL 61.59m

SWMH
LL = 63.42m
OUT IL = 62.12m
INV 1 = 62.23m

SWMH
LL = 63.40m
OUT IL = 61.85m
INV 1 = 61.88m

SWMH
LL = 63.67m
OUT IL = 61.29m
INV 2 = 61.31m

20000

5000

13,31
200Ø @ 1.80%

30,04
300Ø @ 1.80%

18,49
300Ø @ 0.54%

20,53
200Ø @ 0.5%

35,66
200Ø @ 0.52%

SW OUTLET
IL 61.11m

200-300
enlarger

19,98
200Ø @ 1.43%

Conc Pad

73,01
300Ø @ 0.5%

71.4

OPEN DRAIN

20,15
150Ø @ 0.56%

30,02
200Ø @ 0.54%

63,85
250Ø @ 0.50%

Curing Canopy

New
Proposed
Canopy
Extention
1428 m²

50,52
250Ø @ 1.43%

New Pack House
FFL 63.82m

EXISTING SERVICED
AREA = 6355 sq m

EXISTING SWMH
LL = 63.69m
OUT IL = 62.54m
INV 1 = 63.08m

SWMH C
LL = 63.63m
OUT IL = 62.28m
INV 1 = 62.37m
INV 2 = 62.54m
INV 3 = 62.33m

SWMH D
LL = 63.36m
OUT IL = 62.16m
INV 1 = 62.60m
INV 2 = 62.18m

20,53
200Ø @ 0.5%

20.0

18,51
300Ø @ 0.5%

2 NEW 50,000 LITRE
TANKS PLUMBED INTO
EXISTING SYSTEM

225mmØ PVC-U
STORMWATER TANK
OUTLET TO DRAIN

31,51
450Ø @ 1.43%

325°47'00"
51.79m

SW OUTLET-P
IL= 61.99m

EXISTING
STORMWATER
DRAIN

325°46'31"
23.29m

OPEN DRAIN

325°47'26"

Levels and Coordinates are in terms of
Thomson and Survey Topographical Plan
9361 180618 TOPO MERG

STORMWATER ROOF
50000 LITRE PROMAX
WATER DETENTION TANKS

soakage mound

SW OUTLET
IL 61.09m

SERVICES NOTE

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DRAWN:	SB	DESIGNED:	SB
CHECKED:	SC	SURVEYED BY:	PH

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	11.06.25	SB	ISSUED FOR CONSENT

NOTES:

SW EXIST. STORMWATER PIPELINE

SW NEW STORMWATER PIPELINE

SEEKA LTD
WAIPAPA ROAD
KERIKERI

STORMWATER WORKS
NEW CANOPY EXTENSION

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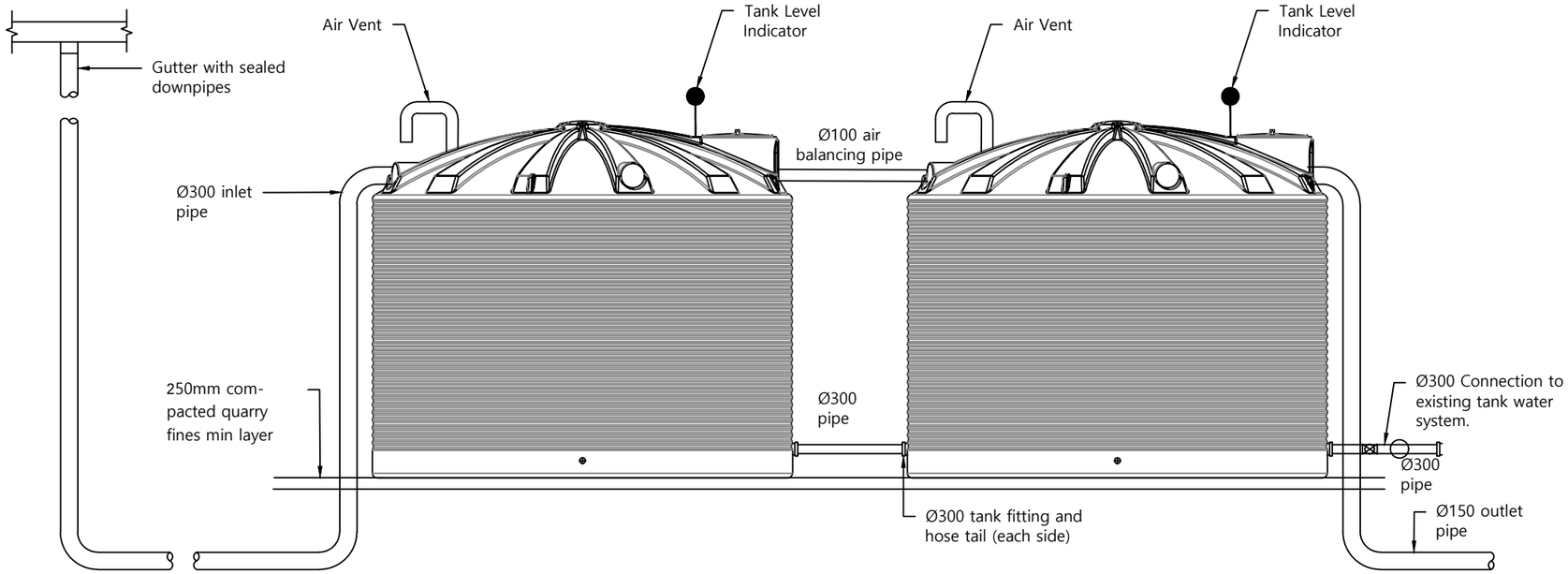
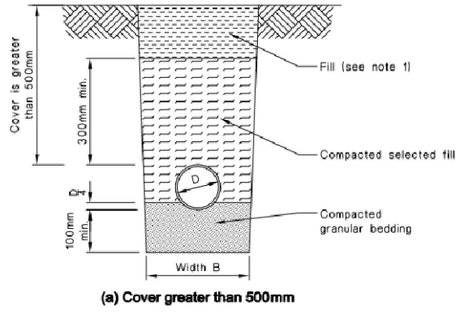
SCALE: 1:750 ORIGINAL DWG. SIZE A3

DRAWING No. **638080-M-E-C005** SHEET No. **D01** ISSUE **A**

C:\work - projects\600000 PROJECTS\638080 - Seeka\2025 Civil SW assessment\638080-M-E-C005 - ASBUILT+new drainage.dwg - Plotted: 12/06/2025



ADDITIONAL Tank Schematic - 1:50 @ A3



(a) Cover greater than 500mm

Bedding and Backfill Detail - nts

Figure 9: Inspection points
Paragraph 5.7.3

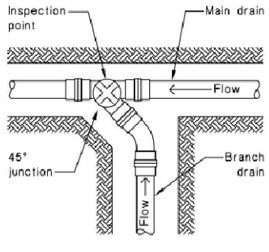
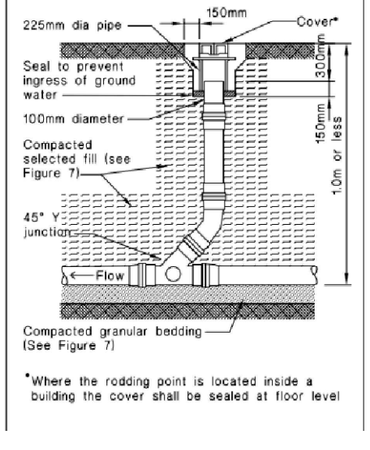


Figure 10: Rodding points
Paragraphs 3.4.6, 5.7.3 and 5.9.1



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DRAWN:	SB	DESIGNED:	SB
CHECKED:	SC	SURVEYED BY:	PH

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	11.06.25	SB	ISSUED FOR CONSENT

NOTES:

SW EXIST. STORMWATER PIPELINE

SW NEW STORMWATER PIPELINE

SEEKA LTD
WAIPAPA ROAD
KERIKERI

STORMWATER DETAILS

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SCALE: 1:750 ORIGINAL DWG. SIZE A3

DRAWING No. **638080-M-E-C005** SHEET No. **D02** ISSUE **A**

C:\work - projects\600000 PROJECTS\638080 - Seeka\2025 Civil SW assessment\638080-M-E-C005 - ASBUILT+new drainage.dwg - Plotted: 12/06/2025

ORIGINAL DESIGN REPORT

MEMORANDUM

Stratum CONSULTANTS
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To: SEEKA Ltd **File No.** 638080-M-E-D001
Attention: Michael Ruegg
From: Alex du Plessis
Date: 16.10.2018
Subject: Seeka Coolstore Site, 153 Waipapa Road, Kerikeri

Introduction

Please find attached supporting documents for your building consent lodgement for the proposed coolstore at the above site. Further commentary is provided under the relevant headings.

Site Works

Site works are being carried out in accordance with the recommendations of our geotechnical assessment report[1], and the resource consent for large scale earthworks obtained from Northland Regional Council[2] and Far North District Council[3]

Works comprise undercutting unsuitable material comprising topsoil and uncertified fill from beneath the building platform and backfilling with imported granular fill.

The completed works will provide a platform suitable for construction of the proposed coolstore.

Site works are being carried out with appropriate geotechnical monitoring comprising site inspections by geotechnical engineers and progressive testing of compacted fill material.

Upon completion, a summary report including as built will be prepared and PS4 issued for the works.

Stormwater Disposal

Attached are plans, calculations and a PS1 for the stormwater drainage works on site.

Comparison of total site discharge for predevelopment and post development has been calculated for a 100 year / 10 minute storm).

Pre-development Runoff	1173l/s
Post-development Run-off	1344l/s – Pre-mitigation
Post Development Run-off	1119l/s - Post-mitigation

The total detention for the site was assessed and an attempt was made to mitigate only the roof stormwater, so as to not require any other site stormwater control.

[1] Geotechnical Assessment prepared by Stratum Consultants Ltd dated 8.08.2018 and referenced 638080-M-E-C003
[2] Northland Regional Council Resource Consent File: 40373 - AUT.040373.01.01 to AUT.040373.04.01.
[3] Far North District Council Consent File: 2190096-RMALUC.

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Level 1, 29 Grey Street, PO Box 13651, Tauranga 3141 P 07 571 4500 F 07 571 3500 W www.stratum.nz

Based on the fact that the carparks and hardstand (on ground and therefore by default not able to be serviced by a standard detention tanks) are of a similar size as the new building, mitigation of the roof water alone is sufficient to ensure that the post development flow was less than the predevelopment. The carpark will be constructed using an unsealed surface with metal placed and swale grass drains to treat stormwater runoff as it drains to the southern boundary. It was noted that some maintenance and cleaning need to be done on the existing catchpits and stormwater system to provide better stormwater runoff.

Accordingly, the areas were therefore examined on roofed area and 'on ground' area basis, with the roofed area provided with stormwater control tanks, sized to mitigate the 1 in 100 year 60 minute storm.

It is recommended that Promax 50,000 Litre tanks be installed (4 in total for roofed area) and all down pipes be piped to the retention tanks. The outfall for the tanks should be controlled by a 100mm diameter orifice plate for the 10 year/60-minute storm, which then connects to the piped stormwater system to open drain. A second 80mm diameter orifice was calculated and need to be placed 2.45m higher than 100mm diameter orifice on the tanks for the 100 year/60-minute storm. This will allow attenuation for both storm events.

The restricted runoff from the 100mm diameter orifice was calculated to be 37.3l/s less than peak non developed flow and 83.93l/s less than peak non developed flow for the 100 year/10-minute storm. (See drawing 638080-M-E-D001 SHT 07 for details on the stormwater tanks layout).

On ground: - To future proof the development a 375mm diameter pipeline will be installed from SWMH A to the outlet. The upstream pipeline form SWMH A to SWMH B will be serviced by a 300mm diameter pipeline. Which will be used for a future cool storage building upgrade and unsealed carpark and access surfaces.

The access road to the north and to the front of the new development should be provided with a nominal fall to the open grassed drain (located at the low point). The open drain is flowing south and is east of the new development and flows for slow release to the adjacent existing Stormwater system.

Provision of both sets of stormwater controls will therefore result in controlled discharge of the development site to a lesser predevelopment level.

Wastewater Disposal

Wastewater to be installed by Innoflow.

Site Access

1. Metaled areas:

Excavate for access and paved areas to the line, gradient and levels shown on the drawings.
Should any excavation be made below the level required or directed, the Contractor must fill the over excavation with compacted hardfill.

After the subgrade has been trimmed and compacted to level and prior to the placement of basecourse the Engineer shall inspect the subgrade and may carry out CBR testing. The Engineer shall also inspect the basecourse prior to paving or laying foundations.

