

URBAN DESIGN SPECIALIST REPORT

To: Sandy Hsiao – Senior Planner &
Russell Butchers – Premium Project Lead
Central Resource Consenting Unit, Resource Consents Department

From: Sheerin Samsudeen, Principal Urban Design Advisor
Design Review Unit, Auckland Design Office

Date: 21.07.2020

Applicant: Ryman Healthcare Limited

Application: BUN60353138
223 Kohimarama Road and 9 John Rymer Place

Proposal: Comprehensive care retirement village in Residential - Mixed Housing Urban Zone

Activity Status: Discretionary

Dear Sandy & Russell,

Thank you for the opportunity to review the proposal to establish a comprehensive care retirement village at the above-mentioned subject site. The following information has been reviewed in relation to my assessment:

Submitted with the original application

- Assessment of Environmental Effects (AEE) prepared by Michael Daysh Ltd, dated February 2020;
- Urban Design Review prepared by Clinton Bird Urban Design Limited, dated 14 February 2020;
- Assessment Site Plans and Drawings prepared by Beca, dated February 2020;
- Resource Consent Site Plans and Drawings, prepared by Beca, dated February 2020;
- Landscape and Visual Effects Assessment (LVEA), prepared by R.A. Skidmore Urban Design Limited, dated February 2020;
- Landscape Plans, prepared by Design Squared Landscape Architects, dated 12 February 2020; and
- Civil Works Drawings prepared by Beca, dated February 2020.

Submitted as further information in response to Section 92 Request

- S92 response memo from Mitchell Daysh (including updated drawings and Architectural, Urban Design and Landscape and Visual response), dated 17.04.2020;

- S92 response memo from Mitchell Daysh (including updated drawings), dated 14.05.2020;
- S92 response memo from Mitchell Daysh (including memo from Design Squared and R.A. Skidmore), dated 21.05.2020;
- S92 response memo from Mitchell Daysh (including updated drawings), dated 26.05.2020.

A site walkabout was undertaken with the applicant's team (25.06.2019) and I have also visited the surrounding adjoining neighbourhood to assess the Building Height, Height in Relation to Boundary (HiRTB) and Yard non-compliances.

I can confirm the information provided by the applicant satisfies my Section 92 (s92) request and provides enough information to enable me to complete a review in terms of the proposal's actual and potential urban design effects and consistency with the relevant objectives and policies of the Auckland Unitary Plan – Operative in Part (AUP:OP).

1.0 PROPOSAL

The proposal is set out in Section 2 of the AEE prepared by Mitchell Daysh Limited and in summary comprises the following:

The Site is approximately 3.12 ha in area and the proposal is for the comprehensive care retirement village (the village) to establish:

- 98 care rooms, 75 assisted living suites and associated residents' amenities in building B01;
- 123 independent living apartments (12 one-bedroom apartments; 69 two-bedroom apartments; and 42 three-bedroom) in buildings B02 to B06;
- 192 car parks and 15 bicycle parks in podium and basement locations;
- A private road that connects John Rymer Place and Kohimarama Road; and
- Stream works, earthworks and associated retaining walls and fencing over 6.0m in height.

2.0 STATUTORY CONTEXT

I understand the site is located within the Residential - Mixed Housing Urban (MHU) zone under the Auckland Unitary Plan – Operative in Part (AUP:OP) and no overlay or precinct provisions apply.

The AEE sets out further information in relation to these statutory provisions and records that the proposal overall is a discretionary activity and requires consent for the following matters which are particularly relevant to the urban design assessment:

- Building height – all buildings infringe the 11m permitted height standard to varying degrees up to 21.4m;
- Height in relation to boundary (HiRTB) – buildings B02 and B04 infringe this standard by up to 2.5m along the Selwyn College interface;
- Yards – infringements relating to skybridge, retaining walls, 10m of the intermittent watercourse.

The AEE has concluded that *“the proposal will have minor adverse effects on 12 properties adjoining the southern boundary and has sought the application is processed on a limited notified basis. It has also noted that as the Ministry of Education has provided its written*

approval to the Proposed Village any potential effects associated with these infringements must be disregarded”.

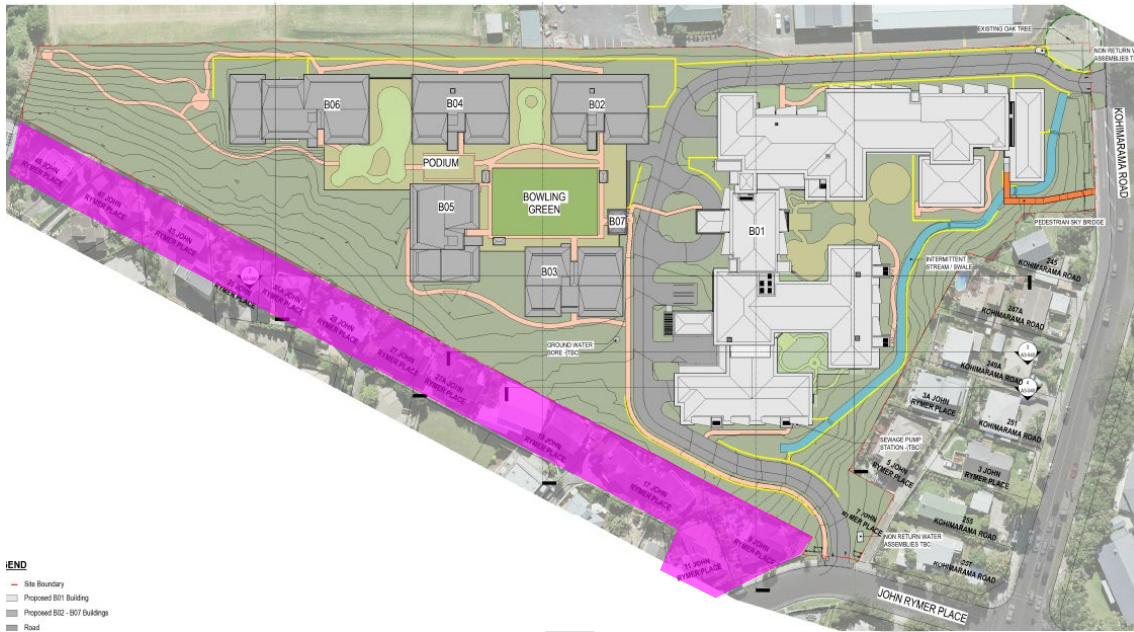


Image 1: Affected properties as identified in AEE

3.0 BACKGROUND

3.1 Pre-Application Meetings

A series of pre-application meetings were held with the applicant including an Auckland Urban Design Panel (AUDP) review.

Several significant urban amenity, landscape and visual effects were identified in the original design by Council’s specialists. Following which, the site layout and apartment buildings arrangement were revised in order to reduce the potential adverse effects on residential properties to the south / south-east. These included:

- The removal of the south western B-07 apartment building;
- An additional floor level onto buildings B-02, B-04 and B-06 along the northern side of the buildings (the additional apartments in these buildings replace the removed B-07 apartments);
- The placement of the bowling green onto the podium level.



Image 2a: Pre-app 1



Image 2b: Pre-app 2

The overall design approach is to consolidate all the care, common amenities and operational services in a single building (Building B01), and to provide independent living units as a cluster

of apartment blocks (Buildings B02 to B06) around a podium that is accessed through Building B07 (vertical circulation core) and connected to building B06. The primary pedestrian access to the proposed village will be from John Rymer Place with a secondary skybridge access from Kohimarama Road.

The built form rationale is to provide graduating heights / bulk / form across the site from north-west to north-east, south and south-east reducing towards the residential interfaces. Further, *“the landscape plan for the site envisions a park like setting, incorporating the use of both native and exotic species to provide fragrance and colour throughout the different seasons of the year”*.

The revised site layout, access arrangement and distribution of building blocks were supported in principle. However, the layout, which included height and HiRTB infringements, led to concerns in terms of how the proposed built form on a prominent slope can be successfully integrated into the planned neighbourhood character, and how residential amenity on adjoining sites can be reasonably maintained.

Specific concerns were also raised in relation to the ground level interface for pedestrian environs along the internal street, which were presented with very high blank walls, retaining walls and service areas. The need for an integrated building design and landscape strategy was identified to ensure a safe and attractive pedestrian environment. In addition, clarification was sought regarding outlook compliance and the extent of apartment units with a south facing aspect. .

3.2 Auckland Urban Design Panel

The proposal was presented to the AUDP on 22 August 2019. The Panel recommendations (*in italics*) and how the proposal has responded to them (in bullets) are set out below:

A. Treatment of exposed edge of the carpark and retaining walls.

- The exposed edges of the car park to the southern neighbours are screened with a mix of existing and proposed vegetation. However, concerns remain in terms of maintenance of existing vegetation and short to medium term impacts until the new plantings are established.
- Retaining walls along the internal street are as high as 6.18m and up to 3.22m near entrances to B01 and B07. While a landscape response has been proposed as a mitigation for the high wall effect, further resolution is needed at detailed design stage to ensure onsite amenity.

B. Entrance legibility of the main entrance in Building B01 and the entrance to the vertical circulation accessing the podium.

- The ground floor program near the Porte Cochere revised to provide improved activation.
- Update to street elevations were requested to clearly show the street /footpath along these frontages as well as street perspectives. The perspectives provided show extensive landscape leading to entrances of buildings B01 and B07. Further resolution needed at detailed design stage regarding signage and wayfinding.

C. Architectural treatment to achieve differentiation between Buildings B02 to B06 in order to ensure that, from a distance, these read as individual buildings.

- The architectural treatment and materiality are generally well resolved.
- However, the bulk and form in relation to buildings B03, B05, B06 and podium walls to the south require further refinements to soften the overall bulk, building and roof form, and to ensure landscape outcomes to deliver positive response, in particular

for immediate adjoining neighbours at 9,11, 17, 17A, 19, 19A, 27, 27A, 29, 35, 35A, 37, 45A.

D. Circulation and wayfinding to resolve potential conflicts between pedestrians (residents and visitors), mobility scooters, cars, and service vehicles.

- The entrances are clear and identifiable however an integrated signage would be required as part of the detailed design to establish legible wayfinding within the Village in association with concerns raised regarding the quality of the internal street pedestrian environment.

E. Podium landscape quality and its importance to this large space including the provision of trees.

- The application drawings continue to show the design intent and specific comments to be provided by Ainsley Verstraeten, the Council Landscape Architect.

F. Retention of existing Oak tree and Pohutukawa trees on Kohimarama Road as well as the southern bush and considers the extent of planting as critical.

- As above and as noted by the panel the southern bush and the extent of planting (sk100, SK102 to SK107) is critical. Further resolution needed to ensure an appropriate outcome on site and to adjoining neighbours.

G. Outlook from some ground floor units which have limited outlook and proximate retaining walls.

- The unit assessment provided (dated 03.04.2020) identifies the extent of fully south facing units and south facing unit with corner aspect. These constitute 29 units and 11 units respectively. This outcome is acceptable as per the apartment guidelines set out in the Auckland Design Manual (ADM).

H. Integration of plant to not adversely affect the roof scape and or balconies.

- The indicative approach to plant locations and screening, shown on drawings (044-ASM-S01-.A0-050, Rev.A) are considered appropriate for the scale of the development and these do not create any perceivable impacts from an urban design perspective.

I. Technical accuracy of visual simulations.

- It is understood visual simulations are prepared in accordance with the NZILA Best Practice Guide and specific comments to be provided in the landscape memo.

The panel noted its support in principle subject to the resolution of recommendations and

“considers the applicant team have achieved a good solution on a difficult site...the effective site coverage and the spatial arrangement of buildings in combination with the proposed building heights represents a good outcome. This and the generous provision of well-scaled landscape will create a feeling of spaciousness within the site and to neighbouring properties”.

4.0 URBAN DESIGN ASSESSMENT

The following section provides an analysis of the urban design merits of the application with regard to urban design best practice, Auckland Design Manual (ADM), and the relevant AUP(OP) objectives, policies and assessment criteria, in order to determine if the proposal is appropriate to its context; will result in a development that responds positively to the unique characteristics of the site and its surroundings; and will contribute to a high quality and enduring neighbourhood, for notification purposes.

4.1 Context & Proposed Typology

From an urban design perspective, it is considered that the proposal is a unique opportunity for a comprehensive development on a large site in a sought-after area close to a wide range of amenities and facilities. The steeply sloping site affords expansive views and solar exposure above the existing Kohimarama Road and John Rymer Place residential areas.