If unsuitable ground, rock or underground obstruction is encountered during excavation, notify the Engineer and cease work in that area until inspected and agreement on volume and rate for removal is agreed.

Basecourse GAP40 metal shall be spread evenly from trucks with tailboards set for spreading, avoiding all unnecessary segregation. (Refer drawings for details.) It shall then be evenly spread over the full width of the strip being metalled to a maximum depth of 125mm loose.

Compaction shall be carried out immediately after the basecourse has been spread. Compact by rolling with a 10 to 12 tonne steel wheeled roller until solid. Water shall be added as necessary.

The roller shall begin at the channel or low side and moving longitudinally, progress towards the high side or crown working the metal thoroughly until it does not weave or creep. Additional layers shall then be placed in a similar manner until the total compacted thickness has been reached. Judicious hand spreading of mineral fines, at the Contractors expense, to open textured areas will be permitted. Moistening and blading of metal shall be kept to a minimum.

2. Concrete areas:

The Truck Unloading area shall be generally be concrete with 663 mesh layer laid central and a minimum 28 day strength of 20MPa and with a minimum thickness of 150mm on a compacted subgrade. The construction boxing shall be 150mm thick.

The concrete shall be supplied to the site from a certified ready mix concrete supplier. Concrete shall comply with NZS 3109 and dockets to validate this shall be provided upon completion.

Contraction joints shall be cut by guillotine and spaced at not more than 6.0m centres.

Cold joints in concrete more than two hours old shall be cut with a saw to provide a proper face on which to restart the extrusion.

The exposed surface of all concrete shall present a neat clean broom finish.
All final surfaces shall be true to the lines and levels specified. Design considerations excepted, the final surface shall not vary by more than 5mm when checked with a 3m straight edge. No finished surface shall hold water.

Care shall be taken to ensure that no damage is done to the concrete structure when placing and compacting the backfill from the metaled access areas.

If you have any further questions, please call me.

Yours faithfully
STRATUM CONSULTANTS LTD

Alex du Plessis
Civil Engineer

Attachments: -

- Drawing No 638080-M-E-D001 Sheets 6, 7 and 11
- Stormwater calculations
- PS1

Job Title	SEEKA Ltd	***Page***	
Site Address	153 Waipapa Road	***No of Pages***	
City	Kerikeri	***Date***	Oct 18
Job No.	638080	***By***	ADP

TGA REV 2 - 07/07/2010

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Stormwater Catchment Data

Existing Site Area = 7432 m^2
Existing runoff coeff 0.5
Rainfall Intensities mm/hr HIRDS

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	104.4	75.0	62.0	44.6	31.1	17.5	12.2
50	145.2	104.7	86.6	62.6	43.8	24.9	17.4
100	166.2	120.3	99.6	71.9	50.4	28.6	20.1

Existing Site Discharge (Q = CIA) l/s

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	107.8	77.4	64.0	46.0	32.1	18.1	12.6
50	149.9	108.1	89.4	64.6	45.2	25.7	18.0
100	171.6	124.2	102.8	74.2	52.0	29.5	20.7

Developed Site Discharge (Q = CIA) l/s

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	194.0	139.4	115.2	82.9	57.8	32.5	22.7
50	269.8	194.5	160.9	116.3	81.4	46.3	32.3
100	308.8	223.5	185.1	133.6	93.6	53.1	37.3

Orifice Plate sizing
$Q = cA\ (2gH)^{0.5}$
c= 0.609 H = 3.1
Orifice Plate diameter = 100 mm Area = 0.008

Q @ max head = 37.3 l/s (less than peak non developed flow)

Storage Required - m^3 - (inflow less outflow x storm duration

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	94.0	122.5	140.2	164	147	-103	-632.2
50	139.5	188.7	222.5	284	317	194	-214.8
100	162.9	223.5	266.0	346.6	405.7	342	1.9

Revised runoff coeff

		Runoff coeff	Total
Building Coverage	6632	0.9	5969
Canopy	800	0.9	720
Parking roadway		0.45	0
wastewater		0.3	0
Balance	0	0.3	0
			6689
Average runoff coeff =			0.9

Extreme rainfall assessment with climate change

Projected temperature change: 2.1° C
Rainfall intensities (mm/h)

		Duration									
ARI (y)	aep	10m	20m	30m	60m	2h	6h	12h	24h	48h	72h
1.58	0.633	66.6	47.7	39.4	28.2	19.5	10.8	7.5	5.2	3.0	2.2
2.00	0.500	71.4	51.6	42.2	30.2	20.9	11.7	8.1	5.6	3.3	2.4
5.00	0.200	90.0	64.5	53.2	38.2	26.5	14.9	10.4	7.2	4.2	3.1
10.00	0.100	104.4	75.0	62.0	44.6	31.1	17.5	12.2	8.5	5.0	3.7
20.00	0.050	120.6	87.0	71.6	51.7	36.1	20.4	14.3	10.0	5.9	4.3
30.00	0.033	130.2	94.2	78.0	56.4	39.5	22.5	15.7	11.0	6.5	4.7
40.00	0.025	138.0	100.2	82.6	59.8	41.9	23.8	16.7	11.7	6.9	5.0
50.00	0.020	145.2	104.7	86.6	62.6	43.8	24.9	17.4	12.2	7.2	5.3
60.00	0.017	150.0	108.6	89.8	64.9	45.5	25.8	18.1	12.7	7.5	5.5
80.00	0.012	159.0	114.9	95.0	68.8	48.2	27.4	19.2	13.4	7.9	5.8
100.00	0.010	166.2	120.3	99.6	71.9	50.4	28.6	20.1	14.0	8.3	6.1

USE 4 x PROMAX WATER TANK (50,000 LITRES) PLUMBED INTO SW DOWNPIPES (FROM HIGH LEVEL)
WITH 100mm DIAMETER OUTLET TO SW DRAIN
TANK TO BE NOMINALLY EMPTY AND TO FILL DURING RAINFALL EVENTS

Job Title	SEEKA Ltd	***Page***	
Site Address	153 Waipapa Road	***No of Pages***	
City	Kerikeri	***Date***	Oct 18
Job No.	638080	***By***	ADP

TGA REV 2 - 07/07/2010

Stratum CONSULTANTS
Experience. Knowledge. Better Outcomes.

Stormwater Catchment Data

Existing Site Area = 7432 m^2
Existing runoff coeff 0.5
Rainfall Intensities mm/hr HIRDS

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	104.4	75.0	62.0	44.6	31.1	17.5	12.2
50	145.2	104.7	86.6	62.6	43.8	24.9	17.4
100	166.2	120.3	99.6	71.9	50.4	28.6	20.1

Existing Site Discharge (Q = CIA) l/s

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	107.8	77.4	64.0	46.0	32.1	18.1	12.6
50	149.9	108.1	89.4	64.6	45.2	25.7	18.0
100	171.6	124.2	102.8	74.2	52.0	29.5	20.7

Developed Site Discharge (Q = CIA) l/s

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	194.0	139.4	115.2	82.9	57.8	32.5	22.7
50	269.8	194.5	160.9	116.3	81.4	46.3	32.3
100	308.8	223.5	185.1	133.6	93.6	53.1	37.3

Orifice Plate sizing
$Q = cA\ (2gH)^{0.5}$
c= 0.609 H = 3.1
Orifice Plate diameter = 150 mm Area = 0.018

Q @ max head = 83.93 l/s (less than peak non developed flow)

Storage Required - m^3 - (inflow less outflow x storm duration

Return	Duration (minutes)						
Period	10	20	30	60	120	360	720
10	66.0	66.5	56.3	-4	-188	-1111	-2646.6
50	111.5	132.7	138.6	117	-18	-814	-2229.2
100	134.9	167.5	182.0	178.8	69.9	-665	-2012.5

Revised runoff coeff

		Runoff coeff	Total
Building Coverage	6632	0.9	5969
Canopy	800	0.9	720
Parking roadway		0.45	0
wastewater		0.3	0
Balance	0	0.3	0
			6689
Average runoff coeff =			**0.9**

Extreme rainfall assessment with climate change

Projected temperature change: 2.1° C
Rainfall intensities (mm/h)

		Duration									
ARI (y)	**aep**	**10m**	**20m**	**30m**	**60m**	**2h**	**6h**	**12h**	**24h**	**48h**	**72h**
1.58	0.633	66.6	47.7	39.4	28.2	19.5	10.8	7.5	5.2	3.0	2.2
2.00	0.500	71.4	51.6	42.2	30.2	20.9	11.7	8.1	5.6	3.3	2.4
5.00	0.200	90.0	64.5	53.2	38.2	26.5	14.9	10.4	7.2	4.2	3.1
10.00	0.100	104.4	75.0	62.0	44.6	31.1	17.5	12.2	8.5	5.0	3.7
20.00	0.050	120.6	87.0	71.6	51.7	36.1	20.4	14.3	10.0	5.9	4.3
30.00	0.033	130.2	94.2	78.0	56.4	39.5	22.5	15.7	11.0	6.5	4.7
40.00	0.025	138.0	100.2	82.6	59.8	41.9	23.8	16.7	11.7	6.9	5.0
50.00	0.020	145.2	104.7	86.6	62.6	43.8	24.9	17.4	12.2	7.2	5.3
60.00	0.017	150.0	108.6	89.8	64.9	45.5	25.8	18.1	12.7	7.5	5.5
80.00	0.012	159.0	114.9	95.0	68.8	48.2	27.4	19.2	13.4	7.9	5.8
100.00	0.010	166.2	120.3	99.6	71.9	50.4	28.6	20.1	14.0	8.3	6.1

USE 4 x PROMAX WATER TANK (50,000 LITRES) PLUMBED INTO SW DOWNPIPES (FROM HIGH LEVEL) WITH 100mm DIAMETER OUTLET TO SW DRAIN
TANK TO BE NOMINALLY EMPTY AND TO FILL DURING RAINFALL EVENTS

Client: Seeka Ltd
Contract Name: 153 Waipara Road
Project Name: Seeka Ltd - 153 Waipara Road, Kerikeri

Job No.: 638080

PRE DEVELOPMENT

New System: Area A

Event Intensity I [mm/h]
10yr - 10min **104.40** primary pipe system

10yr - 10min

Inlet Tag 'exist.'	Area AC			Run-off coefficient C					Run-off Qci [m3/s]			[l/s]
	No.	[m2]	[ha]	Coef.	ΔH [m]	ΔL [m]	slope [%]	Slope cor.	per Area	2nd Flow	total	
Area 1	1	15696	1.57	0.65	0.5	107.1	0.47	-0.05	0.273		0.273	273.110
Area 2	2	9620	0.96	0.85	0.5	107.1	0.47	-0.05	0.223		0.223	223.184
Area 3	3	5987	0.60	0.55	0.5	107.1	0.47	-0.05	0.087		0.087	86.812
Area 4	4	12070	1.21	0.20	0.5	107.1	0.47	-0.05	0.053		0.053	52.505
Area 5	5	23280	2.33	0.20	0.5	107.1	0.47	-0.05	0.101		0.101	101.268

736.878

Event Intensity I [mm/h]
100yr - 10mi **166.20** primary pipe system

Inlet Tag 'exist.'	Area AC			Run-off coefficient C					Run-off Qci [m3/s]			[l/s]
	No.	[m2]	[ha]	Coef.	ΔH [m]	ΔL [m]	slope [%]	Slope cor.	per Area	2nd Flow	total	
Area 1	1	15696	1.57	0.65	0.5	107.1	0.47	-0.05	0.435		0.435	434.779
Area 2	2	9620	0.96	0.85	0.5	107.1	0.47	-0.05	0.355		0.355	355.299
Area 3	3	5987	0.60	0.55	0.5	107.1	0.47	-0.05	0.138		0.138	138.200
Area 4	4	12070	1.21	0.20	0.5	107.1	0.47	-0.05	0.084		0.084	83.585
Area 5	5	23280	2.33	0.20	0.5	107.1	0.47	-0.05	0.161		0.161	161.214

1173.077

Client: Seeka Ltd
Contract Name: 153 Waipara Road
Project Name: Seeka Ltd - 153 Waipara Road, Kerikeri

Job No.: 638080

POST DEVELOPMENT

New System: Area A

Event Intensity I [mm/h]
10yr - 10min **104.40** primary pipe system

10yr - 10min

Inlet Tag 'exist.'	Area AC			Run-off coefficient C					Run-off Qci [m3/s]			[l/s]
	No.	[m2]	[ha]	Coef.	ΔH [m]	ΔL [m]	slope [%]	Slope cor.	per Area	2nd Flow	total	
Area 1	1	14645	1.46	0.65	0.5	107.1	0.47	-0.05	0.255		0.255	254.823
Area 2	2	9620	0.96	0.85	0.5	107.1	0.47	-0.05	0.223		0.223	223.184
Area 3	3	2030	0.20	0.55	0.5	107.1	0.47	-0.05	0.029		0.029	29.435
Area 4	4	10500	1.05	0.20	0.5	107.1	0.47	-0.05	0.046		0.046	45.675
Area 5	5	22277	2.23	0.20	0.5	107.1	0.47	-0.05	0.097		0.097	96.905
Area 6	6	7432	0.74	0.95	0.5	107.1	0.47	-0.05	0.194		0.194	193.975
												843.997

Event Intensity I [mm/h]
100yr - 10mi **166.20** primary pipe system

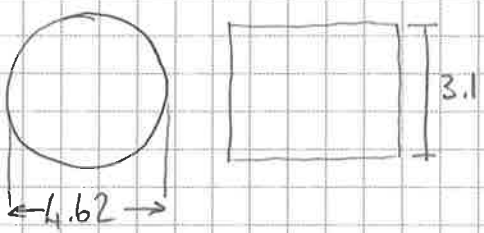
Inlet Tag 'exist.'	Area AC			Run-off coefficient C					Run-off Qci [m3/s]			[l/s]
	No.	[m2]	[ha]	Coef.	ΔH [m]	ΔL [m]	slope [%]	Slope cor.	per Area	2nd Flow	total	
Area 1	1	14645	1.46	0.65	0.5	107.1	0.47	-0.05	0.406		0.406	405.667
Area 2	2	9620	0.96	0.85	0.5	107.1	0.47	-0.05	0.355		0.355	355.299
Area 3	3	2030	0.20	0.55	0.5	107.1	0.47	-0.05	0.047		0.047	46.859
Area 4	4	10500	1.05	0.20	0.5	107.1	0.47	-0.05	0.073		0.073	72.713
Area 5	5	22277	2.23	0.20	0.5	107.1	0.47	-0.05	0.154		0.154	154.268
Area 6	6	7432	0.74	0.95	0.5	107.1	0.47	-0.05	0.309		0.309	308.800
												1343.605

Client: Seeka Kerikeri
Project Title:
Site Address: 153 Waipapa Rd Kerikeri
File Number: 638080

Page: 1.
No. of Pages: 1.
Date: 12/10/18
By: AdP

Stratum CONSULTANTS
Experience. Knowledge. Better Outcomes.

TANK 50,000 PROMAX TANK



$A = \pi\left(\frac{d}{2}\right)^2$

$= \pi\left(\frac{4.62}{2}\right)^2$

$= \pi(2.31)^2$

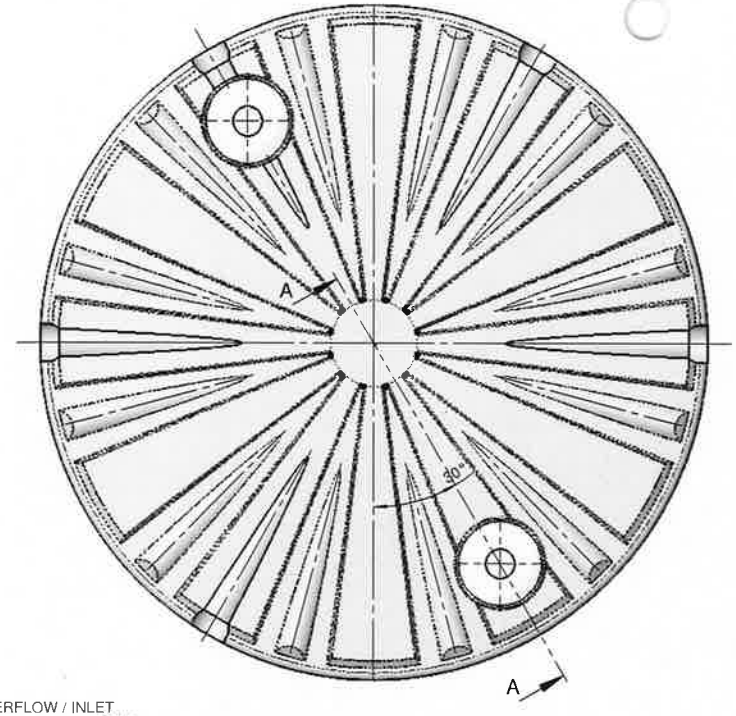
$A = 16.764\ m^2$

10 YEAR 60min STORM 164 m^3 ÷ 4 = 41,000 ℓ. (41 ÷ 16.764)
WITH 100Ø ORIFICE ∴ 2.446 m →

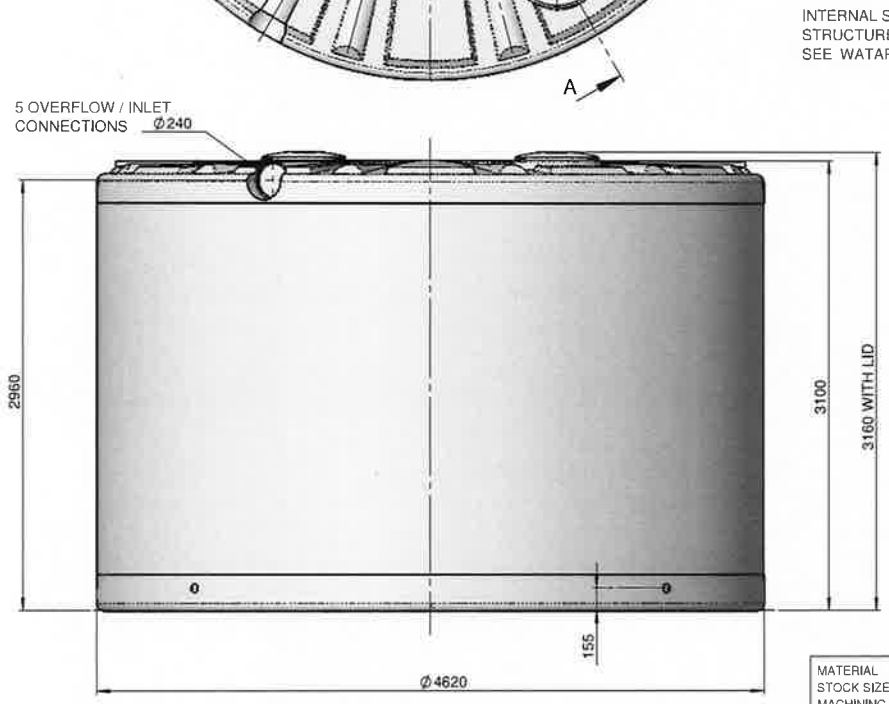
100 YEAR 60 min STORM 178 m^3 ÷ 4 = 44,500 ℓ
WITH 150Ø ORIFICE ∴ 2.654 m. →

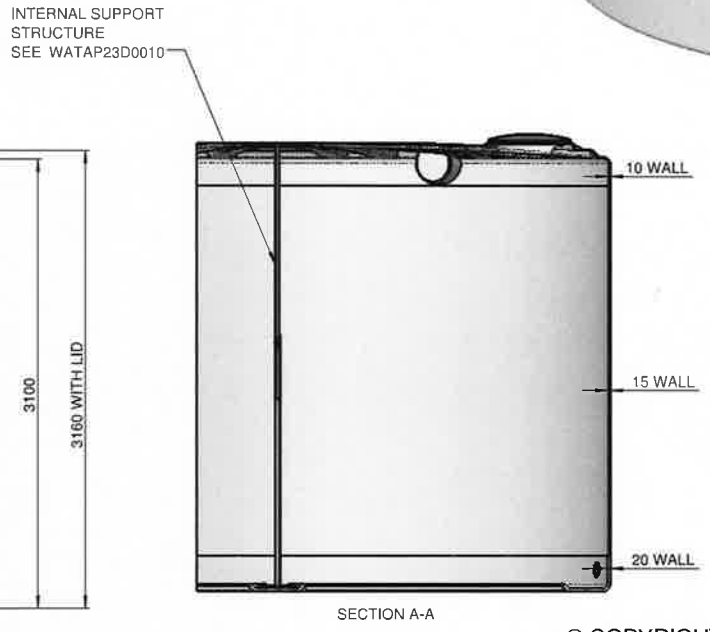
DIFF 208mm USING 100Ø ORIFICE AT GROUND LEVEL AND 80Ø ORIFICE 2.446m LEVEL ABOVE AND 150Ø OVERFLOW. MAX LEVEL OF TANK 3.1m.

50000 LITER WATER TANK



WATAA50A2010
1 OFF REQUIRED





SECTION A-A

MATERIAL :	ORIG. SCALE 1:25	A2	ORIGINAL ISSUE	A	28 APR 2016
STOCK SIZE :			REMARKS	ISS	DATE
MACHINING :					
FINISH :					
HEAT TREATMENT :					
PART/ASSY MODEL :-					
NAME : WATAA50A20 WATERTANK MODEL 50K					
CONFIGURATION : 10					
CONFIG REVISION : A					

DESIGNER	RETUS	PROMAX ENGINEERED PLASTICS
TITLE:	PROMAX 50K TANK	389 Waipara Rd, Kerikeri 0295, Bay of Island. Phone (09) 407 3575, Free Phone 0800 776629
PROJECT:	WATER TANK	
DRG#_TITLE:	WATAA50A2010 50000 L WATER TANK	SHT 1 OF 1

Client: Seeka Ltd
Contract Name: 153 Waipara Road
Project Name: Seeka Ltd - 153 Waipara Road, Kerikeri

Job No.: 638080

EXISTING SW TO NORTH OF DEVELOPMENT

EXIST ROOF DEVELOPMENT
POST DEVELOPMENT

New System: Area A

Event	Intensity I [mm/h]	
10yr - 10min	104.40	primary pipe system

10yr - 10min

Inlet Tag 'exist.'	Area AC			Run-off coefficient C					Run-off Qci [m3/s]			[l/s]
	No.	[m2]	[ha]	Coef.	ΔH [m]	ΔL [m]	slope [%]	Slope cor.	per Area	2nd Flow	total	
SWMH-C6	1	875	0.09	0.90	0.5	10.0	5.07	0	0.023		0.023	22.838
SWMH-C6-CP	1	306	0.03	0.85	0.5	107.1	0.47	-0.05	0.007		0.007	7.099
SWMH-C5	2	880	0.09	0.85	0.5	107.1	0.47	-0.05	0.020		0.020	20.416
SWMH-C5-CP	2	538	0.05	0.90	0.5	10.0	5.07	0	0.014		0.014	14.042
SWMH-C4	3	623	0.06	0.85	0.5	107.1	0.47	-0.05	0.014		0.014	14.454
SWMH-C3	4	623	0.06	0.85	0.5	107.1	0.47	-0.05	0.014		0.014	14.454
SWMH-C2-CP	4	145	0.01	0.90	0.5	10.0	5.07	0	0.004		0.004	3.785
SWMH-C2	5	365	0.04	0.85	0.5	107.1	0.47	-0.05	0.008		0.008	8.468
CP-2	6	1075	0.11	0.85	0.5	107.1	0.47	-0.05	0.025		0.025	24.940

Existing

SWMH-A2	5	2000	0.20	0.95	0.5	10.0	5.07	0	0.055		0.055	55.100
CP-1	5	1313	0.13	0.85	0.5	100.0	0.51	-0.05	0.030		0.030	30.469
												105.554

New

Event	Intensity I [mm/h]	
100yr - 10mi	166.20	primary pipe system

Inlet Tag 'exist.'	Area AC			Run-off coefficient C					Run-off Qci [m3/s]			[l/s]
	No.	[m2]	[ha]	Coef.	ΔH [m]	ΔL [m]	slope [%]	Slope cor.	per Area	2nd Flow	total	
SWMH-C6	1	875	0.09	0.90	0.5	107.1	0.47	-0.05	0.034		0.034	34.336
SWMH-C6-CP	1	306	0.03	0.85	0.5	107.1	0.47	-0.05	0.011		0.011	11.302
SWMH-C5	2	880	0.09	0.85	0.5	107.1	0.47	-0.05	0.033		0.033	32.501
SWMH-C5-CP	2	538	0.05	0.90	0.5	107.1	0.47	-0.05	0.021		0.021	21.112
SWMH-C4	3	623	0.06	0.85	0.5	107.1	0.47	-0.05	0.023		0.023	23.009
SWMH-C3	3	623	0.06	0.85	0.5	107.1	0.47	-0.05	0.023		0.023	23.009
SWMH-C2-CP	3	145	0.01	0.90	0.5	107.1	0.47	-0.05	0.006		0.006	5.690
SWMH-C2	4	365	0.04	0.45	0.5	107.1	0.47	-0.05	0.007		0.007	6.740
CP-2	5	1075	0.11	0.45	0.5	107.1	0.47	-0.05	0.020		0.020	19.852