The site is characterised by an undulating topography with a fall of about 17m from the north-west to the south-east. The site boundaries are marked by different characteristics:

- The high traffic Kohimarama Road is defined by the mature Oak tree and Pohutukawa trees;
- To the north-east, the intermittent stream and its associated setback and planting provide horizontal and vertical separation for the adjoining Kohimarama Road (245, 247A, 249A and John Rymer Pl (3A and 5) residential properties;
- Selwyn College to the north-west shares the highest and longest section of the site buffered by a driveway access to most buildings on site; and
- The southern and south-eastern boundaries adjoin the John Rymer Place residential properties and are considered to be the most sensitive receivers of the proposal.

Each of these boundaries requires a different design response. In my view the applicant's design team have produced a scheme that generally responds positively to each of these boundaries. In particular:

- The design approach to concentrate the building mass, in particular the higher height, to the north and west along the Selwyn College boundary and to the site's centre is a successful response;
- The graduating heights of the buildings across the site from about 6-levels (albeit higher than permitted) along the ridge, to about 3-levels (with a generally complying bulk) closer to existing residential edges is an appropriate response.

It is acknowledged that the existing building heights in the area are lower than that of the subject development as it is one of the first developments to take advantage of the increased height provision under the AUP:OP. Therefore, the proposed bulk and height is likely to be highly visible and, along with the sloping topography, potentially create a sense of commanding presence. . This aspect is seen as particularly sensitive for immediate neighbours to the south and south-east (shown in orange below) whilst the existing stream, vegetation and setback will provide a buffer to the elevated north-eastern neighbours (marked blue).



Image 3: residential edges

Overall, the proposed mix of apartment buildings is not considered to be inconsistent with the provisions in the MHU zone under the AUP:OP. A detailed assessment of the appropriateness of the higher height is provided below.

4.2 Site Planning & Layout

From an urban design perspective, it is my opinion that many aspects of the design proposal respond to the challenges of the site and its immediate context and are an acceptable design response to balance the functional requirements of a care village, the topographical constraints of the site, and the sensitive residential receivers. These include:

- the stepping of the building heights and building mass to reflect the slope of the site and the split of the development, with the village centre around B01, the cluster of independent living apartments, and the generous gaps between the buildings;
- generous setbacks from the residential neighbours together with the retention of existing mature trees along Kohimarama Road, large areas of vegetation to the south, and additional proposed planting;
- the main entrance and pedestrian access from John Rymer Place and a secondary skybridge access from Kohimarama Road, marked by feature entrances and signage;
- the basement and podium parking that minimise at-grade car parking; and
- emphasis on the roof form modulation and façade articulation to reduce the perceived scale of the development.

While they are not ideal the following discrepancies can be supported:

- The proposal consists of 29 south-east facing units and 11 corner units (40 out of 296). These units constitute less than 10% as having southern aspect, which is acceptable as per the guidance provided in the ADM. In addition, the proposal provides for a generous amount of communal space or a 'social heart' for all residents in the form of landscaped podiums, a bowling green, and other shared amenities. I agree with the urban design assessment that those units with a less than ideal solar aspect will provide an affordable choice within the development.

At s92 stage, some questions were raised regarding the extent of hypothetical buildings shown along the residential interfaces. However, I agree with the urban design assessment (paragraph 5.25) that a complying bulk and height closer to the boundary would visually screen buildings higher up the slope. More importantly from the visual impact aspect, the articulation of the southern façades of buildings B01, B03, B05 & B06 will provide a consistent design for all of these facades with the warm timber screens and balconies. This will aid to avoid the suggestion of a 'back' to the development, in particular from views along John Rymer Place.

4.3 Building Height & Bulk

The proposed development includes several external building envelope infringements in relation to building height. The proposal generally complies with the HiRTB requirements, except along the interface to the west adjoining Selwyn College. The proposal's height and HiRTB infringements are clearly set out in the application drawings (044-ASM-S01-A0-005 – Rev.A).

In relation to this, the applicant has included a LVEA report to illustrate and provide an analysis of the extent of potential visual effects the proposal is likely to generate.

I generally agree with various assessments provided with the application and consider the building height infringements to be appropriate for the site and its context mainly for the following reasons:

- The views from surrounding streets show highly modulated roof forms, and/or upper levels of proposed buildings are progressively stepped above the existing residential environs, which while noticeable, do not present a dominant bulk from the public realm;
- I consider the effects to be similar as viewed from the wider residential neighbourhood beyond Kohimarama Road and John Rymer Place;
- In my opinion, the greatest impact of the higher height is along the interface with Selwyn College, where the height infringements are closest to the boundary. However, the landform, the building form, the building and roof articulation, gaps between buildings, and boundary setbacks together with the intervening landscape response along this interface will create an outcome that is comparable to the built form envisaged within the MHU zone.
- I agree with the assessment provided by Mr Bird and Ms Skidmore regarding the adjacent residences to the north and north-east, adjoining Kohimarama Road and at the northern end of John Rymer Place.

Mr Bird has noted in his conclusion that, *"I have identified in Section 7.0 a small number of directly adjoining residential properties on John Rymer Place that may be affected to a minor extent"*. He concludes that from an urban design perspective, the proposed village has his strong support.

However, I have outstanding concerns in terms of Building B06 and the proposed landscape mitigation along the south and south-east interface. In my opinion, the immediate adjoining neighbours will view Building B06 as visually bulky and dominant due to the steep slope, height, roof form and when viewed in the expanse of the proposed buildings.

The residential outlook (in particular for 17, 19, 27, 27A, 29, 35, 35A, 1/37, 2/37, 45A John Rymer Place) is proposed to be mitigated by a combination of the existing vegetation on site and the proposed landscape strategy. As Ainsley Verstraeten has highlighted in her preliminary review (dated 17.07.2020),

"existing vegetation on site is proposed to be retained as well as new planting (mixed native planting) to be established along the boundary with 19, 19A and 27A John Rymer Place. The detail of this planting is not provided as part of the application;

the plant schedule of the typical mixed native planting detail indicates relatively small plant grades at the time of planting, which in my opinion would take some time to establish to a height that achieves any form of screening. In any case this planting will only assist in reducing effects for immediate neighbours only.

In addition, although there is existing planting proposed to be retained there is no guarantee that this planting will remain as the application proposes to remove weed species overtime”.

The concern raised by the landscape architect exacerbates the bulk related issue associated with Building B06 and hence I consider the higher height at that end as not appropriate in close proximity to the above identified residences.

4.4 Design Quality and Public Amenity

In addition to a building's form, bulk and height, key factors influencing the impact of a building upon the public realm include the quality of its design and materials, and its contribution to the safety and vibrancy of the street.

In my opinion the proposed architectural design strategy is well-considered and utilises a combination of visual modulation to manage the higher than anticipated height and bulk. In particular:

- The proposed graduating form and bulk reflects the underlying topography and I agree with Mr. Bird that *“this stepped approach to the Proposed Village building forms will result in the Proposal presenting as having a predominantly 2 - 3 storey character that will positively blend with and generally maintain the existing visual character of John Rymer Place”*;
- In addition, the stepping back of additional levels on all sides (excluding Selwyn College) and the generous setbacks from adjacent residential interfaces, will reduce overlooking and dominance whilst contributing positively to the building form;
- As noted in Ms Skidmore’s LVEA, *“in some instances, views of the taller Buildings B01, B02, B04, B06 and B07 from John Rymer Place, will be screened by the intervening and interspersed lower, stepped forms and heights of Buildings B01, B03 and B05”*;
“The six buildings and the variation in their form, materials, colours, shadows and silhouette against the sky will assist in reading these buildings as a ‘family’ of buildings, each with their individual character”.

Overall, the proposed design includes a number of architectural design gestures to provide a high level of articulation that will assist in mitigating the perceptions of scale. In addition to the strong modulation of the roof and façade elements, the building finishes consist of high-quality materials, surface finishes and colours. All of which contribute to reducing the perceived scale of the building cluster and manage adverse visual effects on the surrounding neighbourhood.

Building B01 has a large footprint with portions of the upper levels extending above the 11m height standard. However, this building is highly modulated both in plan and elevation. It will also be largely obscured by existing vegetation, residential properties along Kohimarama Road, and by buildings B03 and B05 from along John Rymer Place.

In relation to buildings B02 to B06, the vegetated quality of the site will assist to restrict direct views to and from the development. For the lower level blank carpark walls facing the John Rymer Place residences, it is proposed to contour the ground plane up the wall and to use a mix of trees and shrubs to screen the walls. However as discussed earlier, concerns remain for the south & south eastern interface with regard to the cumulative effect of the proposed height of Building B06; potential reduction of the existing southern bush and the ability of the proposed

vegetation to provide screening and green buffer until such time as the proposed planting is established on site.

Onsite and internal amenity of apartment units

The apartments have been designed as a 'comprehensive care' product to cater for a wide range of residents. As a result, the apartments and their associated private open spaces vary in size, amenity, outlook and solar access. In general, most apartment units benefit from well considered floor plans and include private open spaces (balconies) that are immediately accessed from internal living areas. In addition, a range of indoor and outdoor amenities are an integral part of the proposal which future residents will benefit from.

The only weakness to the residential floor plans is the creation of apartment units on the south side of buildings B01 to B06. This equates to 40 apartments from a total of 296 that will experience a southerly aspect, which is typically looked to be avoided. Urban design guidance on the Auckland Design Manual recommends "at least 70% of living rooms and private open spaces in a development should receive a minimum of three hours of direct sunlight". The 40 south-facing apartments equal about 13% of the total number of apartments proposed, therefore the residential amenity of the proposal is considered to be within the best practice guidance.

4.5 Street Interface and Streetscape Character

The site's shape, topography and the functionality of the retirement village limits the front door presence to both Kohimarama Road and John Rymer Place. The retention of the existing Oak tree and Pohutukawa trees will retain the existing character along the Kohimarama frontage which is positive. The proposed vehicle access and the sky bridge pedestrian entrance combined with the proposed building design will provide adequate activation and opportunities for passive surveillance, which will contribute to the existing street environ.

Along John Rymer Place, the main entrance is clearly marked by the feature brick wall / signage. The buildings are set well back from this entry however the landscaped access to the development will contribute to a strong sense of arrival while remaining recessive to the existing residential environ.

Overall, a comprehensive signage strategy is important in relation to pedestrian and vehicle entrance and access.

Shading along the street

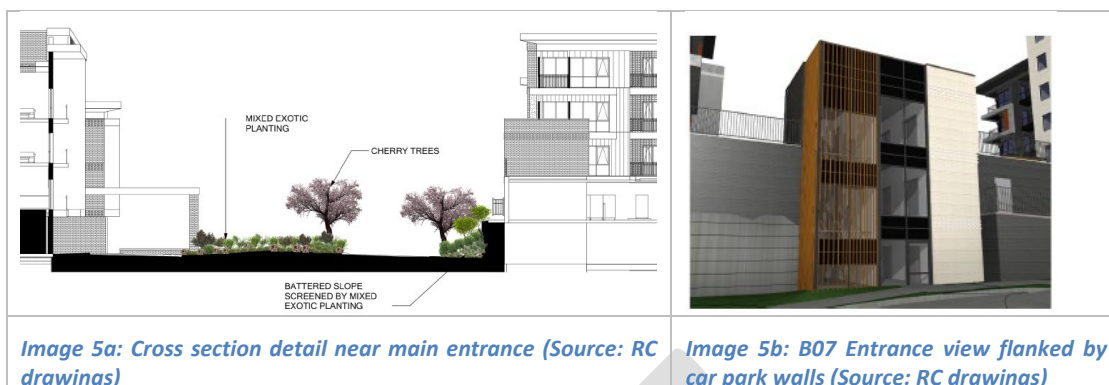
The shading analysis illustrates the extent of potential shading and privacy effects that the proposal is likely to generate over the neighbouring properties and the streets in the surrounding area.

The shading impacts to adjoining neighbours do not form part of my assessment but in terms of additional height and associated bulk, the shading studies (044-ASM-S01-A4-010 to A4-010) demonstrate that an acceptable sunny public realm could be reasonably maintained, and the additional shading does not compromise the public amenity. I also note that the proposal maintains a reasonable level of solar access to publicly accessible areas on site (the internal street and landscaped podiums).

Internal street design

A large extent of the internal street that connects Kohimarama Road to John Rymer Place is characterised by high retaining walls and blank walls of car parking.

- The main entrances of buildings B01 and B07 will have retaining walls up to 3.2m and 2.8m respectively. The proposed mitigation measures include high quality finishes for the retaining walls, as well as landscaped battered slopes and large trees.