Existing

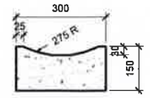
SWMH-A2	5	2000	0.20	0.95	0.5	107.1	0.47	-0.05	0.083		0.083	83.100
CP-1	5	1313	0.13	0.45	0.5	107.1	0.47	-0.05	0.024		0.024	24.252

New

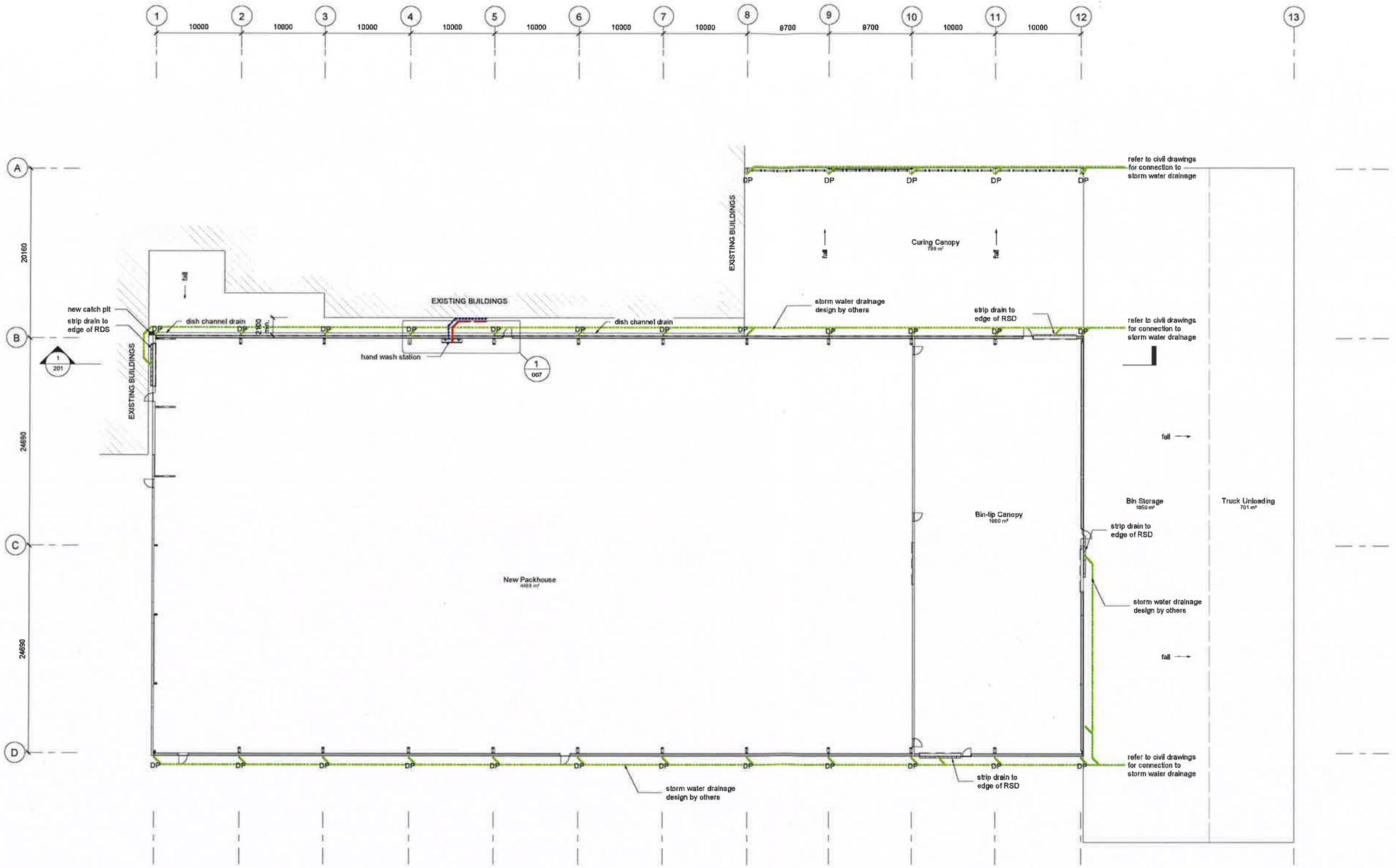
Pipe ID	ND Ø [mm]	OD Ø [mm]	ID Ø [mm]	t [mm]	Material	Rough-ness Coeff. n [-]	Length	UpStream				DownStream				Grade [%]				Pipe Capacity				System Capacity		
								Tag	Lid Level [m]	Invert [m]	Cover [m]	Tag	Lid Level [m]	Invert [m]	Cover [m]		Q_{INLET} [l/s]	Q_{INLET} [m^3/s]	Q_{Sum} [m^3/s]	A [m^2]	R [m]	Q_{PI} [m^3/s]	$Q_{OverFlow}$ [m^3/s]	Q_{PI} [m^3/s]	Pipefill [%]	$v_{100\%}$ [m/s]
153 Waipara Road 10min / 10 Year																										
New Pipeline Required pipesizes for Required catchpits																										
Line C																										
SWMH C6-C5	300	367	302	33	RCRRJ	0.015	31.63	SWMH-C6	63.72	63.09	0.296	SWMH-C5	63.65	62.90	0.416	0.60	29.94	0.0299	**0.030**	0.072	0.076	0.0661		**0.066**	45	0.92
SWMH C5-C4	375	444	380	32	RCRRJ	0.015	30.21	SWMH-C5	63.65	62.88	0.358	SWMH-C4	63.61	62.72	0.478	0.53	34.46	0.0345	**0.064**	0.113	0.095	0.1146		**0.115**	56	1.01
SWMH C4-C3	375	444	380	32	RCRRJ	0.015	28.57	SWMH-C4	63.61	62.70	0.498	SWMH-C3	63.50	62.54	0.548	0.56	14.45	0.0145	**0.079**	0.113	0.095	0.1178		**0.118**	67	1.04
SWMH C3-C2	375	444	380	32	RCRRJ	0.015	38.18	SWMH-C3	63.50	62.54	0.548	SWMH-C2	62.89	62.20	0.278	0.89	18.24	0.0182	**0.097**	0.113	0.095	0.1485		**0.149**	65	1.31
SWMH C2-A1	375	444	380	32	RCRRJ	0.015	50.08	SWMH-C2	62.89	62.18	0.298	SWOUT-C1	62.89	61.25	1.228	1.86	24.94	0.0249	**0.122**	0.113	0.095	0.2145		**0.215**	57	1.89
Line A																										
SWMH A2-A1	300	367	302	33	RCRRJ	0.003	30.6	SWMH-A2	63.49	61.36	1.796	SWMH-A1	63.23	61.21	1.686	0.49	85.57	0.0856	**0.086**	0.072	0.076	0.2986		**0.299**	29	4.17
SWMH A1-OUTLET	375	444	380	32	RCRRJ	0.003	19.39	SWMH-A1	63.23	61.18	1.638	SW-OUTLET	62.09	61.08	0.598	0.52	146.97	0.1470	**0.355**	0.113	0.095	0.5652		**0.565**	63	4.98
153 Waipara Road 10min / 100 Year																										
New Pipeline Required pipesizes for Required catchpits																										
Line C																										
SWMH C6-C5	300	367	302	33	RCRRJ	0.015	31.63	SWMH-C6	63.72	63.09	0.296	SWMH-C5	63.65	62.90	0.416	0.60	45.64	0.0456	**0.046**	0.072	0.076	0.0661		**0.066**	69	0.92
SWMH C5-C4	375	444	380	32	RCRRJ	0.015	30.21	SWMH-C5	63.65	62.88	0.358	SWMH-C4	63.61	62.72	0.478	0.53	53.61	0.0536	**0.099**	0.113	0.095	0.1146		**0.115**	87	1.01
SWMH C4-C3	375	444	380	32	RCRRJ	0.015	28.57	SWMH-C4	63.61	62.70	0.498	SWMH-C3	63.50	62.54	0.548	0.56	23.01	0.0230	**0.122**	0.113	0.095	0.1178	0.0045	**0.118**	104	1.04
SWMH C3-C2	375	444	380	32	RCRRJ	0.015	38.18	SWMH-C3	63.50	62.54	0.548	SWMH-C2	62.89	62.20	0.278	0.89	28.70	0.0287	**0.151**	0.113	0.095	0.1485	0.0024	**0.149**	102	1.31
SWMH C2-A1	375	444	380	32	RCRRJ	0.015	50.08	SWMH-C2	62.89	62.18	0.298	SWOUT-C1	62.89	61.25	1.228	1.86	33.41	0.0334	**0.184**	0.113	0.095	0.2145		**0.215**	86	1.89
Line A																										
SWMH A2-A1	300	367	302	33	RCRRJ	0.003	30.6	SWMH-A2	63.49	61.36	1.796	SWMH-A1	63.23	61.21	1.686	0.49	107.35	0.1074	**0.107**	0.072	0.076	0.2986		**0.299**	36	4.17
SWMH A1-OUTLET	375	444	380	32	RCRRJ	0.003	19.39	SWMH-A1	63.23	61.18	1.638	SW-OUTLET	62.09	61.08	0.598	0.52	204.22	0.2042	**0.496**	0.113	0.095	0.5652		**0.565**	88	4.98

NOTE:
- all downpipes to be 150Ø
- refer to civil drawings for all connections to stormwater and septic systems

water supply
sanitary sewer
storm water



DISH CHANNEL



Amenities and Drainage Plan Schematic - Zone 1
1 : 250

all dimensions to be verified on site before making any shop drawings or commencing any work.

Rev	Date	by	Reason
1	18-08-27	KT	FOR INFORMATION

contractor: form BUILDING & DEVELOPMENTS

client: Seeka

consultant: BCD GROUP
Consulting Engineers and Planners
HAMILTON | 240 Tristram St, Hamilton | p 07 839 0107
NEW PLYMOUTH | Level 3/53 Brougham St, New Plymouth | p 06 757 5051
TAURANGA | Level 1, 75 Elizabeth St, Tauranga | p 07 571 0182

project title: SEEKA KERIKERI REDEVELOPMENT 153 WAIPAPA ROAD

sheet title: DRAINAGE PLAN - ZONE 1

drawn: KT	scale: As Indicated	at A1
engineer: SJ		
job no:	sheet no:	revision:
18-0548	006	1

SERVICES NOTE

THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. STRATUM CONSULTANTS TAKES NO RESPONSIBILITY FOR SERVICES SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING SERVICES PRIOR TO AND DURING THE CONTRACT WORKS

Area 1
15,696m²
Q10 = 273L/s OVERLAND
Q100 = 435L/s OVERLAND

Area 2
9,620m²
Q10 = 223L/s OVERLAND
Q100 = 355L/s OVERLAND

Area 3
5987m²
Q10 = 87L/s OVERLAND
Q100 = 138L/s OVERLAND

Area 4
12,070m²
Q10 = 53L/s OVERLAND
Q100 = 84L/s OVERLAND

Area 5
23,280m²
Q10 = 101L/s OVERLAND
Q100 = 161L/s OVERLAND

LOT 2
DP 199954

LOT 2
DP 448914

DRAWN: ADP	DESIGNED: ADP
CHECKED: -	SURVEYED BY: -

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL
B	12-10-18	ADP	OVERLAND FLOW ADDED

NOTES/KEY:

Key

- - Overland Flow Path

Seeka
SELECT EXCELLENCE

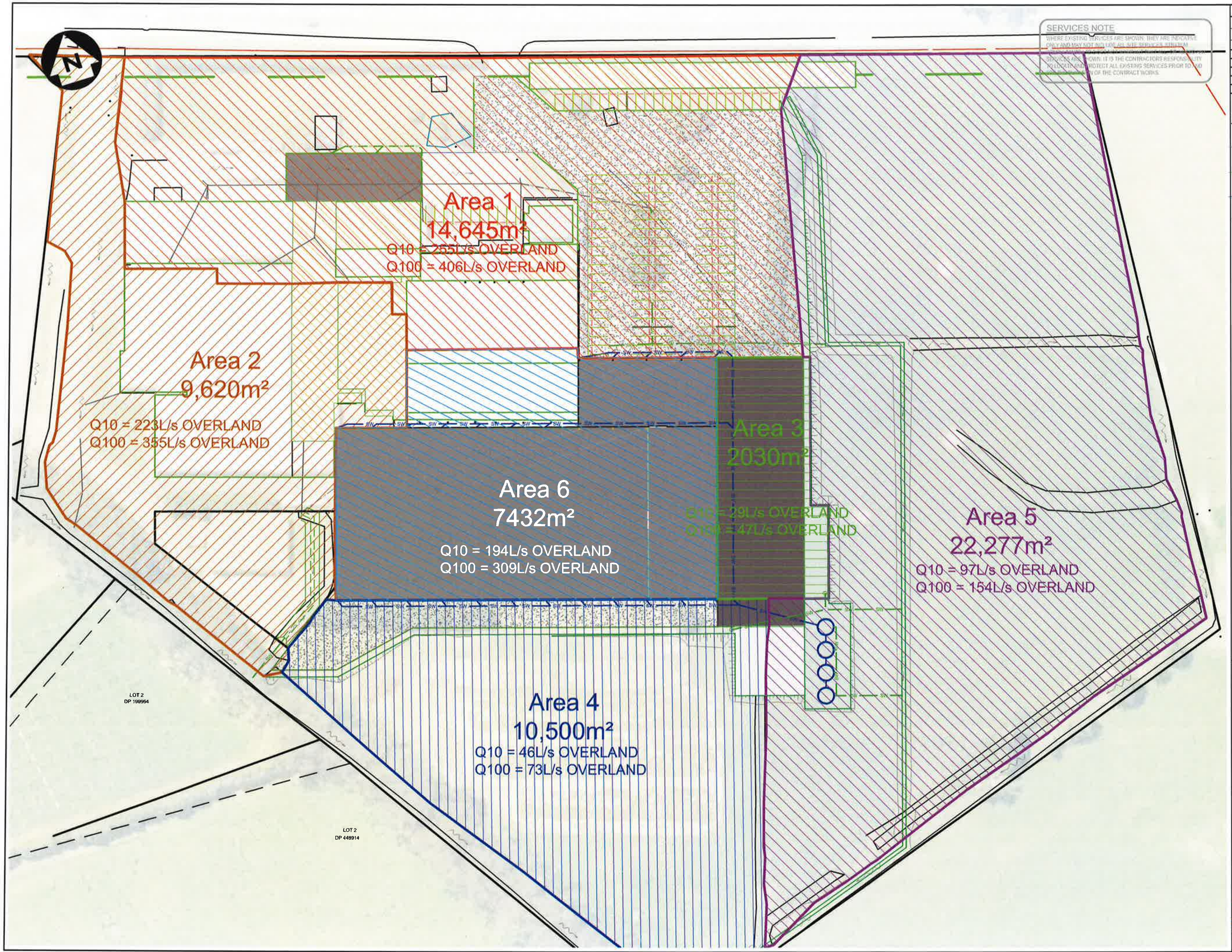
SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

CATCHMENT PLAN
PRE DEVELOPMENT

Stratum CONSULTANTS
Experience, Knowledge, Better Outcomes
Planners I Engineers I Surveyors

SCALE: 1:1000 ORIGINAL DWG. SIZE A3

DRAWING No. 638080-M-E-D001 SHEET No. 18 ISSUE B



DRAWN: ADP	DESIGNED: ADP
CHECKED: -	SURVEYED BY: -

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL
B	12-10-18	ADP	OVERLAND FLOW ADDED

NOTES/KEY:

Key

- Existing Stormwater
- Proposed Stormwater
- Proposed Roof Drain
- Overland Flow Path

BASECOURSE ACCESS 200mm GAP40

150mm CONCRETE ON 50mm SAND BASE ON SUBGRADE ≥ CBR 7

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CATCHMENT PLAN
POST DEVELOPMENT

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SCALE: 1:1000 ORIGINAL DWG. SIZE A3

DRAWING No.	SHEET No.	ISSUE
638080-M-E-D001	19	B

SERVICES NOTE

THE SERVICES SHOWN ON THESE DRAWINGS ARE SHOWN THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. STRATUM CONSULTANTS LIMITED DOES NOT WARRANT THAT ALL EXISTING 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.

DOWNPIPE CONNECTION TO EXISTING STORMWATER MANHOLE

RAISE STORMWATER MANHOLE TO NEW SURFACE LEVEL

STORMWATER CLEAN WATER CUTOFF DRAIN

PROPOSED 375mmØ STORMWATER PIPELINE TO OUTLET

STORMWATER CLEAN WATER CUTOFF DRAIN

SEALED STORMWATER DOWN PIPE SYSTEM

SEALED STORMWATER ROOF PIPE SYSTEM

STORMWATER CUTOFF DRAIN

STORMWATER LINE TO BE REMOVED

PROPOSED 375mmØ STORMWATER PIPELINE

EXISTING STORMWATER DRAIN

SEALED STORMWATER ROOF PIPE SYSTEM

STORMWATER DROP STRUCTURE CONNECTED TO MANHOLE WITH 300Ø OUTLET

STORMWATER ROOF 50000 LITRE PROMAX WATER DETENTION TANKS OR SIMILAR APPROVED (SEE DRAWING 07 FOR TANK DETAILS)

225mmØ PVC-U STORMWATER TANK OUTLET TO DRAIN

EXISTING STORMWATER DRAIN TO BE FILLED IN

EXISTING STORMWATER DRAIN

STORMWATER CLEAN WATER CUTOFF DRAIN

LOT 2 DP 437473

LOT 2 DP 448914

LOT 2 DP 448914

T&G Office

A1.05 Loadout Canopy 300 m²

SWMH C6

SWMH C5

SWMH C4

SWMH C3

SWMH C2

SWCP-2

SWCP-1

SWMH-B

SWMH-A

Box Making Shed

Front Offices

New Carpark

Forklift Recharge

Offices

Plantroom

Passage

Coolstore

Covered Passage

Room

Plantroom Room

Repack Room

A1.03 Curing Canopy 800 m²

A1.01 Packhouse 4500 m²

A1.02 Bin-tip Canopy 920 m²

A1.04 Bin Storage 200 m²

A1.06 Truck Unloading 600 m²

A1.07 New Effluent Treatment Plant (By Seeka)

SW-OUTLET

14.00 150Ø @ 0.55%

34.50 200Ø @ 0.55%

61.30 250Ø @ 0.55%

35.60 1200Ø @ 0.55%

20.62 1000 @ 0.55%

52.88 300Ø @ 1.0%

20.00 150Ø @ 0.55%

30.00 200Ø @ 0.55%

63.00 250Ø @ 0.55%

24.00 300Ø @ 5.0%

DRAWN: ADP		DESIGNED: -	
CHECKED: -		SURVEYED BY: -	
OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500			
No	Date	By	Issue/Revision
A	02-08-18	ADP	DRAFT
B	07-08-18	ADP	ISSUED FOR RESOURCE CONSENT
C	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL

NOTES/KEY:

Key

- SW - Existing Stormwater
- SW - Proposed Stormwater
- SW - Proposed Roof Drain
- Overland Flow Path

1. ALL WORKS TO COMPLY WITH FAR NORTH DISTRICT COUNCIL STANDARDS.
2. ALL WORKS TO BE CARRIED OUT BY APPROVED CONTRACTOR.
3. ALL PIPES UNDER CARRIGEWAYS AND VEHICLE CROSSINGS TO BE BACKFILLED WITH COMPACTED HARDFILL.
4. CONTRACTOR TO SEARCH, LOCATE, PROTECT AND MAINTAIN ALL EXISTING SERVICES.
5.

Seeka SELECT EXCELLENCE

SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

STORMWATER LAYOUT PLAN

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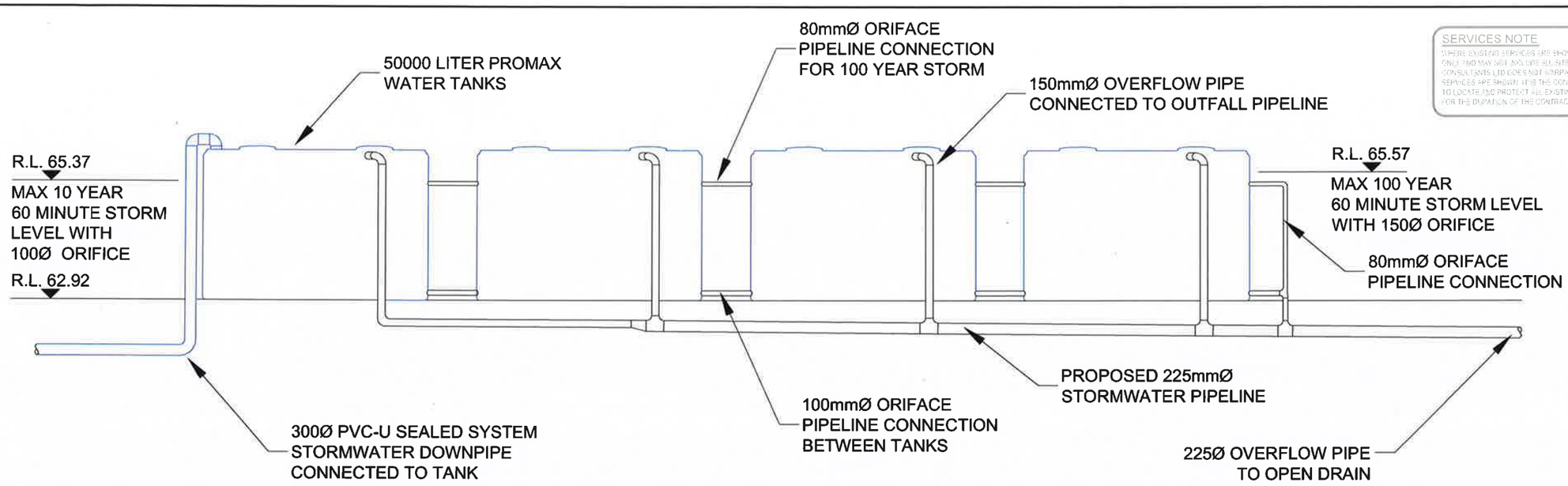
SCALE: 1:1000	ORIGINAL DWG. SIZE A3	
DRAWING No. 638080-M-E-D001	SHEET No. 06	ISSUE C

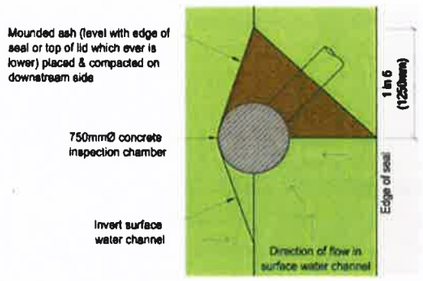


SERVICES NOTE

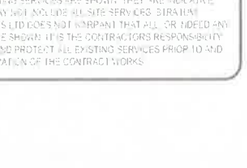
WHERE EXISTING SERVICES ARE SHOWN, THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. STRATUM CONSULTANTS LTD DOES NOT WARRANT THAT ALL OR INDEED ANY SERVICES ARE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING SERVICES PRIOR TO AND FOR THE DURATION OF THE CONTRACT WORKS.

STORMWATER PROMAX TANKS

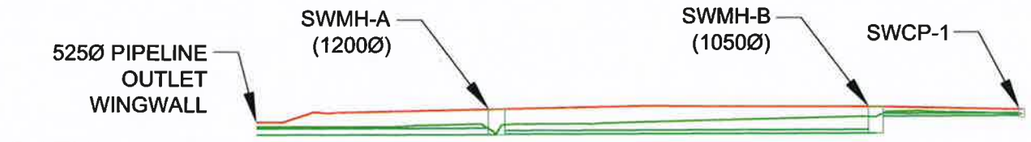
SCALE 1:100 (HORIZ & VERT)



PLAN



SECTION A

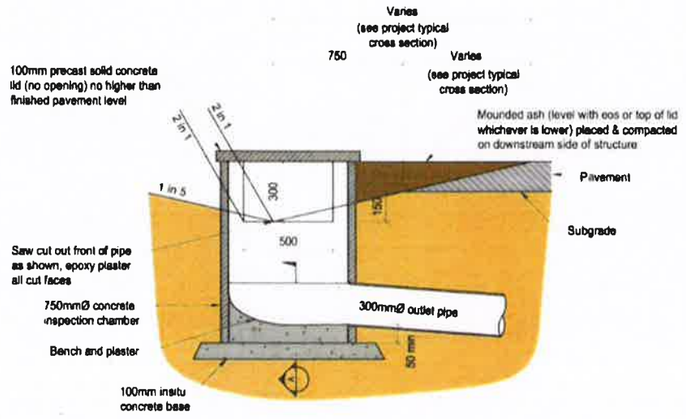


DATUM: 58.00

DEPTH TO INVERT			2.05			2.13		
INVERT LEVEL	61.08		61.18	61.21		61.36	62.74	62.80
LID LEVEL	62.09		63.23			63.49		63.34
CHAINAGE	0.00		19.40			50.00		61.77
PIPE SIZE & GRADIENT	19.4m of Ø 525 mm RCRRJ @ -0.50%			30.6m of Ø 300 mm RCRRJ @ -0.50%			11.8m of Ø 225 mm RCRRJ @ -0.50%	

STORMWATER LONGSECTION

SCALE 1:500 (HORIZ & VERT)



STORMWATER DROP STRUCTURE

DRAWN: ADP	DESIGNED: -
CHECKED: -	SURVEYED BY: -

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	02-08-18	ADP	DRAFT
B	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL
C	-	-	-

NOTES/KEY:

Key

- sw - Existing Stormwater
- sw - Proposed Stormwater
- sw - Proposed Roof Drain

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KERIKERI

STORMWATER DETAILS

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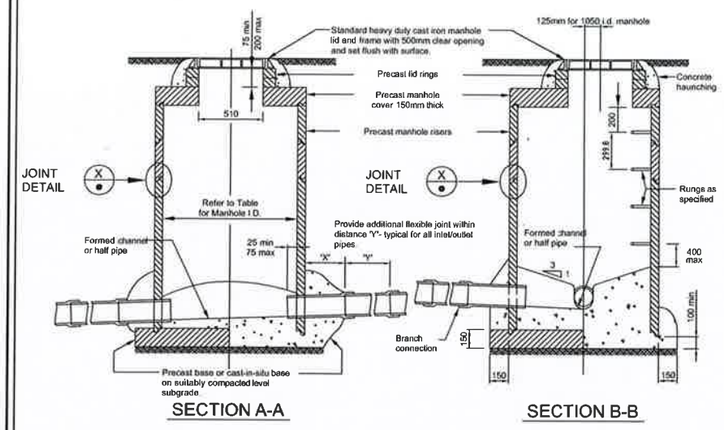
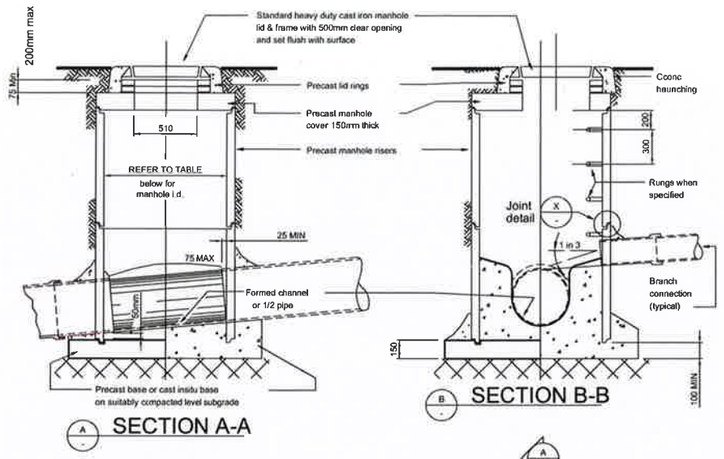
SCALE: 1:1000 ORIGINAL DWG. SIZE A3

DRAWING No. 638080-M-E-D001 SHEET No. 07 ISSUE B



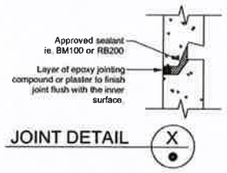
SECTION A-A

SECTION B-B



A SECTION A-A

B SECTION B-B



JOINT DETAIL X

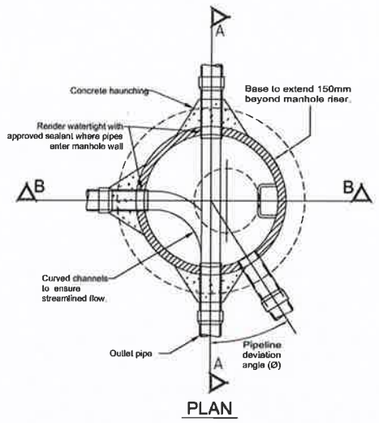
MINIMUM MANHOLE INTERNA.. DIA (mm) *						
OUTLET PIPE DIA (mm)	PIPELINE DEVIATION ANGLE (Ø) 0°-15°	16°-45°	46°-75°	76°-90°	'X' (mm)	'Y' (mm)
Up to 300	1050	1050	1050	1050	300	500
375 to 600	1050	1050	1050	1050	500	700
675 to 750	1050	1200	1500	1500	600	750
825 to 900	1500	1500	1800	1800	600	900

* To be used as a guide only. Larger diameters may be required where more than 1 inlet pipe is to be constructed

NOTES:

1. All in-situ concrete other than site concrete shall have a minimum compressive strength of 20 MPa at 28 days.
2. All precast manhole units (shown shaded) are standard manufactured concrete units (ie. HUMES or similar approved.)

Where pipes pass through walls they shall be watertight. Extreme care shall be taken to ensure that the pipe is free of all dirt and grease. All pipes through walls shall conform to the appropriate detail shown on the drawings or in the appropriate NZ Standard. All uPVC sewer pipe shall be connected to concrete structures via a proprietary uPVC manhole connector supplied by the pipe manufacturerr.



PLAN

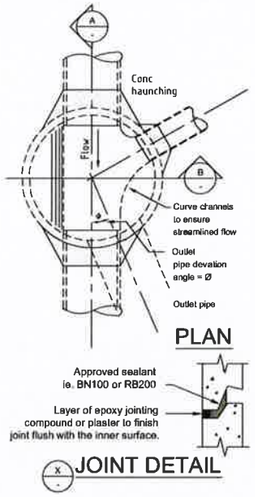
MINIMUM MANHOLE INSIDE DIA *				
OUTLET PIPE DIA., (mm)	PIPELINE DEVIATION ANGLE (Ø) 0°-15°	16°-45°	46°-75°	76°-90°
UP to 300	1050	1050	1050	1050
375 to 575	1050	1050	1050	1050
600 to 750	1200	1200	1500	1500
825 to 900	1500	1500	1800	1800

* To be used as guide only

* Larger diameters may be required where more than 1 inlet pipe is to be constructed

NOTES:

1. All insitu concrete other than site concrete shall have a minimum compressive strength of 20 mpa @ 28 days.
2. All manhole precast units (shaded) are standard manufactured concrete units (i.e. "humes" osa)
3. All figured dimensions are in millimetres.



PLAN

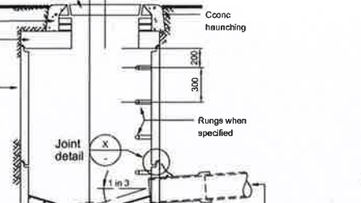
X JOINT DETAIL

NOTE: all fittings non ferrous

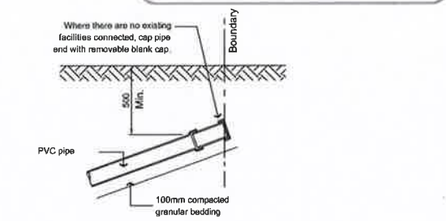
SERVICE CONNECTION

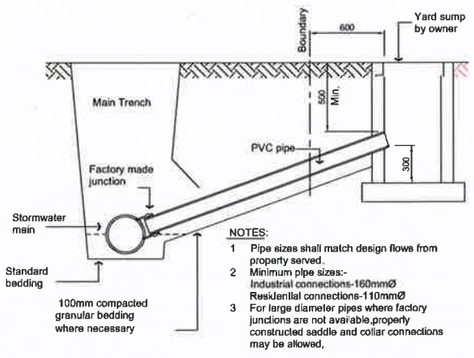
NOTE: all fittings non ferrous

SERVICE CONNECTION

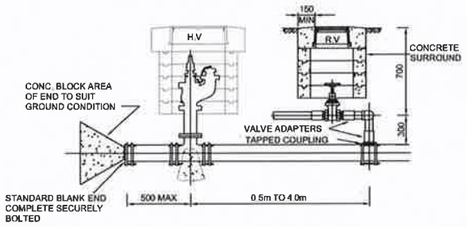


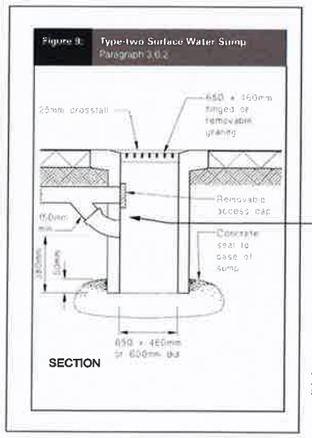
SLUICE VALVE INSTALLATION



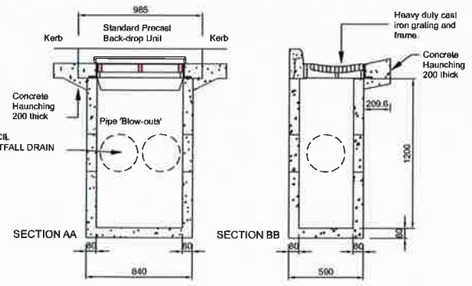


NOTES:
1. Pipe sizes shall match design flows from property served.
2. Minimum pipe sizes:-
   Industrial connections-160mmØ
   Residential connections-110mmØ
3. For large diameter pipes where factory junctions are not available,properly constructed saddle and collar connections may be allowed,

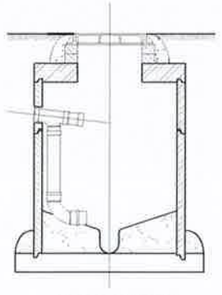




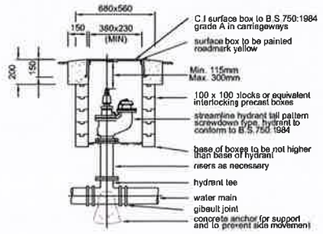
ALL 150Ø OUTLETS TO BE SUBMERGED IN ACCORDANCE WITH THE NZBC.



PRECAST CONCRETE CESSPIT SUMP UNIT

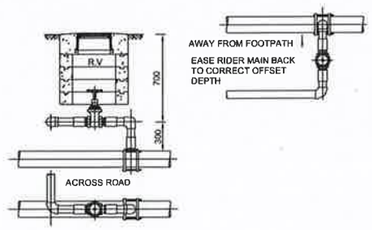


S/S DROP CONNECTION INTO MANHOLE



NOTES
frost drain point to be plugged when mains are constructed in PVC, use standard cast iron hydrant tee and step gibault joint

HYDRANT INSTALLATION



RIDERMAIN CONNECTION TO MAIN

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DRAWN: ADP	DESIGNED: -
CHECKED: -	SURVEYED BY: -

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	02-08-18	ADP	DRAFT
B	07-08-18	ADP	ISSUED FOR RESOURCE CONSENT
C	11-09-18	ADP	ISSUED FOR ENGINEERING APPROVAL

NOTES/KEY:

Seeka
SELECT EXCELLENCE

SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

SERVICE CONNECTION DETAILS

Stratum CONSULTANTS
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SCALE: 1:1000 ORIGINAL DWG. SIZE A3

DRAWING No. **638080-M-E-D001** SHEET No. **11** ISSUE **C**

Building Code Clause(s).....B1 / B2.....

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance notes on the use of this form are printed on page 2)

ISSUED BY:.....STRATUM CONSULTANTS LTD .....
(Design Firm)

TO:.....SEEKA LTD.....
(Owner/Developer)

TO BE SUPPLIED TO:.....FAR NORTH DISTRICT COUNCIL .....
(Building Consent Authority)

IN RESPECT OF:.....STORMWATER DESIGN WORKS.....
(Description of Building Work)

AT:.....153 WAIPAPA ROAD, KERIKERI.....
(Address)
..... **LOT**.....3..... **DP** ...196433.. **SO** .....

We have been engaged by the owner/developer referred to above to provide .....ENGINEERING DESIGN services in respect of the requirements of
(Extent of Engagement)
Clause(s) .....E1.....of the Building Code for
All ☐ or Part only ☒ (as specified in the attachment to this statement), of the proposed building work.

The design carried out by us has been prepared in accordance with:

☒ Compliance Documents issued by the Ministry of Business, Innovation & Employment.....E1 / VM 1.....or
(verification method / acceptable solution)

☐ Alternative solution as per the attached schedule.....

The proposed building work covered by this producer statement is described on the drawings titled .....