- The proposed retaining walls along the internal street range in height from **x.xm** to 6.8m, and the landscape strategy to soften the very high blank-walls include planting above and below with climbers, shrubs and specimen trees. During s92 stage, I had raised concerns regarding the visibility and negative effects of some of these walls on onsite amenity and internal pedestrian environment. In this regard, Ms Verstraeten had recommended the following:

“Given the retaining wall 1 is up to 6.8m tall a taller evergreen species is recommended to more appropriately mitigate these effects and to be planted at a height of at least 3m. I note that the landscape plan also includes climbing plants and low growing shrubs which will assist in minimising these effects, however the detail of these will not be provided till the detailed design stage, and I am conscious that it may take some time for a climber to reach the top of the wall (if at all).

Retaining wall 1 and the surrounding podium will create quite an enclosed space for residents. The retaining wall is also visible in some of the visual simulations from outside of the site. It is important that mitigation measures respond to both of these audiences.

Ms Verstraeten did not agree with the applicant’s response that the proposed design is adequate and thus remains outstanding. From an urban design perspective, as the subject site is proposed to be of a scale and bulk higher than anticipated amidst the established residential environment, concerns associated with significantly high retaining walls should be resolved with appropriate mitigation measures in addition to the realisation of the proposed landscape elements to ensure positive user experience.

4.6 Interface to Neighbours – Outlook / Privacy / Dominance

As discussed in 4.3 & 4.4 above, there will be a perceived bulkiness and dominance due to the higher height and bulk of the cumulative built form for immediate neighbours along John Rymer Place. The existing and proposed vegetation will assist in reducing some of these effects. However, the views for these neighbours rising up the slope (images 6a & 6b) towards the sky will be impacted by higher than anticipated bulk that spans across B06 and B05, particularly for residences along the southern end (27, 29, 35, 35A, 1/37, 2/37, 45A John Rymer Place). Of particular concern is that there is no guarantee that the existing planting will remain as the application proposes to remove weed species overtime.

For residences along the northern end (17, 19, 27A), the views of the proposed height and bulk span across B01 to B05 interspersed with views to B01, B02, B04 and blank walls of the car park podium. The perceived scale and bulk impacts would be of a lesser degree than that of the southern end. However, the proposed bulk would read dominant until the proposed planting is established, as noted by Ms Verstraeten in her preliminary assessment:

“the detail of this planting is not provided as part of the application” and “the plant schedule of the typical mixed native planting detail indicates relatively small plant grades at the time of planting, which in my opinion would take some time to establish to a height that achieves any form of screening”.

Hence from a bulk and dominance perspective, I consider the adjacent residences to the south and south-east of the proposal to be adversely impacted to varying degrees.



Image 6a: View from 35 John Rymer Place (Source: RC Drawings)



Image 6a: View from 27 John Rymer Place (Source: RC Drawings)

5.0 CONCLUSIONS & RECOMMENDATIONS

The proposal will introduce a significant change to the existing character of the site particularly owing to the higher height and bulk on a prominent sloping site but one that is generally considered to be not inconsistent with the zone outcomes, subject to appropriate design resolution for the higher height, bulk and associated dominant built form.

Overall, from an urban design perspective, there are outstanding concerns associated with the following aspects of the design and requires further consideration to reduce potential negative impacts and gain urban design support.

5.1 Height, bulk and landscape response along John Rymer Place interface:

The higher height of B06 is seen as imposing and will present a bulky and dominant outlook for adjoining residents. A reduction in building height and bulk is recommended together with an appropriate architectural response to reduce the perceived scale of this building.

In addition, the proposed landscape strategy requires further refinement:

- Maintenance and management plan including weed removal plan to ensure retention / replacement of the existing vegetation on site.
- Details of the proposed planting should include suitably sized plant grades to provide screening and a soft buffer.


5.2 Retaining and blank walls along internal street:

The retaining wall 1 and the surrounding podium will create quite an enclosed space for residents. The retaining wall is also visible in some of the visual simulations from outside of the site. Hence it is important that mitigation measures respond to both of these audiences as recommended by Ms Verstraeten in her preliminary assessment.

Should you wish to discuss the content of this memorandum or discuss anything further on this application please contact me.

Kind regards,

Sheerin Samsudeen, MA (Urban Design), BArch
Principal Urban Design - Design Review Unit
Auckland Design Office
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Report Peer reviewed by:	Nicole Miller Team Leader – Design Review Unit
Date: 22.06.2020	

PRELIMINARY LANDSCAPE ARCHITECTURE SPECIALIST REPORT

To: Sandy Hsiao, Senior Planner
Russell Butchers, Principal Project Lead
Premium Resource Consenting Unit, Resource Consents Department

From: Ainsley Verstraeten, Principal Landscape Architect
Design Review Unit, Auckland Design Office

Date: 06.08.2020 (updated)

Applicant: Ryman Healthcare Limited

Application: BUN60353138 | 223 Kohimarama Road & 7 John Rymer Place,
Kohimarama

Proposal: Comprehensive care retirement village

Activity Status: Discretionary

Dear Sandy,

Introduction

1. I write to provide my preliminary technical review advice on the above application from a landscape and visual effects perspective.
2. I have visited the site and viewpoint locations, reviewed the application material and the relevant provisions of the Auckland Unitary Plan (Operative in part) (“AUP(OP)”), provided a request for further information and reviewed the further information provided by the application.
3. This preliminary technical review is to initially assist with your notification (under section 95 the Resource Management Act 1991 (“RMA”)) recommendation, with substantive (section 104 RMA) reporting and decision making to come after that determination.

Application material reviewed

4. I have reviewed the following relevant application material:

Submitted with the original application

- “Assessment of Environmental Effects” Prepared by Mitchell Daysh Ltd, dated February 2020;
- “Landscape and Visual Effects Assessment” (LVEA), Prepared by R.A Skidmore, dated February 2020;
- “Urban Design Review” Prepared by Clinton Bird, dated 14 February 2020;

- *“Landscape Plans and elevations”, prepared by Design Squared Landscape Architects, dated 12 February 2020;*
- *“Assessment Site Plans and Drawings”, prepared by Beca, dated February 2020;*
- *“Resource Consent Site Plans and Drawings”, prepared by Beca, dated February 2020*
- *“Visual simulations”, prepared by Ryman Healthcare Limited, note dated.*
- *“Civil Engineering drawings”, prepared by Beca, dated February 2020.*

Submitted as further information in response to Section 92 Request

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- S92 response memo from Mitchell Daysh (including updated drawings), dated 26.05.2020.

Statutory Context

5. I am aware the statutory provisions which apply under the AUP(OP). I understand the site is zoned Residential – Mixed Housing Urban and no overlay or precinct provisions apply.

Review comments – landscape and visual effects

6. I agree with the application Assessment of Environmental Effects that the proposal has the potential to result in at least minor¹ adverse visual effects on some people – for the purposes of a section 95B determination under the RMA. I have however adopted a slightly different rating scale that is consistent with the NZILA best practice guidance². This is appended to the end of this memo. The difference between the two scales is that the Skidmore report includes positive effects. For notification purposes I consider ‘minor’ to align with low.
7. I have also reached a different conclusion to that of the applicant in terms of the extent of these affected persons. My assessment is people that may be adversely affected (to at least a low degree) as a result of the proposal’s landscape and visual effects, extend further into John Rymer Place and include users of this road (residents who use the road to travel to and from their properties). Those who can view the development from their living areas may be adversely affected to a greater degree, however I have not undertaken this detailed analysis in terms of visiting individual properties. (Refer attached map which illustrates the location of properties, within which, there are likely to be people that I consider to be adversely affected to at a low-moderate degree).
8. The reason for this is that residents living on this cul-de-sac not only take their visual amenity from within their own properties but also as part of the experience of travelling to and from their place of residence (although I acknowledge these views are less sensitive than those from indoor and outdoor living areas). While these properties may not be

¹ Low on the rating scale provided within the LVEA

² NZILA Landscape Assessment Best Practice Note 10.1

directly adjoining the Ryman site, the distance these views will be experienced from are not significant enough to moderate the potential adverse visual effects of the development, in my opinion.

9. It is my opinion that residents of John Rymer Place will view the development as visually bulky, dominant and intrusive due to the height of the proposed buildings and visually heavy roof forms. The sloping nature of the site exacerbates these effects on residents living and experiencing their street at a lower elevation.
10. It is noted that existing vegetation on site is proposed to be retained as well as new planting (mixed native planting) to be established along the boundary with 19, 19A and 27A John Rymer Place. The detail of this planting is not provided as part of the application; however, the plant schedule of the typical mixed native planting detail indicates relatively small plant grades at the time of planting, which in my opinion would take some time to establish to a height that achieves any form of screening. I have therefore not relied on this vegetation as part of this assessment. In any case this planting will only assist in reducing effects for immediate neighbours only.
11. In addition, although there is existing planting proposed to be retained there is no guarantee that this planting will remain as the application proposes to remove weed species overtime. I have therefore not heavily relied on this aspect of the proposal.
12. Residents identified within properties along Whytehead Crescent also have the potential for the development to visually dominate their elevated outlook over the site and take up a greater amount of visible skyline than a development of a complying height would. It is my opinion that this is likely to adversely affect their visual amenity to between a low and moderate degree.
13. The above assessment is in consideration of the development's greater intensity and character than anticipated within the Residential - Mixed Housing Urban zone, affecting people's visual amenity values to a moderate degree.
14. Having said the above, it is my preliminary assessment that the proposed retirement village will sit comfortably within its landscape setting when viewed from wider representative public viewpoints (such as VPTs 8, 9 & 10) for the purposes of a section 95A determination. This would therefore align with a very low (less than minor) adverse effects rating.
15. I am also of the opinion that the proposal has many positive attributes from a landscape and visual effects perspective, although this is not taken into consideration in terms of adverse effects.
16. It is however the combined bulk, massing and height on a prominent elevated site, that will result in low – moderate (minor and more than minor) adverse effects on localised landscape and visual amenity values for certain people, above what is anticipated within this zone.

Recommendation

17. Following my preliminary review of the application from a landscape and visual effects perspective, it is my opinion that the proposal will result in at least minor adverse landscape and visual effects on the owners and occupiers of the following properties:
 - a. All of John Rymer Place (other than 2A)
 - b. 5, 7, 9, 11, 15-17, 19, 21, 23, 25, 27 Whytehead Crescent
 - c. 1, 3, 5, 7 Harvey Place

Please let me know if you require any further clarification.

Kind regards,

Ainsley Verstraeten

Principal Landscape Architect BLA NZILA (Registered)

Design Review Unit

Auckland Design Office

Auckland Council

135 Albert St

Direct Dial: 021 807 410

Email: ainsley.verstraeten@aucklandcouncil.govt.nz

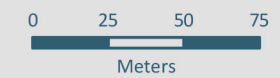
Report Peer reviewed by:	Peter Kensington
Date:	17 June 2020

Appendix 1 – Effects rating scale

EXTREME	Total divergence or loss from the anticipated character, distinctive features or quality of the landscape resulting in a complete change to the landscape or outlook anticipated	MORE THAN MINOR
VERY HIGH	Major change or loss from the anticipated character, distinctive features or quality of the landscape or a significant reduction in the perceived amenity of the outlook	
HIGH	Noticeable change from the anticipated character or distinctive features of the landscape or reduction in the perceived amenity or the addition of new but uncharacteristic features and elements	
MODERATE	Appreciable or partial change to parts of the local landscape; small reduction in some amenity values, including visual intrusion. Divergence from the anticipated character.	
LOW	A slight or minor loss from the anticipated landscape character, features or landscape quality. New elements are not uncharacteristic within the receiving landscape, limited change to amenity values and a low level of visual intrusion	MINOR
VERY LOW	Limited change to landscape character and amenity values or the proposed development is barely discernible with little change to the anticipated character, features or landscape quality	LESS THAN MINOR
NEGIGIBLE	No appreciable change or the proposed development is barely discernible or there are no changes to the existing character, features or landscape quality.	