SEEKA LTD.....and numbered .....638080-M-E-C001.....;
together with the specification, and other documents set out in the schedule attached to this statement.
On behalf of the Design Firm, and subject to:
(i) Site verification of the following design assumptions ... ...
(ii) All proprietary products meeting their performance specification requirements;

I **believe on reasonable grounds** that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:
☐CM1 ☐CM2 ☒CM3 ☐CM4 ☐CM5 (Engineering Categories) or ☐ as per agreement with owner/developer (Architectural)

I, ...STEPHEN BOS..... am:
(Name of Design Professional)

☒CPEng .....154367.....#

☐Reg Arch ..... .#

I am a Member of : ☒ IPENZ ☐NZIA and hold the following qualifications:...NZCE, BE, MIPENZ, CPEng.....
The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than $200,000*.
The Design Firm is a member of ACENZ: ☐

SIGNED BY .....STEPHEN BOS..... ON BEHALF OF .....STRATUM CONSULTANTS LTD...
(Design Firm)

Date.....24/09/18..... (signature).....

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of $200,000.*

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.

636080-GEO-C002

12 June 2025

Seeka Ltd
PO Box 47
Te Puke, 3153

Geotechnical Plan Review of Proposed Stage 1B Canopy Extension and Packaging Lean-to 153 Waipapa Road, Kerikeri

1. Introduction

Stratum Consultants Ltd (Stratum) has been engaged by Seeka Ltd to carry out a geotechnical plan review in relation to the building consent application for the proposed Stage 1B bin curing canopy extension and future packaging lean-to at Seeka Kerikeri, 153 Waipapa Road, Kerikeri, legally described as Lot 3 DP 196433.

This plan review is based on the existing information from the most relevant geotechnical assessment report (GAR) and geotechnical completion report (GCR), as referenced below.

2. Proposed Development

The following documents were reviewed as part of the geotechnical plan review:

- GAR: Geotechnical Assessment Report. Proposed Packhouse, Coolstore and Curing Canopy. 153 Waipapa Road, Kerikeri. Report prepared by Stratum for Seeka Ltd. Dated 11 September 2018. Reference 638080-M-E-C005.
- GCR: Geotechnical Completion Report. Stage 1 Ground Works. 153 Waipapa Road, Kerikeri. Report prepared by Stratum for Seeka Ltd. Dated 2 May 2020. Reference 638080-M-E-C007.
- Structural building plans for resource consent prepared by BCD Group Ltd, "Seeka Stage 1B – Packhouse Canopy Extension" Ref: 25-0030, Dated 6 June 2025, 9 pages.
- Structural building plans for building consent prepared by BCD Group Ltd, "Seeka Stage 1B – Packhouse Canopy Extension" Ref: 25-0030, Dated 6 June 2025, 25 pages.

The proposed development involves constructing the Stage 1B bin curing canopy extension to the east and a packaging lean-to canopy to the south of the existing Seeka packhouse located at 153 Waipapa Road, Kerikeri. The proposed canopy extension will extend approximately 20m eastward off the existing bin tip canopy and curing canopy. The proposed packaging lean-to is to be attached to the southern end of the existing bin tip and curing canopy and extend approximately 11.5m to the south. The canopy extension and lean-to will cover approximately 1,440m^2 and 436m^2 respectively.

The foundations for the eastward canopy extension will consist of eight concrete pad footings measuring 2m by 2m and 0.5m deep. A new foundation beam will also be required which will be cut 0.6m wide and 0.5m in depth. The foundations for the packaging lean-to are expected to consist of strip footings.

No design bearing capacity for the foundations or soil parameters were given on the structural plans available to us. It is assumed that the foundations have been designed for 'good ground' using a geotechnical ultimate bearing capacity of 300kPa (100kPa allowable bearing capacity).

3. Previous Reports

The GAR found that the ground conditions typically allowed the use of shallow foundations utilising a bearing capacity of 300kPa (100kPa allowable bearing capacity) after removal of any uncontrolled filling. Earthworks were completed and documented in the GCR which included the area of the proposed canopy extension. The platform in this area has been prepared by undercutting any weak natural silts or uncontrolled filling and backfilling with hardfill and a layer of Duragrid 30/30 geogrid. At completion of the earthworks the building platform was certified as suitable for foundations utilising a bearing capacity of 300kPa (100kPa allowable bearing capacity).

Earthworks have also been completed within the area of the packaging lean-to to the south and therefore the recommendations in the GCR are relevant for the lean-to also. It is understood that the proposed lean-to extends up to 11.5m south of the existing structure. The attached as-built plans indicate that the previous site preparation earthworks extended across the majority of the proposed lean-to except for the south-eastern corner. Site records indicate that geo-grid has only been placed in the western part of the proposed lean-to.

If the lean-to extends outside the previously earthworked area further earthworks will have to be completed to match. We expect geogrid may be required to be placed across the eastern portion of the lean-to to create consistency across all foundations. For any part of the building platform that has not yet been subject to ground improvements, undercuts would be required with geocloth and geogrid to match the existing works completed as detailed in the GCR.

Any earthworks required should follow the recommendations in the GAR.

The subgrade of the building platform is to be inspected by a suitably qualified engineer to verify the ground conditions, prior to constructing the foundations or backfilling.

4. Geotechnical Plan Review

Based on the GAR and GCR discussed above in Section 3 we expect the proposed Stage 1B canopy extension will found within a previously prepared earthworked platform which has been certified within the GCR. The prepared fill platforms located under both the Stage 1B bin curing canopy extension and packaging lean-to are suitable to provide a geotechnical ultimate bearing capacity of 300kPa (100kPa allowable bearing capacity). As the canopy extension to the east is being

constructed within an earthworked platform which has already been certified no construction monitoring is required for this area.

Based on our understanding of the site the packaging lean-to structure will generally found within a prepared platform. For any area outside of the prepared platform it is expected that any earthworks will include a layer of geocloth and geogrid as per the works completed as part of the prepared platform in the GCR. This will prevent differential settlements across the building.

Geotechnical testing and construction monitoring should be undertaken during excavation of the foundations for the packaging lean-to to the south to verify the extent of the previous ground improvements and ensure the site conditions are suitable for the proposed foundations. Any uncontrolled fill or other unsuitable material is to be removed and replaced with engineered fill. Foundations for the proposed Stage 1B bin curing canopy and packaging lean-to should not extend past 0.5m depth to align with the GAR requirements.

The building platform subgrade for the proposed Stage 1B canopy extension and packaging lean-to is expected have a geotechnical ultimate bearing capacity of at least 300kPa (100kPa allowable bearing capacity).

Stormwater flows for both the Stage 1B canopy extension and packaging lean-to are expected to be directed into a stormwater detention tank system, which is considered geotechnically suitable.

5. Conclusions

The site conditions in the area of the proposed Stage 1B canopy extension and future packaging lean-to are expected to be consistent with the referenced GAR and GCR. The recommendations given in the existing reports are considered to be applicable for the canopy and lean-to extensions.

Overall, the provided design for the Stage 1B canopy extension and future packaging lean-to is considered to be suitable to address the geotechnical restrictions of the site provided the recommendations in the GCR and GAR are adhered to. Geotechnical testing and inspections should be completed to confirm the ground conditions within any areas which have not been previously earthworked and certified in the GCR.

6. Limitations

This report has been prepared for the sole benefit of Seeka Ltd for the proposed Stage 1B canopy extension and future packaging lean-to at 153 Waipapa Road, Kerikeri. It is not to be relied upon or used out of context by any other person without reference to Stratum Consultants Ltd. The reliance by other parties on the information or opinions contained in the report shall, without prior review and agreement in writing, be at such party's sole risk.

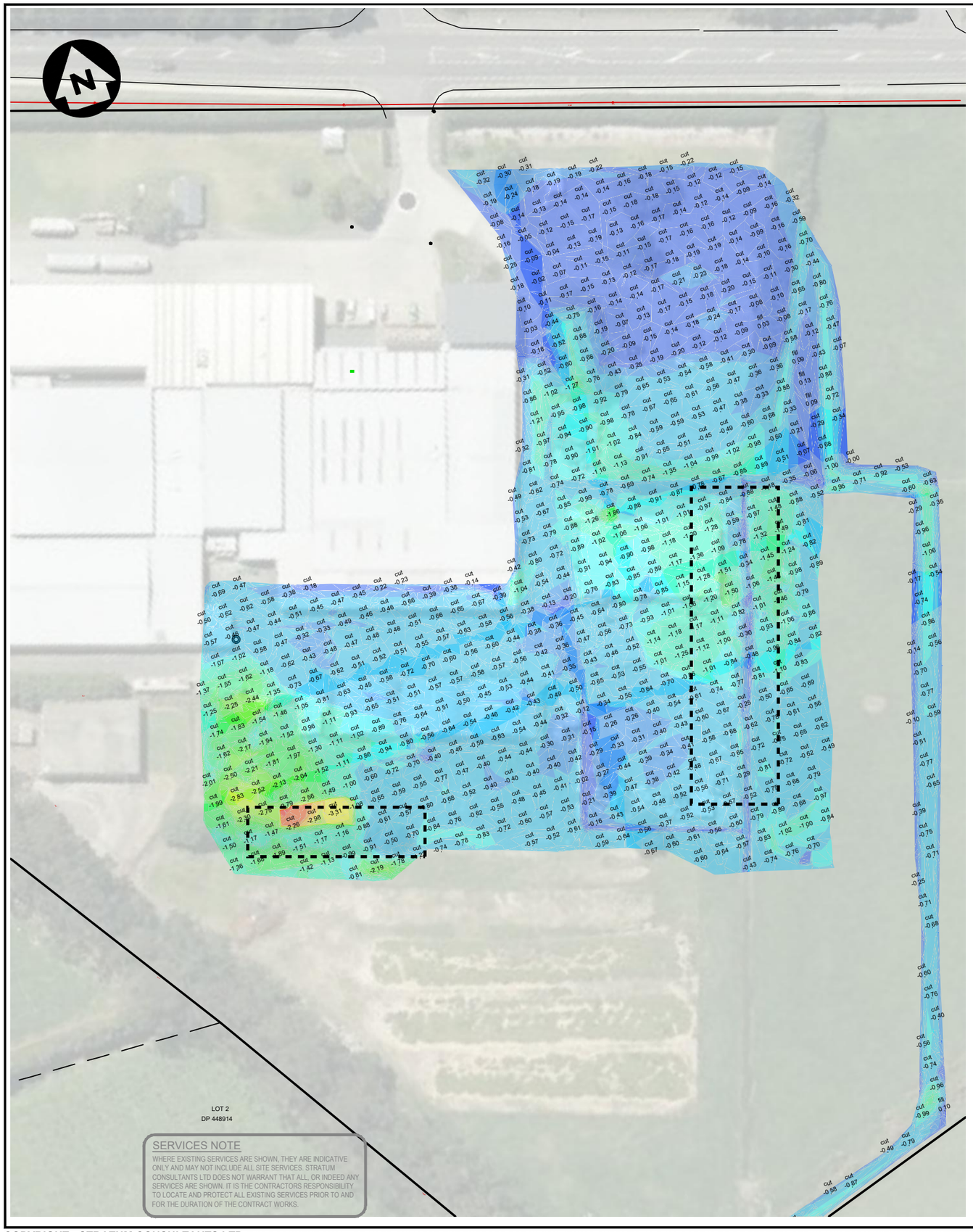
Yours faithfully

Stratum Consultants Ltd

Prepared by:
Thomas Stemmer
Engineering Geologist

Reviewed and Approved by:
Elles Pearse-Danker
CPEng Geotechnical Engineer

encl. Selected plans.



Cut Fill Banding Details

Number	Color	Minimum Elevation (m)	Maximum Elevation (m)	2D Area (m^2)	Volume (m^3)
1		-5.000	-4.800	0.0	0.0
2		-4.800	-4.600	0.0	0.0
3		-4.600	-4.400	2.6	0.1
4		-4.400	-4.200	11.0	1.8
5		-4.200	-4.000	8.5	3.5
6		-4.000	-3.800	5.9	5.1
7		-3.800	-3.600	4.4	6.0
8		-3.600	-3.400	5.1	6.9
9		-3.400	-3.200	33.0	10.6
10		-3.200	-3.000	12.2	15.8
11		-3.000	-2.800	17.7	17.3
12		-2.800	-2.600	53.0	25.5
13		-2.600	-2.400	50.1	34.9
14		-2.400	-2.200	70.6	46.9
15		-2.200	-2.000	135.6	66.9
16		-2.000	-1.800	191.3	102.0
17		-1.800	-1.600	196.3	139.4
18		-1.600	-1.400	346.0	191.7
19		-1.400	-1.200	625.5	282.4
20		-1.200	-1.000	1074.7	451.2
21		-1.000	-0.800	1972.9	748.8
22		-0.800	-0.600	3334.1	1275.2
23		-0.600	-0.400	3840.9	2025.8
24		-0.400	-0.200	1946.0	2607.7
25		-0.200	0.000	2732.1	3152.4
26		0.000	0.200	147.2	10.6
27		0.200	0.400	3.6	0.8
28		0.400	0.600	1.2	0.4
29		0.600	0.800	0.9	0.2
30		0.800	1.000	0.7	0.1
31		1.000	1.200	0.0	0.0

DRAWN:	ADP	DESIGNED:	-
CHECKED:	-	SURVEYED BY:	-

OFFICE OF ORIGIN - TAURANGA Ph 07 571 4500

No.	Date	By	Issue/Revision
A	02-0818	ADP	DRAFT
B	07-08-18	ADP	ISSUED FOR RESOURCE CONSENT
C	03-09-18	ADP	BUILDING UPDATE CHANGES
D	20-05-20	ADP	FINAL UNDERCUT LEVELS

NOTES/KEY:

Cut Volume
Undercut Base Surface to Natural Surface - Unsuitable Material Removed

Cut - 11,218.00m³ (SOLID VOLUME)
Area - 16822.92m²

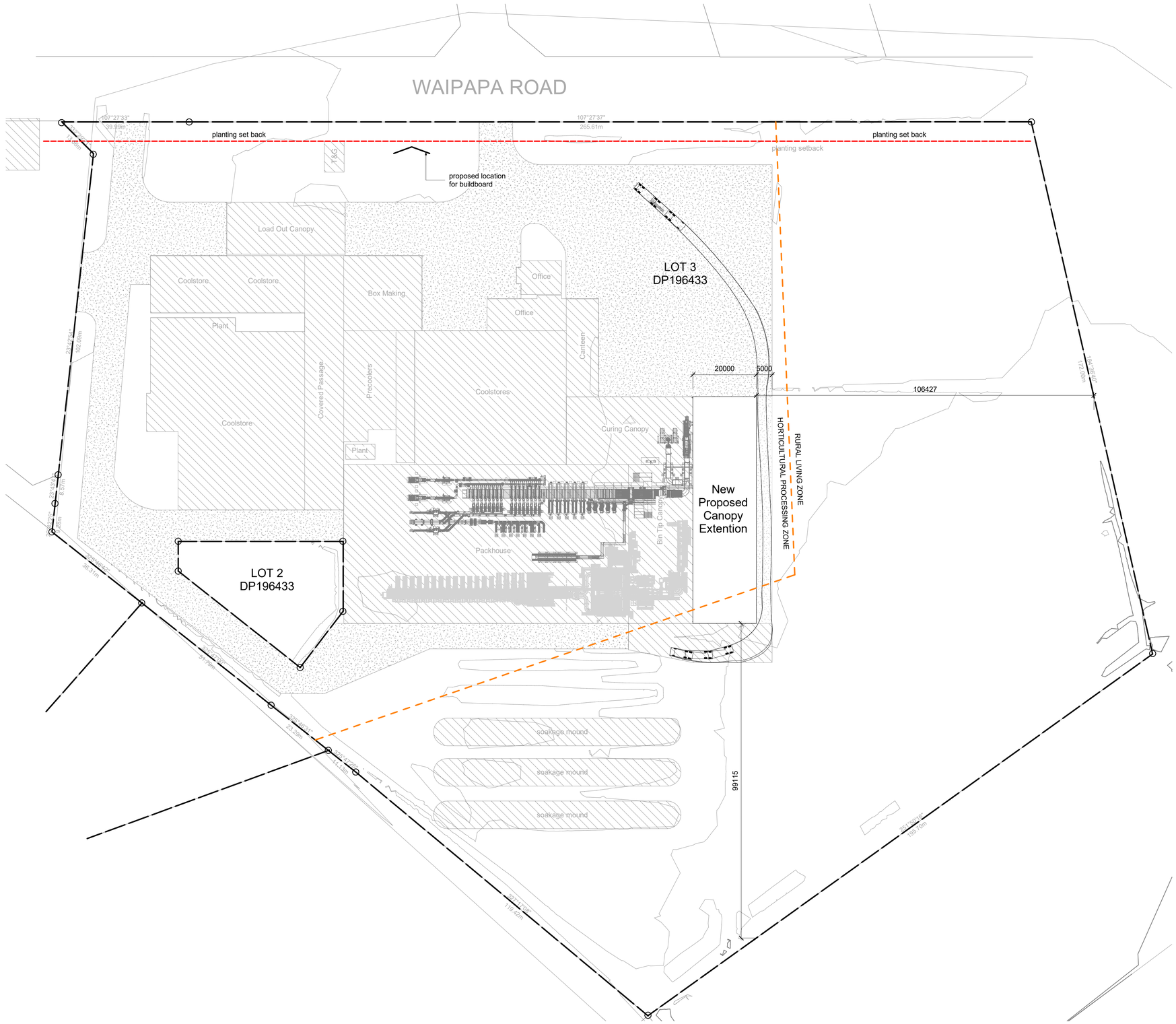
Seeka
SELECT EXCELLENCE

SEEKA LTD
153 WAIPAPA ROAD
KERIKERI

CUT FILL PLAN
3 METERS OUTSIDE NEW BUILDING PLATFORM

Stratum CONSULTANTS
Experience. Knowledge. Better Outcomes.
Planners | Engineers | Surveyors

SCALE: 1:1000	ORIGINAL DWG. SIZE A3	
DRAWING No.	SHEET No.	ISSUE
638080-M-E-D001	T01	D



Site Information & Requirements

Street Address: 153 Waipapa Road, Kerikeri

DP & Lot Number: DP 196433, Lot 3

Local Council: Far North District Council

Zone: Horticulural Processing / Rural Living Zone

Site Area: 68,752m²

Zone Information:
EQ Zone: Zone 1
Wind Zone: H
Corrosion Zone: Zone c

Notes:

- Site boundaries/ levels nominal and subject to survey.
- Easements not shown.
- Dimensions approximate and subject to confirmation.
- Structure and grid setout indicative only and subject to calculation.
- Stormwater detention/ soakage/ treatment/ discharge not yet checked.
- Resource Consent not expected/ expected.

Client: Seeka

Contractor: form

BCD GROUP

Sheet: **PROPOSED SITE PLAN**

Project Title: **SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION**

153 WAIPAPA ROAD, KERIKERI

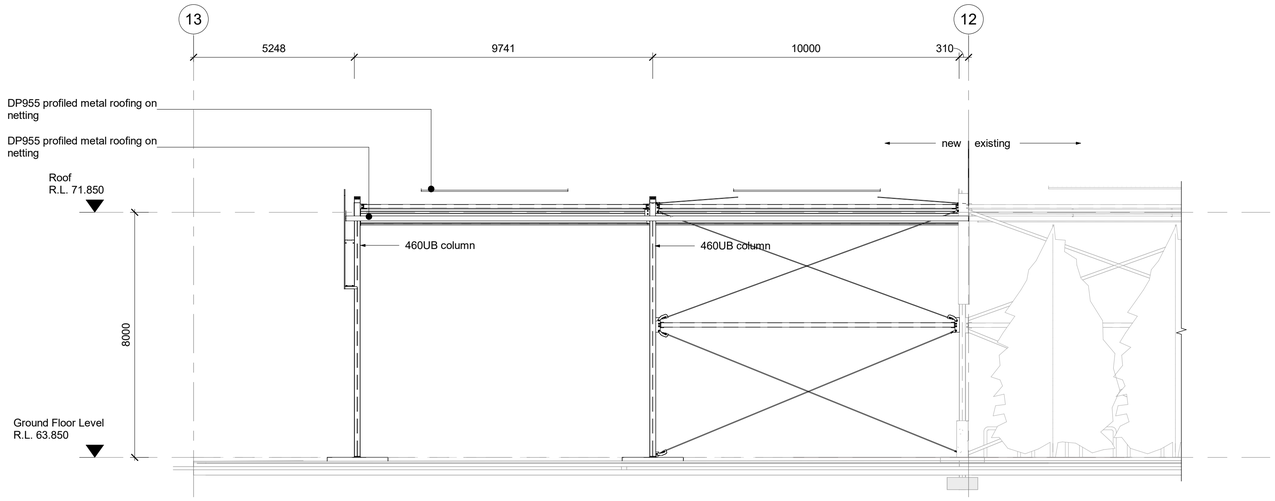
Rev	Date	by	Reason
5	06-06-2025	MT	FOR BUILDING CONSENT
4	23-05-2025	MT	FOR INFORMATION
3	16-05-2025	MT	FOR INFORMATION
2	06-02-2025	MT	FOR INFORMATION
1	23-01-2025	MT	FOR INFORMATION

Drawn: MT | Scale: As indicated | at A1

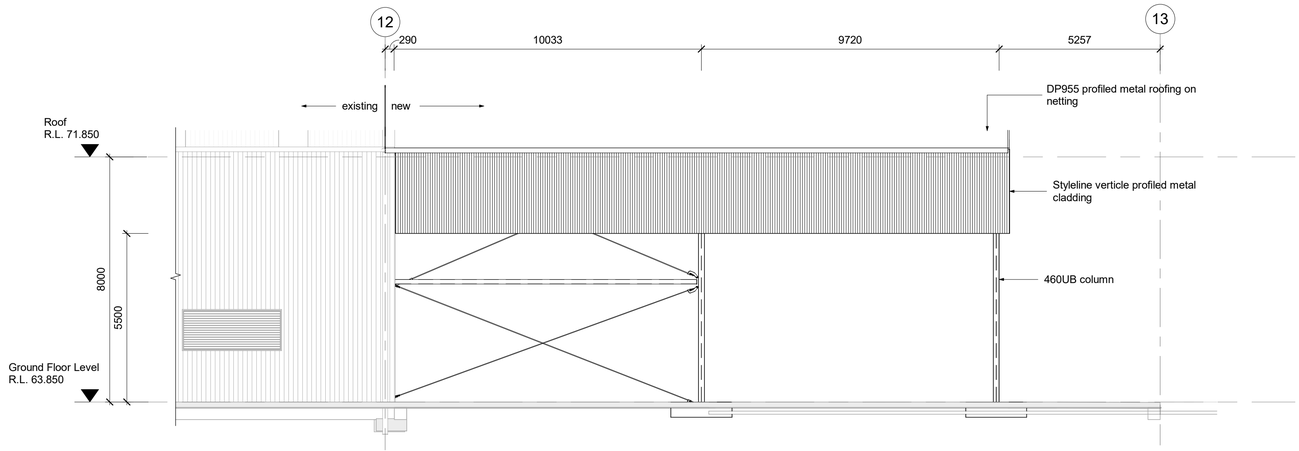
Reviewer: SJ

Job No: 25-0030 | Sheet No: A-100 | Revision: 5

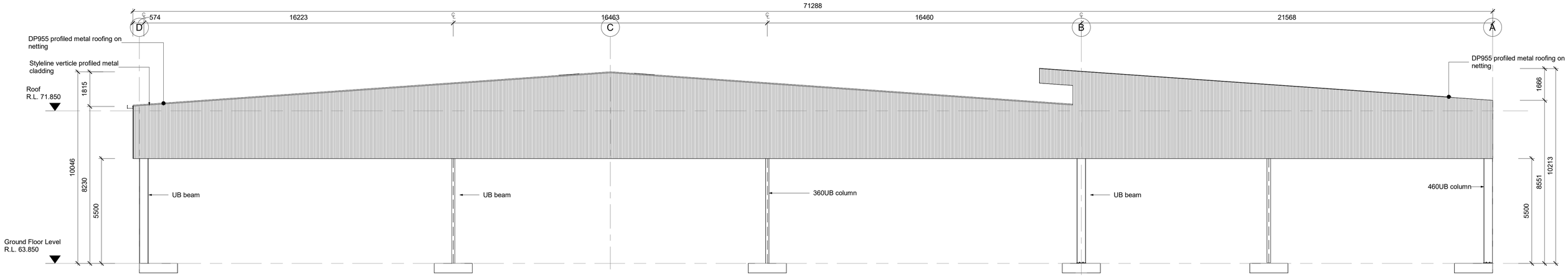
all dimensions to be verified on site before making any shop drawings or commencing any work.



Architectural Elevation North
1 : 100



Architectural Elevation West
1 : 100



Architectural Elevation East
1 : 100

Client: Seeka

Contractor: form

BCD GROUP

Sheet: EXTERIOR ELEVATIONS

Project Title: SEEKA STAGE 1B - PACKHOUSE CANOPY EXTENSION

153 WAIPAPA ROAD, KERIKERI

Rev	Date	by	Reason
3	06-06-2025	MT	FOR BUILDING CONSENT
2	23-05-2025	MT	FOR INFORMATION
1	06-02-2025	MT	FOR INFORMATION

Drawn: MT | Scale: 1 : 100 | at A1

Reviewer: SJ

Job No:	Sheet No:	Revision
25-0030	A-200	3

all dimensions to be verified on site before making any shop drawings or commencing any work.