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Scale @ A3
= 1:2,500

Date Printed:
15/06/2020



From: [Ainsley Verstraeten](#)
To: [Sandy Hsiao](#)
Subject: RE: Ryman Kohi/AC meeting
Date: Wednesday, 22 July 2020 1:16:34 PM
Attachments: [image001.gif](#)
[image002.jpg](#)
[image003.jpg](#)
[image004.jpg](#)

Ok

- The conservative approach is due to a lack of detailed analysis from the applicant. The applicant could provide further information to demonstrate that the properties I have identified will not be adversely affected by visiting these properties and providing photographs or perspectives etc. I have worked on other applications where applicants have provided this information with their lodged documents.
- My assessment does not consider any view to be adverse nor is it an assessment on visual change. My assessment is based on the proposed development and any effects above what could be anticipated on the site under the MHU zone.
- I agree that street users or transient views are generally considered to have a lower sensitivity to change. My assessment is based on this street environment being a cul de sac with residents who are likely to have a greater sense of ownership over this space and therefore take some of their amenity values based on this street environment. The consented connection to the Glenn Innes to Tamaki Drive shared path at the end of John Rymer Place means that residents who live at the upper end of their street may now walk down towards this path. Therefore I have not just considered the higher sensitivity spaces from within residents living areas. I acknowledge and agree that views from a living area would be given a greater sensitivity rating, that does not mean that amenity values from within the streetscape can be disregarded in an assessment of landscape and visual effects.
- I have focussed on the height and bulky nature of the proposed retirement village when considering adverse effects for notification purposes. I agree that the stepping and spacing of the built form is a positive element of the design.
- With regards to the proposed planting I have also considered this, however when viewed from below the site most of this vegetation is not visible so does not assist in reducing visual dominance effects. I agree that the planting will embed the buildings in their setting. However this is only appreciable from closer towards the entrance to the site on John Rymer or from a wider distance where I do consider it to have had a positive impact. The proposed planting along the southern boundary is discussed in my memo as is the existing vegetation.
- As I mentioned at the meeting with Rebecca, distance does play a role, however so does elevation and the particular characteristics of this area mean that distance cannot be considered alone.
- With regards to the comments / recommendations from the Urban Design Panel, please note that visual simulations were not provided at the time of this.

Many thanks

Ainsley

Ainsley VERSTRAETEN | Principal Landscape Architect NZILA (Registered)

Design Review

Auckland Design Office (ADO)

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Private bag 92300, Victoria Street West, Auckland 1142
Visit our website: www.aucklandcouncil.govt.nz

From: [Andrew Gordon](#)
To: [Sandy Hsiao](#)
Cc: [Russell Butchers](#)
Subject: RE: Noise peer review [PREMIUM] [RYMANS] BUN60353138 Rymans Healthcare 223 Kohimarama Road and 7 John Rymer Place
Date: Thursday, 18 June 2020 10:28:12 AM
Attachments: [image009.png](#)

Hi Sandy,

In regard to noise effects I have reviewed the:

- s92 response memo dated 12 June 2020 prepared by Mitchell Daysh
- s92 response letter dated 11 June 2020 prepared by Marshall Day Acoustics
- updated Draft CNVMP dated 11 June 2020 (revision 1) prepared by Marshall Day Acoustics

I confirm the response is satisfactory. No further information is requested.

I note the applicant is requesting limited notification to the following 12 sites:

- Owner / occupier of 249A Kohimarama Road – visual effects;
- Owner / occupier of 3A John Rymer Place – visual effects;
- Owner / occupier of 5 John Rymer Place – visual effects;
- Owner / occupier of 9 John Rymer Place – visual effects;
- Owner / occupier of 17 John Rymer Place – visual effects;
- Owner / occupier of 17A John Rymer Place – visual effects;
- Owner / occupier of 19 John Rymer Place – visual effects;
- Owner / occupier of 19A John Rymer Place – visual effects;
- Owner / occupier of 27A John Rymer Place – visual and shading effects;
- Owner / occupier of 29 John Rymer Place – shading effects;
- Owner / occupier of 35 John Rymer Place – shading effects; and
- Owner / occupier of 35A John Rymer Place – shading effects.

You may wish to add sites listed in Appendix C of the CNVMP predicted to receive noise ≥ 70 dB LAeq (permitted standard). Note some of these sites are already included above.

I suggest as a minimum the following 5 sites should be added (predicted to receive noise ≥ 80 dB LAeq discontinuously for 2 weeks): -

--

APPENDIX C LIST OF RECEIVERS PREDICTED TO RECEIVE NOISE ABOVE 70 DB LAEQ

Receiver	Predicted noise level (dB LAeq) (07:30 – 18:00)	Indicative total duration of exceedance (weeks)	Continuous or discontinuous exceedance?	Exceedance during which stage of construction
3 John Rymer Place	71	2	Discontinuous	2
5 John Rymer Place	87	2	Discontinuous	2
9 John Rymer Place	85	2	Discontinuous	2
11 John Rymer Place	76	2	Discontinuous	2
15 John Rymer Place	72	2	Discontinuous	2
17 John Rymer Place	82	2	Discontinuous	2
17A John Rymer Place	82	2	Discontinuous	2
19 John Rymer Place	85	2	Discontinuous	2
19A John Rymer Place	85	2	Discontinuous	2
27 John Rymer Place	82	2	Discontinuous	2
27A John Rymer Place	85	2	Discontinuous	2
29 John Rymer Place	76	2	Discontinuous	2
35 John Rymer Place	84	2	Discontinuous	2
35A John Rymer Place	84	2	Discontinuous	2
1/37 John Rymer Place	76	2	Discontinuous	2
2/37 John Rymer Place	84	2	Discontinuous	2
43 John Rymer Place	73	2	Discontinuous	2
45 John Rymer Place	76	2	Discontinuous	2
45A John Rymer Place	85	2	Discontinuous	2
47 John Rymer Place	84	2	Discontinuous	2
49 John Rymer Place	83	2	Discontinuous	2

Regards

Andrew Gordon | Specialist

Contamination, Air & Noise Team | Specialist Unit

Ph 09 301 01 01 | Mobile 027 482 3527

Auckland Council, Level 2, 35 Graham Street, Private Bag 92300, Auckland 1142

Visit our website: www.aucklandcouncil.govt.nz

From: Karen Joubert <karen.joubert@mitchelldaysh.co.nz>

Sent: Friday, 12 June 2020 8:59 AM

To: Sandy Hsiao <Sandy.Hsiao@aucklandcouncil.govt.nz>
Cc: Russell Butchers <russell.butchers@aucklandcouncil.govt.nz>; Andrew Gordon <Andrew.Gordon@aucklandcouncil.govt.nz>
Subject: RE: Noise peer review [PREMIUM] [RYMANS] BUN60353138 Rymans Healthcare 223 Kohimarama Road and 7 John Rymer Place

Hi Sandy

Please receive **enclosed** Ryman's response to the last outstanding noise matter.

Kind regards

 **Karen Joubert**
Associate

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www.mitchelldaysh.co.nz

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From: Sandy Hsiao <Sandy.Hsiao@aucklandcouncil.govt.nz>
Sent: Monday, 18 May 2020 10:34 AM
To: Karen Joubert <karen.joubert@mitchelldaysh.co.nz>
Cc: Russell Butchers <russell.butchers@aucklandcouncil.govt.nz>
Subject: FW: Noise peer review [PREMIUM] [RYMANS] BUN60353138 Rymans Healthcare 223 Kohimarama Road and 9 John Rymer Place

Hi Karen,

Please refer to the below comments from Andrew after his review of the s92 responses, and provide the following information, so we can be clear on which properties will experience infringements, for how long, and at what stage of the development:

1. Please provide a list of all the site addresses that are predicted to receive noise infringements, and include:
 - a. The noise levels experienced at that property/ extent of infringement(s);
 - b. The total duration that the infringement will occur (and whether it is continuous or discontinuous);
 - c. Which stage and season(s) (1st/2nd/3rd) the infringements are expected at the property.

Please include this information in an appendix in the CNVMP.

Thanks,
Sandy

From: Andrew Gordon <Andrew.Gordon@aucklandcouncil.govt.nz>
Sent: Monday, 18 May 2020 9:34 AM
To: Sandy Hsiao <Sandy.Hsiao@aucklandcouncil.govt.nz>

Subject: RE: Noise peer review [PREMIUM] [RYMANS] BUN60353138 Rymans Healthcare 223 Kohimarama Road and 9 John Rymer Place

Hi Sandy,

In regard to noise effects and items 33 – 38, I comment as follows.

Noise and Vibration (New s92 questions)

33. Please estimate the range of construction noise levels at affected receivers during Stage 2 earthworks.
34. As the minimum setback distances of 14m and 38m from vibratory rolling during Stages 2 and 4 may not be met means that structure and amenity vibration standards will not be met. If practicable, please indicate the sites which may be affected, the extent of vibration infringements in mm/s PPV and estimated infringement durations.
35. Please confirm that structural and amenity vibration permitted standards will be met at all adjacent buildings during vibratory sheet piling (Stage 3) (e.g. at the buildings adjacent to east and south sheet piling locations).
36. Noise infringements during vibratory rolling during stage 4 are predicted at the two nearest dwellings at 17 and 17A John Rymer Place with noise predicted up to 78 dB LAeq. Please estimate the duration of the noise infringement. (It is noted with mitigation in place compliance is expected).
37. Please provide comment about LAE_{max} levels and compliance with the permitted standard.
38. Please provide comments from a suitably qualified acoustic specialist that operational noise from the site (including cumulative noise effects) will comply with permitted noise standards in AUP (OP) E25.6.2 and, if specific noise management and/or mitigation measures are necessary to ensure compliance, please describe these measures.

The response is generally satisfactory.

I confirm resource consent is required to infringe E25.6.27 during stage 2 earthworks by up to 17 dB for an expected duration of no more than 2 weeks. However, as Stage 2 is expected to take 3 “seasons” (generally October to April over 3 years) and each season will comprise 30 weeks, it is not clear if the duration infringement is a total of 2 weeks.

Also, I should have requested to identify the receiver sites where noise infringements are predicted. In my view, these sites are likely to be: -



Permitted vibration standards will be met by selecting suitable compaction machinery for works within 38m of the subject site boundary.

In regard to item 38, I agree operational noise must comply with E25.6.21 when received within Selwyn College (school not located in the Special Purpose – School Zone) and E25.6.2 for remaining sites zoned residential (where standards are 5 dB more stringent).

Further information

I suggest sites predicted to receive noise infringements are confirmed and site addresses included in an appendix in the CNVMP and, the total duration of the infringement is confirmed and which season(s) (1st/2nd/3rd) when infringements are expected.

Regards

Andrew Gordon | Specialist
Contamination, Air & Noise Team | Specialist Unit
Ph 09 301 01 01 | Mobile 027 482 3527
Auckland Council, Level 2, 35 Graham Street, Private Bag 92300, Auckland 1142
Visit our website: www.aucklandcouncil.govt.nz

From: Sandy Hsiao <Sandy.Hsiao@aucklandcouncil.govt.nz>
Sent: Thursday, 14 May 2020 10:54 AM
To: Sheerin Samsudeen <Sheerin.Samsudeen@aucklandcouncil.govt.nz>; Ainsley Verstraeten <Ainsley.Verstraeten@aucklandcouncil.govt.nz>; Andrew Gordon <Andrew.Gordon@aucklandcouncil.govt.nz>
Subject: RE: Noise peer review [PREMIUM] [RYMANS] BUN60353138 Rymans Healthcare 223 Kohimarama Road and 9 John Rymer Place

Hi All,

I have downloaded the information into this folder: [\\aklc.govt.nz\Shared\COO\Resource Consents\Premium Unit\Project Management\Ryman Healthcare\Kohimarama \(BUN60353138\)\10 Further info\14.05.2020 noise and UD,landscape](\\aklc.govt.nz\Shared\COO\Resource Consents\Premium Unit\Project Management\Ryman Healthcare\Kohimarama (BUN60353138)\10 Further info\14.05.2020 noise and UD,landscape)

And have attached the Word document with the outstanding s92 points and comments.

Thanks,
Sandy

From: Karen Joubert <karen.joubert@mitchelldaysh.co.nz>
Sent: Thursday, 14 May 2020 8:51 AM
To: Russell Butchers <russell.butchers@aucklandcouncil.govt.nz>; Sandy Hsiao <Sandy.Hsiao@aucklandcouncil.govt.nz>
Cc: Sheerin Samsudeen <Sheerin.Samsudeen@aucklandcouncil.govt.nz>; Ainsley Verstraeten <Ainsley.Verstraeten@aucklandcouncil.govt.nz>; Andrew Gordon <Andrew.Gordon@aucklandcouncil.govt.nz>
Subject: RE: Noise peer review [PREMIUM] [RYMANS] BUN60353138 Rymans Healthcare 223 Kohimarama Road and 9 John Rymer Place

Good morning Russell and Sandy

Please access Ryman's response to the outstanding urban design & landscape as well as noise & vibration requests for further information here: [Further Urban Design & Landscape and Noise & Vibration matters](#).

Note that requests for further information listed in the letter dated 1 May 2020 that have already been responded to, have not been included in this response. Also, the additional comments from Ainsley on the landscaping for the retaining wall on the Selwyn College boundary has not been included and will follow in due course.

Kind regards

 **Karen Joubert**
Associate

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www.mitchelldaysh.co.nz

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From: Russell Butchers <russell.butchers@aucklandcouncil.govt.nz>

Sent: Wednesday, 29 April 2020 3:31 PM

To: Karen Joubert <karen.joubert@mitchelldaysh.co.nz>

Cc: Sandy Hsiao <Sandy.Hsiao@aucklandcouncil.govt.nz>

Subject: FW: Noise peer review [PREMIUM] [RYMANS] BUN60353138 Ryman's Healthcare 223 Kohimarama Road and 9 John Rymer Place

Hi Karen,

Please see comments from the noise specialist below, including draft s92 matters at the end of the email.

As a formal s92 letter has not been issued for this application, Sandy will be compiling any outstanding matters and issuing a s92 letter in due course.

Regards,

Russell Butchers Principal Project Lead
Auckland Council | Premium Resource Consents

Mob: 021 301 968 | 35 Graham Street, Level 2 West | russell.butchers@aucklandcouncil.govt.nz

From: Andrew Gordon <Andrew.Gordon@aucklandcouncil.govt.nz>

Sent: Wednesday, 29 April 2020 1:48 PM

To: Sandy Hsiao <Sandy.Hsiao@aucklandcouncil.govt.nz>

Cc: Russell Butchers <russell.butchers@aucklandcouncil.govt.nz>

Subject: RE: Noise peer review [PREMIUM] [RYMANS] BUN60353138 Rymans Healthcare 223 Kohimarama Road and 9 John Rymer Place

Hi Sandy,

I have reviewed the following documents in regards to acoustic matters and compliance with E25: -

- Resource Consent Applications and Assessment of Environmental Effects, Volume 1, dated April 2020 prepared by Mitchell Daysh Limited
- Volume 2, Appendix A Resource Consent Site Plans and Drawings, February 2020
- Volume 2, Appendix H Geotechnical Assessment, Tonkin and Taylor (2019)
- Construction Noise and Vibration Assessment dated 16 April 2020 prepared by Marshall Day Acoustics
- Construction Noise and Vibration Management Plan dated 9 April 2020 prepared by Marshall Day Acoustics

Operational noise

The site and surrounding sites are zoned Residential and therefore permitted standards are specified in E25.6.2: -

E25.6.2. Maximum noise levels in residential zones

(1) The noise (rating) levels and maximum noise level arising from any activity in the Residential – Large Lot Zone, Residential – Rural and Coastal Settlement Zone, Residential – Single House Zone, Residential – Mixed Housing Suburban Zone, Residential – Mixed Housing Urban Zone and the Residential – Terrace Housing and Apartment Buildings Zone measured within the boundary of an adjacent site in these residential zones must not exceed the levels in Table E25.6.2.1 Noise levels in residential zones below:

Unitary Plan Operative in part 4

E25 Noise and vibration

Table E25.6.2.1 Noise levels in residential zones

Time	Noise level
Monday to Saturday 7am-10pm	50dB LAeq
Sunday 9am-6pm	40dB LAeq
All other times	75dB LAmax

Compliance with the above standards will ensure residential amenity for adjacent sites is maintained.

Operational noise is briefly discussed in 5.13: -

5.13 OPERATIONAL NOISE

Traffic and mechanical plant noise will be the main sources of noise during the operation of the Proposed Village.

With respect to traffic, noise generated by vehicles entering and exiting the Site will be negligible and in accordance with that commonly experienced on public roads in Auckland. It is also noted that the scale of the Proposed Village, specifically the number of units proposed, means that the development is a permitted activity in the AUP respect of traffic generation.

Based on Ryman's extensive experience at other retirement villages, noise from the mechanical plant can be treated and controlled using well tested engineering methods and enclosure within the basement of buildings. As such, and as noted in Section 4 of the AEE, the mechanical plant will achieve the permitted activity standards for operational noise specified in the AUP.

Finally, it is noted that emergency generators will only be used infrequently in the event of a mains electricity outage.

The following noise sources are relevant:

- onsite vehicle movements of approximately 759 vehicle trips per day or approximately 41 vehicle movements per hour during the morning peak and 50 vehicle movements per hour during the afternoon peak
- parking areas with 192 spaces
- John Rymer Place will be used as the primary vehicle access
- ancillary activities within Building B01 (as listed in section 2.3.1)
- loading and refuse pick up areas
- emergency generators

I generally agree operational noise (including cumulative noise) should comply with permitted noise standards mentioned above without any practical difficulty. However, given the scale of the development I suggest this conclusion is confirmed by an acoustic specialist.

Construction noise and vibration

A high level assessment has been completed given the proposed construction methodology and typical machinery likely to be used has yet to be finalised.

The construction period is expected to be approximately 36 - 42 months and is likely to be undertaken in four stages although this approach may change as the construction methodology is developed and finalised.

Noisy works will be restricted to between 7.30am – 6pm, Monday to Saturday (when the highest noise standards apply).

Earthworks are necessary in order to construct the foundations and basements of each building, establish the internal roading network and install infrastructural services. Excavation of approximately 52,874 m³ of cut and approximately 5,750 m³ of fill over the entire site is proposed except for the north western vegetated area. There will be excess cut over fill of approximately 47,124 m³.

Various retaining walls will be constructed – the maximum height being 6.1m next to Selwyn College.

Auger piling and vibratory piling is proposed.

The programme is reproduced below: -

Stage	Activity	Hours of Operation	Approximate Duration (weeks)	Estimated no. of Truck Movements per Hour
1	Initial site works	0700 – 1800 hrs	4 weeks	2
2	Earthworks / removal of existing buildings	0700 – 1800 hrs	3 seasons (30 weeks each)	6 – 8
3	Construction and Fitting out	0700 – 1800 hrs	Staged over 156 weeks	18 – 34
4	Vehicle Crossings	0700 – 1800 hrs	6 weeks	12 – 26

The closest receiver distances to the site boundary varies from 4m to 12m. Distances to actual working areas are still to be confirmed as part of the final construction methodology. Therefore, our assessment has been carried out on a high level.

Machinery (listed in Table 5) operating within the associated minimum setback distance will give rise to infringements unless effective mitigation is provided.

Stage 1

I agree effects will be acceptable given the adequate setback distances from the works to nearest receivers. Acoustic barriers, if required, can be used to ensure compliance with noise standards.

Compliance is expected with permitted vibration standards.

Stage 2

All bulk earthworks will be carried out.

As machinery such as excavators and loaders will move around the site, receivers will be exposed to a range of noise levels (referred to as transitory by MDA). Some of the time noise will be below 70 dB LAeq and other times infringe 70 dB LAeq. Infringements will generally occur at the first row of dwellings along Kohimarama Rd (5 sites) and John Rymer Place (approximately 12 sites).

MDA state no individual receivers would be exposed to high noise for more than 2 weeks. **It is not clear if high noise means levels above 70 dB LAeq. The extent of the noise infringement is not estimated.**

Noise would comply at Selwyn College providing acoustic barriers are installed.

I agree the highest potential vibration creating activity is vibratory rolling for compaction.

The minimum setback distances of 14m and 38m from vibratory rolling may not be met means that structure and amenity vibration limits will not be met. **Affected dwellings are not identified.**

MDA recommend vibratory rolling is not carried out within 14m of any dwelling. If alternative compaction methods are not practicable then MDA recommend:

1. Consultation be carried out with those receivers to understand their sensitivities
2. A pre-construction building condition survey is carried out prior to high vibration work commencing
3. Vibration monitoring should be carried out in the first instance of rolling
4. If monitoring reveals an infringement (e.g. > 5 mm/s PPV) then works must stop, and a condition survey carried out. If no cosmetic damage has been found, then the vibration limit at that receiver can be increased. If there has been cosmetic damage found due to the earthworks then the contractor must repair the damage to a condition that is equal or better to what it was prior to the construction works commencing and at the consent holders cost. A post-construction building condition survey should also be carried out to ensure any potential damage due to vibration has been identified.

This approach is generally acceptable.

Stage 3

Piling for building foundations and associated concreting operations will be dominant noise sources

Auger piling can comply.

Generally, noisier vibratory sheet piling can comply with mitigation in place (i.e. barriers)

Vibratory sheet piling close to Kohimarama Rd will infringe the noise standard at 3 sites due to the setback distance to these receivers (expected duration is one week). The extent of the infringement is not stated but expected to be up to 75 dB LAeq 1m from the most exposed façade at 224 Kohimarama Rd.

In regard to vibration, the minimum setback distance of 30m from vibratory piling is reported as being met means the amenity permitted vibration limit will be met. **This should be checked as the dwelling at 224 Kohimarama Rd appears to be less than 30m away.**

Stage 4

Construction of internal roads and access crossings.

As stated in the report, noise infringements are predicted at the two nearest dwellings at 17 and 17A John Rymer Place with noise predicted up to 76 dB LAeq. **The duration of the noise infringement is not estimated.**

With mitigation in place compliance is expected.

In regard to vibration, the same comments for vibratory rolling in stage 2 apply to stage 4.

General

Reasons for resource consent include infringing noise standards in E25.6.27 and vibration standards in E25.6.30 (1) (a) and (b).

In my view the high level assessment and Draft CNVMP is appropriate at the application stage as it gives a good indication of expected noise and vibration levels and the number of affected receivers. I note however there are no specific comments on effects for affected receivers (e.g. level of annoyance, level of disturbance of residential activities).

Further detailed information confirming the extent and duration of predicted noise and vibration infringements,

the location of affected receivers, the management and mitigation measures that will be implemented will need to be provided once the construction methodology design is finalised. This is not likely to be possible until a Final CNVMP is submitted post application.

I note the conclusion includes: - *“Although the AUP has two sets of vibration limits (cosmetic building damage limit and the amenity limits), we consider that for construction management, the cosmetic building damage limit should be used. The amenity limit should be used to inform consultation procedures.”*

This approach is not contained in E25. Any infringement of the amenity vibration standard is a reason for consent as mentioned above. Vibration levels exceeding 2 mm/s PPV will be perceivable and may cause discomfort to sensitive receivers. Furthermore, I note Appendix C shows if vibratory rolling is used there is potential for the amenity vibration standard to be infringed at approximately 44 sites (including Selwyn college).

The acoustic assessment reports written approval has been obtained from Selwyn College. Therefore effects on the school can be disregarded.

Draft CNVMP

Generally the document contains all essential information. The Final CNVMP should confirm: -

- the highest predicted noise and vibration levels
- the duration of all noise and vibration infringements
- list of site addresses where infringements are predicted - ideally in three appendices (noise, structural vibration and amenity vibration)
- when and where temporary barriers will be installed
- what mitigation and management measures will actually be implemented
- sites that will be subject to building pre-condition surveys
- information included in the section 92 request below for items 1 – 5 (where not covered above).

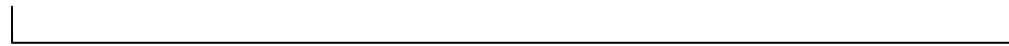
Suggested s92 request: -

1. Please estimate the range of construction noise levels at affected receivers during Stage 2 earthworks.
2. As the minimum setback distances of 14m and 38m from vibratory rolling during Stages 2 and 4 may not be met means that structure and amenity vibration standards will not be met. If practicable, please indicate the sites which may be affected, the extent of vibration infringements in mm/s PPV and estimated infringement durations.
3. Please confirm that structural and amenity vibration permitted standards will be met at all adjacent buildings during vibratory sheet piling (Stage 3) (e.g. at the buildings adjacent to east and south sheet piling locations).
4. Noise infringements during vibratory rolling during stage 4 are predicted at the two nearest dwellings at 17 and 17A John Rymer Place with noise predicted up to 76 dB LAeq. Please estimate the duration of the noise infringement. (It is noted with mitigation in place compliance is expected).
5. Please provide comment about LAFmax levels and compliance with the permitted standard.
6. Please provide comments from a suitably qualified acoustic specialist that operational noise from the site (including cumulative noise effects) will comply with permitted noise standards in AUP (OP) E25.6.2 and, if specific noise management and/or mitigation measures are necessary to ensure compliance, please describe these measures.

Please let me know if you have any concerns or queries.

Regards

Andrew Gordon | Specialist
Contamination, Air & Noise Team | Specialist Unit
Ph 09 301 01 01 | Mobile 027 482 3527
Auckland Council, Level 2, 35 Graham Street, Private Bag 92300, Auckland 1142
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MEMO

Date: 24 August 2020

To: Russell Butchers Premium Project Manager
Sandy Hsiao Planner

From: Kuanjin (Jin) Lee Regulatory Engineering - Central
Auckland Council Operations Division

Subject: Regulatory Engineering Review
Resource Consent Application – BUN60353138
223 Kohimarama Road and 9 John Rymer Place

INTRODUCTION

I understand it is proposed to construct 7 new buildings at the subject site. The seven new buildings shall comprise:

- 98 care rooms
- 75 assisted living suites
- 123 apartment units
- Common spaces for bowling

Proposed Site



The following comments relate to your brief to me, specifically looking at:

- Infrastructure (Stormwater, Wastewater and Water Supply)
- Flooding
- Earthworks

As part of the review, I have assessed the information provided in the following:

- Auckland Council GeoMaps
- Proposed Comprehensive Care Retirement Village, Resource Consent Applications and Assessment of Environmental Effects by Ryman Healthcare (dated: February 2020)
- Ryman Healthcare Proposed Comprehensive Care Civil Design Report Kohimarama by Beca Limited (reference: 3124460, NZ1-16663405-6 0.6, revision: C, dated; 14 February 2020)
- Ryman Healthcare Proposed Comprehensive Care Stormwater Management Plan Kohimarama by Beca Limited (reference: 3124460, NZ1-16661235-16 0.16, revision: A, dated; 14 February 2020)
- Geotechnical Assessment of Environmental Effects by Tonkin & Taylor Limited (reference: 30314.v2, dated: October 2019)
- Email RE: Capacity Review – 223 Kohimarama Road Kohimarama – (Ref. 86364) from Tarso Girio of Watercare Services Limited to Shilaj Shah of Beca Limited (dated: 17 December 2019)
- Letter RE: Firefighting Water Supply at 223 Kohimarama Road by Nova Flowtec Services Limited (dated: 10 September 2019)
- Email RE: RE: BUN60353138 Rymans Healthcare 223 Kohimarama Road and 9 John Rymer Place from Katja Huls of Healthy Waters to Sandy Hsiao of Resource Consents Central (dated: 19 March 2020)
- Memo RE: Further Information Response – 223 Kohimarama Road and 7 John Rymer Place, Kohimarama by Mitchell Daysh to Auckland Council (dated: 17 April 2020)
- Letter RE: 223 Kohimarama Road and 7 John Rymer Place, Kohimarama Geotechnical and Groundwater Response to s92 Comments from Tonkin & Taylor Limited to Ryman Healthcare Limited (reference: 30314, dated: 7 April 2020)
- Memo SUB: Ryman Kohimarama Road – Section 92 Query Responses from Beca to Mitchell Daysh (reference: 3125560-221-S92, dated: 17 April 2020)
- Letter RE: Council Resource Consent number BUN60353138, 223 Kohimarama RD Kohimarama 1071, Watercare Application Number – RC 17697 from Watercare Services Limited to Auckland Council (dated: 13 May 2020)
- Memo RE: Further Information Response – 223 Kohimarama Road and 7 John Rymer Place, Kohimarama by Mitchell Daysh to Auckland Council (dated: 29 May 2020)
- Letter RE: 223 Kohimarama Road and 7 John Rymer Place, Kohimarama, Geotechnical and Groundwater Response to s92 Question 14 by Tonkin and Taylor Limited (reference: 30314, dated: 27 May 2020)
- Email RE: Curly SW COP question... BUN60353138 Rymans Healthcare 223 Kohimarama Road and 7 John Rymer Place from Matthew Yu of Regulatory Engineering Central to Kuanjin Lee of Regulatory Engineering Central (dated: 16 June 2020)
- Ryman Healthcare Limited Scott Road, Hobsonville Construction Management Plan by Ryman Healthcare (dated: September 2019)
- Email RE: Ryman Kohi/AC meeting from Karen Joubert of Mitchell Daysh to Sandy Hsiao of Resource Consents Central (dated: 22 July 2020)
- Appendix C – Fire Hydrant Markups.pdf provided within Email RE: Ryman Kohi/AC meeting from Karen Joubert of Mitchell Daysh to Sandy Hsiao of Resource Consents Central (dated: 21 July 2020)
- Memo RE: Further Information Response – 223 Kohimarama Road and 7 John Rymer Place, Kohimarama by Mitchell Daysh to Auckland Council (dated: 21 July 2020)
- Memo SUB: Ryman Kohimarama Road – Outstand Stormwater RFI by Beca (reference: 3124460-221-S92 (dated: 30 June 2020)
- Ryman Healthcare Proposed Comprehensive Care Stormwater Management Plan Kohimarama by Beca Limited (reference: 3124460, NZ1-16661235-16 1.1, revision: B, dated; 20 July 2020)
- Memo RE: Further Information Repose – 223 Kohimarama Road and 7 John Rymer Place, Kohimarama from Mitchell Daysh to Auckland Council (dated: 5 August 2020)
- Memo RE: Ryman Kohimarama Road – Outstand Stormwater RFI from Beca to Mitchell Daysh (reference: 3124460-221-S92, dated: 5 August 2020)

- Email RE: Ryman Kohi/AC meeting [BUN60353138] from Karen Joubert of Mitchell Daysh to Kuanjin Lee of Regulatory Engineering (dated: 17 August 2020)
- Memo RE: Further Information Repose – 223 Kohimarama Road and 7 John Rymer Place, Kohimarama from Mitchell Daysh to Auckland Council (dated: 17 August 2020)
- Memo RE: BUN60353138 by Healthy Waters (dated: 21 August 2020)

Based on my assessment, I have provided a summary of findings and the following recommended conditions from an engineering perspective:

SUMMARY AND RECOMMENDED CONDITIONS

1. Auckland Council GeoMaps

Auckland Council GeoMaps show the site mapped as:



2. Site Visit

As part of the assessment, a site visit was conducted on 26 February 2020. I have used the observations from my site visit to supplement my assessment of the proposed development.



View along southeast boundary from 7 John Rymer Place, site slopes moderately to steeply towards the southwest. Overland flow path/stream located within the vegetation on the right.



View across playing fields in central portion of the site. Evidence of moderate to steep slopes directly south of the site.



Looking northward, site is moderate to steeply sloping.



View across the northwest boundary looking northward



Evidence of existing retaining wall along northwest boundary in northern portion of the site supporting accessway. High permeability fences at boundary.



View looking southward from northwest corner of site. View towards overland flow path channel.

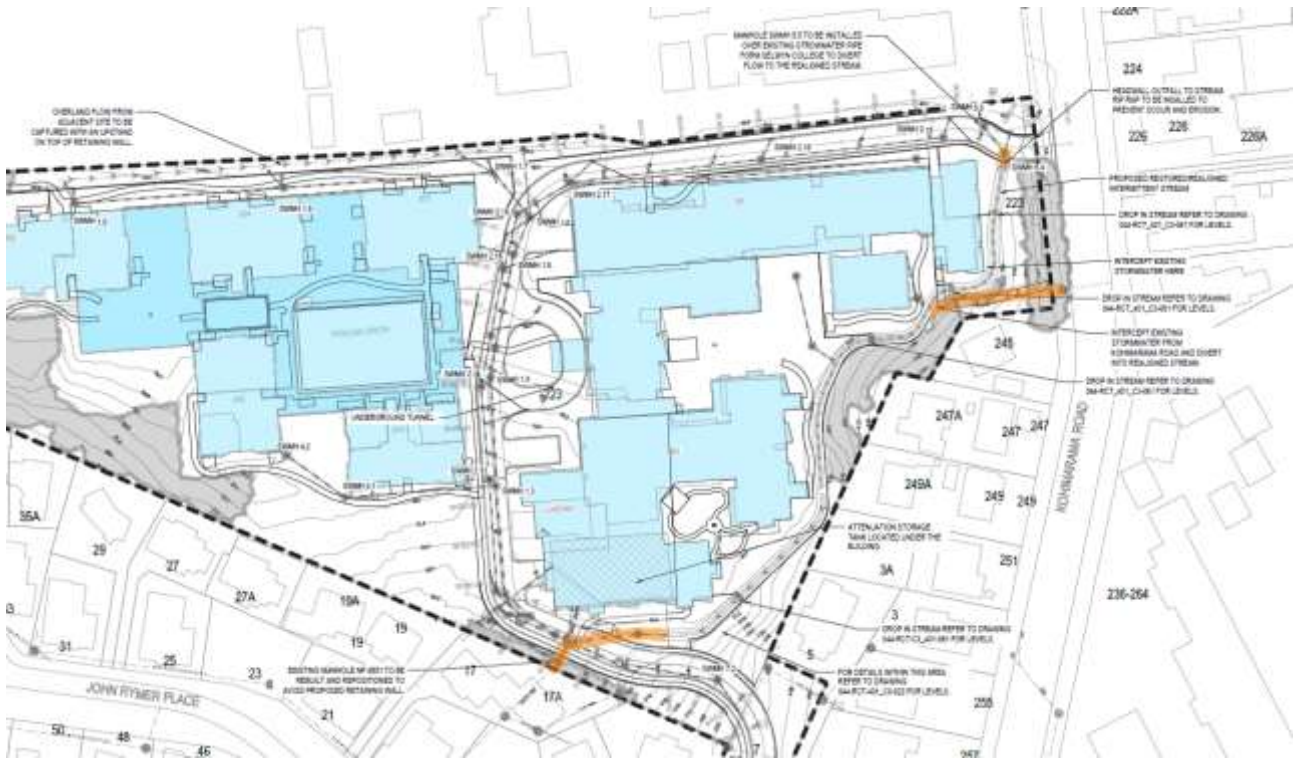
3. Stormwater

Auckland GeoMaps show an existing 225 mm diameter public stormwater line located east of the site and a 375 mm diameter and 225 mm diameter public stormwater line in the northern portion of the site. The site is not mapped as being underlain by an aquifer nor a Stormwater Management Area Flow site.

The application indicates the existing development has a pervious percentage of 100% and the proposed impervious area of 53.1%. The impervious area of the proposed development is 6.9% less than what is permitted for this zone (60%) and 53.1% more than what is existing.

Part of the stormwater from the site will be discharging into the newly aligned private watercourse, east of B01 within the site. As part of the realignment, it is proposed to widen and length the existing section of open channel and replace part of the existing public stormwater pipe onsite. The stormwater from the upper catchment shall be discharged into the watercourse. Based on the Email from Healthy Waters to Resource Consents Central (dated: 19 March 2020), I understand Healthy Waters is in support of the private watercourse within the site.

Public stormwater assets are highlighted in orange in the figure below:



The application documents have highlighted insufficient capacity within the downstream pipe network for the proposed development. It is proposed to alter an existing public stormwater manhole in the eastern portion of the site and install an attenuation tank below building B01. I understand that 1350 m³ of attenuation including 100 m³ of retention is proposed below B01 shown below. The Memo from Beca to Mitchell Daysh (reference: 3125560-221-S92, dated: 17 April 2020) proposes to re-use the retained water for irrigation and landscaping to resulting in regular draw-down of stormwater volumes and ensuing capacity prior to storm events.

Based on Ryman Healthcare proposed Comprehensive Care Stormwater Management Plan Kohimarama by Beca Limited (reference: 3124460, NZ1-16661235-16 0.16, revision: A, dated; 14 February 2020), predevelopment discharge was reported to be 0.79 m³/s and the proposed development was reported to be 0.57 m³/s. The resulting stormwater mitigation is considered favourable in terms of total site discharge relative to existing for the piped discharge as well as overland flows in a 1 in 10 year storm event.

I understand that as the proposal does involve private discharges to the watercourse which ultimately connects to an authorised stormwater network located within site, downstream, this activity is considered a Permitted Activity (A1) under E8. For the purposes under the AUP for E8, a condition for the detention tank is not required.

The proposed impervious area is 16,573 m². Under the Local Government Act, Regional Network Discharge Consent for a large brownfield development (over 5000 m² and/or more than 20 Lots), an approved Stormwater Management Plan is required. Please note that this is not a Resource Management Act matter and at the time of this consent, the Stormwater Management Plan is still under the process of review with Healthy Waters.

Matters pertaining to stormwater quality and private discharges to the watercourse are addressed by the Regional Stormwater Specialist.

Assessment Conclusions

Based on the provided information and I am in support of this application and can advise that this proposal appears reasonable and provides for better management of internal private drainage. Detailed design will be addressed at Building Consent and Engineering Plan Approval stage. Advice notes are provided in relation to the proposed stormwater management.

The stormwater tank can be incorporated into the private drainage reticulation. This activity is considered a Permitted Activity (A1) under E8 and is compliant under E8.6.2.1. For the purposes under the AUP, a condition for the detention tank is not required however, I have recommended a covenant for the operation and maintenance of critical stormwater infrastructure which supports flood management outcomes which are covered within Memo RE: BUN60353138 by Healthy Waters (dated: 21 August 2020) and in Section 6 below.

Recommended Advice Notes

- Proposed retaining structures must have an absolute minimum clearance of 1.0 m from the public stormwater line as per 4.3.9.1 of the Stormwater Code of Practice.
- Stormwater mitigation device calculations will be assessed at Building Consent stage.
- An Engineering Plan Approval application for this work is required to be submitted to Auckland Council's Development Engineering and approved prior to the works commencing.
- The finalised location of connections shall be confirmed at Engineering Plan Approval stage.
- A survey of the public line and levels should be completed prior to lodgement of Engineering Plan Approval to confirm levels and location.

4. Wastewater

Auckland GeoMaps show an existing 150 mm diameter public wastewater line located east of the site. I note that applicant has been in correspondence with Watercare and Watercare has indicated that a connection to 150 mm diameter public wastewater line on Allum Street is preferred due to capacity constraints in the other network line.

The development intends to extend the public network to cater for the development. The proposal complies with the recommendations of Watercare and wastewater is shown to be pumped from the site to Allum Street.

Due to the size of the proposed development this application was sent to Watercare Services for an assessment on the downstream effects/capacity for this development. Based on my review of Letter RE: Council Resource Consent number BUN60353138, 223 Kohimarama RD Kohimarama 1071, Watercare Application Number – RC 17697 from Watercare Services Limited to Auckland Council (dated: 13 May 2020), they have concluded that the proposed wastewater network extension and capacity assessment for wastewater at the above site is generally acceptable. On the basis that the following conditions are met:

- The maximum discharge rate from the pump station is no more than 3L/s

Assessment Conclusions

Based on the Watercare review, I expect the existing public wastewater line to be able to accommodate the flows from site and there is sufficient capacity for the proposed development. A Building Consent and an Engineering Plan Approval will be required as part of works. I have recommended a condition below to ensure alignment with the requirements by Watercare such that capacity is not breached for the wastewater assets.

Recommended Conditions

- The maximum discharge rate from the pump station shall be no more than 3 L/s or to a level which is accepted by Watercare Services. A Building Consent shall be required for the work. A private drainage "as-built" plan signed by a registered drainlayer shall be provided to Auckland Council Team Leader Compliance and Monitoring – Central within 20 working days from the completion of the works.

Recommended Advice Notes

- A completed Watercare Approved Contractor Form must be provided with all new wastewater connections to public lines.

- Consent shall be required from Watercare Services Ltd for building in proximity to their wastewater pipes. Their written approval shall be required prior to any Building Consent application to Council.
- Watercare Services Ltd shall be responsible for all new connections to the wastewater networks. A service fee will be charged. Please contact Watercare for details and their connection approval. Please note that CCC will not be issued without this approval.
- An Engineering Plan Approval application for this work is required to be submitted to Auckland Council's Development Engineering and approved prior to the works commencing.
- Please refer to: Letter RE: Council Resource Consent number BUN60353138, 223 Kohimarama RD Kohimarama 1071, Watercare Application Number – RC 17697 from Watercare Services Limited to Auckland Council (dated: 13 May 2020)
- Watercare's approval is valid for 2 years from 13 May 2020. Network upgrades may be required after 13 May 2022.

5. Water

Water Supply

It is proposed to have two connections for water supply, one to the existing 225 mm diameter water line on Kohimarama Road and another to the 100 mm diameter water line on the southern side of John Rymer Place.

Due to the size of the proposed development this application was sent to Watercare Services for an assessment on water supply. Based on my review of Letter RE: Council Resource Consent number BUN60353138, 223 Kohimarama RD Kohimarama 1071, Watercare Application Number – RC 17697 from Watercare Services Limited to Auckland Council (dated: 13 May 2020), they have concluded that water supply at the above site is generally acceptable from the 225 mm line on Kohimarama Road or the 100 mm diameter water line on John Rymer Place.

Firefighting

As part of my assessment for infrastructure services and capacity, I have assessed the capacity for firefighting. Though this is not specifically stated as a requirement within the AUP, I consider this to be pivotal to the resilience of the site and community against fires and a good engineering outcome.

Based on my review of Letter RE: Firefighting Water Supply at 223 Kohimarama Road by Nova Flowtec Services Limited (dated: 10 September 2019), a fire hydrant test has had been conducted. The test states that the fire hydrants on Kohimarama Road meets the criteria of SNZPAS 4509:2008 which states that sprinklered structures which are not single-family homes have a Fire Water classification of 2.

I note that given the proposed size of development and distance from public hydrants, the site may not be able to be adequately serviced for firefighting. As part of a s92 response, Email from Mitchell Daysh (dated: 22 July 2020) advocate that written approval from Fire Emergency New Zealand has provided verbal indication that the site can be serviced for firefighting and an annotated document showing the preferred number of location of fire hydrants. The document is stamped by the Assistance Area Manager of Fire and Emergency New Zealand and shows 5 proposed inground hydrants proposed onsite.

I have recommended a condition below such that the alignment and location is in accordance with the stamped plan 'Appendix C – Fire Hydrant Markups.pdf' or to a revised design which is supported by the NZ Fire Service.

Assessment Conclusions

I consider that the site has adequate source of water supply and firefighting capacity. Please note that water supply matters are assessed at Building Consent Stage.

Recommended Conditions

- The Consent Holder shall be required to confirm the adequacy of the public water supply to provide for firefighting as required by SNZ PAS 4509:2008. Confirmation of meeting this condition shall be either in accordance with the Appendix C – Fire Hydrant Markups.pdf provided within Email RE: Ryman Kohi/AC meeting from Karen Joubert of Mitchell Daysh to Sandy Hsiao of Resource Consents Central (dated: 21 July 2020) or in the form of a written report from the NZ Fire Service. This shall be provided to Team Leader Compliance Monitoring Central, Auckland Council prior to any occupancy of the buildings. Any shortfalls in the adequacy of the public supply shall also be mitigated by the Consent Holder to the satisfaction of Team Leader Compliance Monitoring Central, Auckland Council.

Recommended Advice Notes

- Watercare Services Ltd shall be responsible for all new connections to the water networks. A service fee will be charged. Please contact Watercare for details and their connection approval. Please note that CCC will not be issued without this approval.
- All new water supply connections to the Watercare supply main shall be designed in accordance with Watercare Services Ltd.'s Standards and be completed by a Watercare Services Ltd approved contractor. For details, please contact Watercare Services Ltd.
- Please refer to: Letter RE: Council Resource Consent number BUN60353138, 223 Kohimarama RD Kohimarama 1071, Watercare Application Number – RC 17697 from Watercare Services Limited to Auckland Council (dated: 13 May 2020)
- Watercare's approval is valid for 2 years from 13 May 2020. Network upgrades may be required after 13 May 2022.

6. Flooding

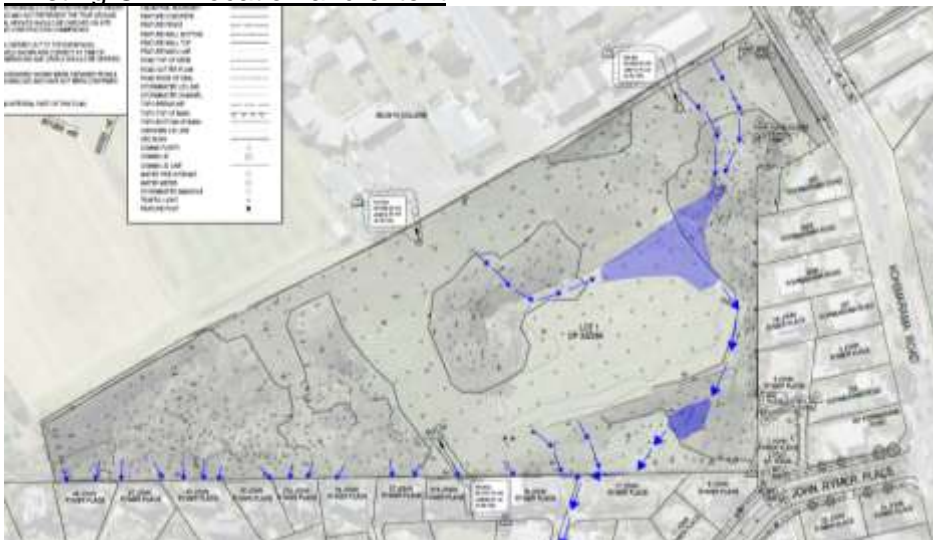
Auckland GeoMaps shows potential floodwaters affecting the site. There are a number of overland flow paths mapped onsite. To address this, the applicant has provided a Ryman Healthcare Proposed Comprehensive Care Stormwater Management Plan Kohimarama by Beca Limited (reference: 3124460, NZ1-16661235-16 1.1, revision: B, dated; 20 July 2020).

For the flooding component of this assessment, I have utilised the expertise of Healthy Waters and their provided Memo (dated: 21 August 2020).

Overland Flow Path (OLFP)

There are a number of overland flow paths shown on site. The smaller overland flow paths in the southern portion of the site are unchanged from existing and therefore considered part of the existing environment. The OLFP in the northern portion of the site is being altered into a watercourse and the assessment of the alteration are discussed in this section. The proposed changes are shown in the figures below.

Existing OLFP location and extent



Proposed OLFP location and extent



Alignment

I note that while the entry locations of the OLFPs are unchanged, the exit location has been altered. The alignment of the overland flow path is to be directed through the site via an engineered overland flow path/watercourse channel which collects stormwater from the site and discharges the flows to 17 John Rymer Place. The exit location has been directed further westward from the existing exit location on 17 John Rymer Place. The effects of this re-alignment are discussed below under Floodwater Risk, offsite.

Following discussions with Healthy Waters and Beca, I understand that changes will be made to the alignment of the channel within the site prior to the resource consent hearing, following the limited notification process. The proposed changes will deepen the stream and widen the stream extent at cross sections 2 and 3 to reduce the peak 100yr ARI water levels and increase the freeboard onsite.

To effectively manage the risk of flood waters to the site and development, I have recommended a condition for the construction of the engineered overland flow path channel.

Fencing

Fences within the areas identified within the overland flow path must be designed to allow unobstructed flood waters. Boundary fencing in the northwest site boundary are considered appropriate for floodwater flows (please refer to Section 2). As there is no proposed alteration to the existing fence/boundary conditions, I consider this to be part of the existing environment.

Floodwater Risk

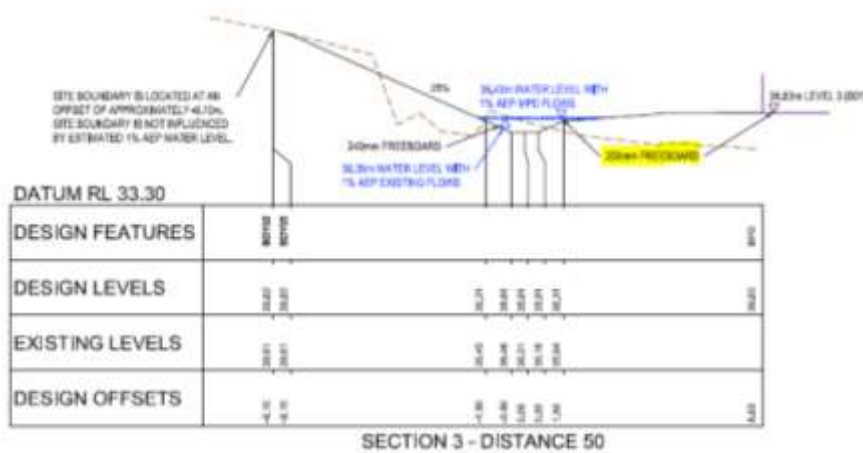
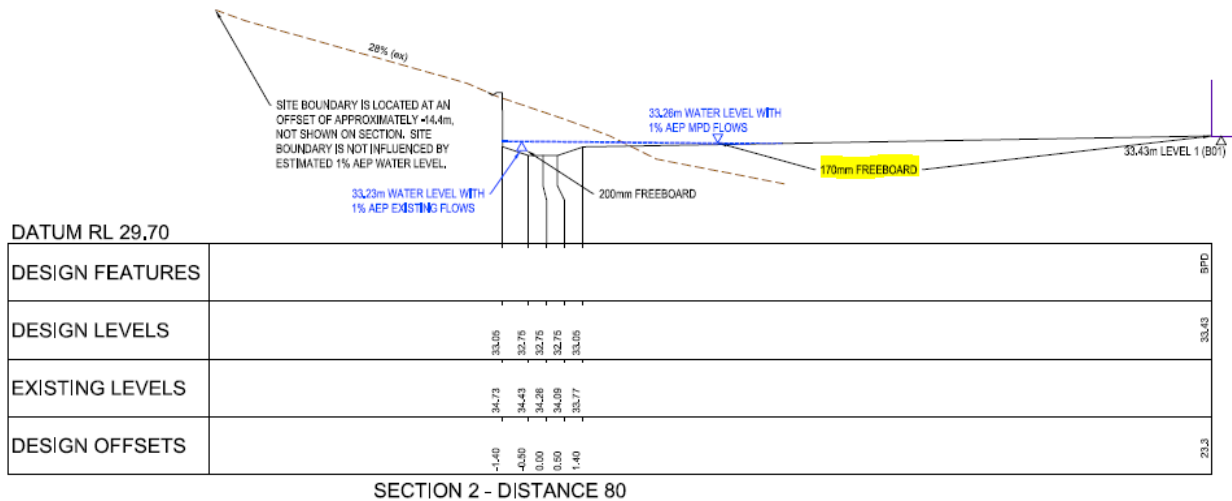
I have discussed the assessment of overland flow path design and effects with Senior Development Engineer, Matthew Yu in reflection with the requirements stipulated within the Auckland Council Stormwater Code of Practice. We are in agreement that the Code of Practice only requires the overland flow path design to taken into account full blockage requirements stipulated within the Stormwater Code of Practice in terms of the hazard to users of the subject site. In contrast, for the assessment of effects, full blockage assumptions within the Stormwater Code of Practice is not required. This is consistent with the way other Council detailed flood models are development.

I understand this assessment protocols are accepted and aligned with the applicant's proposal and assessment.

Onsite

As part of our assessment of risk, cross sections have been provided along the length of the watercourse. Sections 1, 2, 3 and 4 were provided showing the water levels, freeboard and the

proposed channel in relation to the new buildings. The freeboard levels provided were found to be in the order of 170 mm at Section 2 and 200 mm at Section 3.



Healthy Waters have acknowledged that the proposed freeboard provided is compliant with the Building Act and Stormwater Code of Practice but have expressed preferences for a greater freeboard. The discretion Healthy Waters have over the proposal is in alignment with their approval of the Stormwater Management Plan requirements under the Regionwide Network Discharge Consent for the Local Government Act and Stormwater By-Law. I concur that elevated freeboards would be favourable given the vulnerability of the activity and persons utilising the site. It is understood from meetings and discussions with Beca that changes will be made to the alignment of the channel within the site prior to the resource consent hearing, following the limited notification process. The proposed changes will deepen the stream and widen the stream extent at cross sections 2 and 3 to reduce the peak 100yr ARI water levels and increase the freeboard onsite. At the time of this memo, no further information was provided to address the proposed changes and Healthy Waters have indicated non-support of the proposal.

The Memo RE: Further Information Repose – 223 Kohimarama Road and 7 John Rymer Place, Kohimarama from Mitchell Daysh to Auckland Council (dated: 17 August 2020) advocates for a site specific flood hazard management plan to be developed. Healthy Waters has indicated support for this and I have recommended a condition and covenant for this to be provided for.

Offsite

Based on the evidence provided, there is no anticipated effects on the upstream properties and downstream conditions are considered to be improved relative to existing as a result of the development. Evidence for this is as follows:

- The OLFP flow rate is reduced from existing conditions (0.3 m³/s to 0.28 m³/s) by means of the stormwater mitigation device.
- The resulting relocated OLFP exit location is considered to be favourable. The existing exit location at 17 John Rymer Place results in flows directly entering the dwelling. The

relocated exit location directs the OLFP away from the dwelling and down the accessway which reduces the risk to 17 John Rymer Place.

Healthy Waters have considered the offsite effects to be '*mitigated, subject to a long-term and committed maintenance regime*'. I have therefore recommended a covenant below to support the management and operation of the stormwater/OLFP devices.

Assessment Conclusions

Based on the provided information and the peer review from Healthy Waters, the effects of the proposed development are considered to be effectively managed and controlled in relation to downstream buildings and infrastructure.

Concerns have been highlighted regarding the effects of the proposal within the site, specifically due to the lack of adequate freeboard onsite. It is understood that additional freeboards will be provided as part of the consenting process however at the time of this memo, this remains unresolved. Healthy Waters have indicated non-support of the onsite effects and I am in support of my specialist's opinions given the vulnerability of the activity and persons onsite.

If you choose to support the proposal, I have recommended the following conditions, advice notes and covenants for your consideration. Please note the an augier condition is recommended for the freeboard requirements onsite which may be subject to review and revision with the anticipated revised cross sections and risk assessment to be provided by the applicant prior to the hearing.

Recommended Conditions

- The Consent Holder shall engineer an overland flow path around the proposed buildings via an engineered stream. Freeboards shall be aligned to the approved Stormwater Management Plan for the catchment. Evidence of completing this shall be engineering certification reporting and 'as-built' drawing of the completed flood protection works. The as-built plan shall include cross sections of the overland flow path channel showing the 1% AEP flood water levels, freeboards and finished floor levels. This shall be provided to the satisfaction of Auckland Council Team Leader Compliance and Monitoring – Central within 20 working days from the completion of works and prior to occupancy of the building(s).
- A stormwater detention tank shall be incorporated into the private drainage reticulation to reduce the 1% AEP peak overland flows to a maximum of predevelopment level or to a level which is accepted by Healthy Waters. A Building Consent shall be required for the work. A private drainage "as-built" plan signed by a registered drainlayer showing the installed detention tank shall be provided to Auckland Council Team Leader Compliance and Monitoring – Central within 20 working days from the completion of the works.
- The Consent Holder shall provide to the satisfaction of Auckland Council Team Leader Compliance and Monitoring – Central a statement from an engineer certifying that the overland flow path depicted within Concept Design Grading and Drainage Plan Sheet 1 of 2 by Beca (drawing number: 044-RCT_401_C0-021, revision: C, dated: 13 February 2020) has its alignment maintained across the site. This shall be provided within 20 working days from the completion of the works.
- The overland flow path shall maintain the capacity and entry and exit points as identified in Concept Design Grading and Drainage Plan Sheet 1 of 2 by Beca (drawing number: 044-RCT_401_C0-021, revision: C, dated: 13 February 2020) and be kept free of all obstructions e.g. buildings and solid fences.
- The Consent Holder shall provide a Flood Management Plan for certification by Auckland Council Team Leader Compliance and Monitoring – Central prior to the commencement of works onsite. The Flood Management Plan shall be required to be implemented in perpetuity. The Flood Management Plan shall include (but is not limited to):
 - Description of the stream and attenuation details
 - Site plan illustrating anticipated area of stormwater ponding throughout the site and anticipated extent of the stream water levels during the 1% AEP event
 - Areas on-site with a significant flood risk and how pedestrian and vehicle will be limited to these areas at time of risk

- Areas within the proposed building with safe refuge
- Evacuations plans for safe passage of persons and animals onsite
- Monitoring of weather conditions which align with higher frequency events as required for effective management e.g. safe evacuation threshold trigger
- Protection of flood sensitive items and electronics
- Maintenance of flood resistant items and structures
- On-site alert systems of high rainfall event and procedures relating to flood events
- Operation and maintenance of any alarms
- List of relevant site contacts to report any flood incidents to
- The Consent Holder shall provide a Stormwater Operation and Maintenance Plan for certification by Auckland Council Team Leader Compliance and Monitoring – Central prior to the commencement of works onsite. The Stormwater Operation and Maintenance Plan shall be required to be implemented in perpetuity.

Recommended Advice Notes

- The site is subject to section 71-74 of the Building Act Limitations and restrictions on building consents: Construction of building on land subject to natural hazards.
- Council recommends that the Consent Holder seeks financial, legal and insurance advice on this.

Recommended Covenants

Covenant

- The Consent Holder shall register against the record of Title for the site a covenant, granted in favour of Council. The covenant shall record and advise any future owners of the need to comply with this condition on an on-going basis. In particular the covenant shall include:
 - The on-going operation and maintenance of the stormwater attenuation tank, catch pits, scruffy domes, mega pit and realigned stream shall be the responsibility of the Consent Holder.
 - To ensure the unobstructed flow of the overland flow path during this 1 in 100 year storm event, the owner[s] of the property are required to comply with the following restrictions on an on-going basis:
 - Do not change the ground levels within the overland flow path
 - Do not obstruct the overland flows through the property with any fencing, object (either by temporary storage or permanent placement), impermeable landscaping, building or structure.
 - Maintain the overland flow path channel such that it remains free from weeds/ground that would inhibit its ability to convey overland flows.
 - Do not alter the finished floor levels of the buildings onsite without prior approval from Council.
 - Implement the approved Flood Management Plan in perpetuity as approved under BUN60353138 or modified by a variation approved by Council.
 - Implement the approved Stormwater Operation and Maintenance Plan in perpetuity as approved under BUN60353138 or modified by a variation approved by Council.

Covenant Instrument

The final draft of covenant shall be submitted to Council and certified by Council prior to its registration against the Record of Title. The Covenant shall be registered against the Record of Title prior to the start of construction. All costs associated with the preparation, approval by Council and registering the Covenant on the Record of Title shall be at the expense of the Consent Holder.

7. Earthworks

General Earthworks

The anticipated earthworks cover an area of 25377 m², a cut volume of 52874 m³ and a fill volume of 5750 m³. A maximum cut depth of 6.18 m and a maximum fill depth of 6.0 m is proposed. This is

to create a level accessway, building platform and basement excavation for the proposed development.



Based on Memo RE: Further Information Response – 223 Kohimarama Road and 7 John Rymer Place, Kohimarama by Mitchell Daysh to Auckland Council (dated: 17 April 2020), a Construction Management Plan has been provided to aid in the management of works onsite and minimise construction effects. The Ryman Healthcare Limited Scott Road, Hobsonville Construction Management Plan by Ryman Healthcare (dated: September 2019) though referenced to a different address, demonstrates that the management of the site can be carried out to minimise construction effects. I have recommended a condition for a relevant Construction Management Plan be provided in relation to the proposal.

As the proposed earthwork area and the proposed excavation depths appear to require temporary retaining or invoke slope instability and the filling depths appear to require specific methods to mitigate differential settlement, I have included comment regarding this in the Geotechnical section below.

Based on GeoMaps, the proposed earthworks to be conducted is not on an area identified as being within a flood plain. However, the proposed earthworks to be conducted is on an area identified as being within an overland flow. As per E12, the proposed earthworks must maintain the same entry point at the boundaries of the site. I acknowledge that the exit location of the northern overland flow path will be altered as part of the proposal. I have recommended a condition for entry locations and exit locations for southern overland flow paths to be unchanged below.

Assessment Conclusions

I consider the proposed earthworks to be suitable for the proposed development. I have recommended conditions below to aid in management of works.

Recommended Conditions

- The Auckland Council Team Leader Compliance and Monitoring – Central, shall be notified at least 5 working days prior to earthwork activities commencing on the subject site.
- Prior to the commencement of earthworks activity, the consent holder shall hold a pre-start meeting that:
 - Is located at the subject site
 - Is scheduled not less than 5 days before the anticipated commencement of earthworks
 - Includes all concerning officer[s] e.g. Monitoring officer, aborist etc
 - Includes representation from contractors who will undertake earthworks and suitably qualified professionals
 - The following information shall be made available at the pre-start meeting including specific references to all relevant documentation, such as resource consent conditions, erosion and sediment control plan and engineers work method.

- All machinery associated with the earthworks activity shall be operated in a way, which ensures that spillages of hazardous substances such as fuel, oil, grout, concrete products and any other contaminants are prevented
- There shall be no damage to public roads, footpaths, berms, kerbs, drains, reserves or other public asset as a result of the earthworks and construction activity. In the event that such damage does occur, the Auckland Council Team Leader Compliance and Monitoring – Central, will be notified within 24 hours of its discovery. The costs of rectifying such damage and restoring the asset to its original condition will be met by the consent holder.
- All materials and equipment shall be stored within the subject site's boundaries unless written permission is granted from Auckland Transport for specific storage in the road reserve.
- The Consent Holder shall provide a Construction Management Plan to Auckland Council Team Leader Compliance and Monitoring – Central at least two weeks prior to any works commencing on site. The Construction Management Plan must specify construction timetable, construction methods, general site management, site reinstatement upon completion of works. The Construction Management Plan shall be to the satisfaction of Auckland Council Team Leader Compliance and Monitoring – Central.
- The proposed earthworks and construction works shall not alter the overland flow paths and must maintain the same entry point for the northern overland flow path and the same entry and exit points for all other overland flow paths at the subject site.
- An 'as-built' drawing from an engineer showing the final contours of the site shall be provided on a CAD plan to Auckland Council Team Leader Compliance and Monitoring – Central within ten (10) working days following completion.
- All imported fill used shall:
 - Comply with the definition for 'clean fill' in the Ministry for the Environment publication 'A guide to the Management of Clean fills' (2002)
 - Be solid material of a stable, inert nature and
 - Not contain hazardous substances or contaminants above recorded natural background levels of the receiving site
- Within 10 working days following the completion of earthworks, the suitably qualified engineering professional responsible for supervising the works shall provide to the Auckland Council Team Leader Compliance and Monitoring – Central, written evidence that all fill used on the subject site has the characteristics set out above. Written evidence shall be in the form of a receipt, compaction certificate(s) or similar.

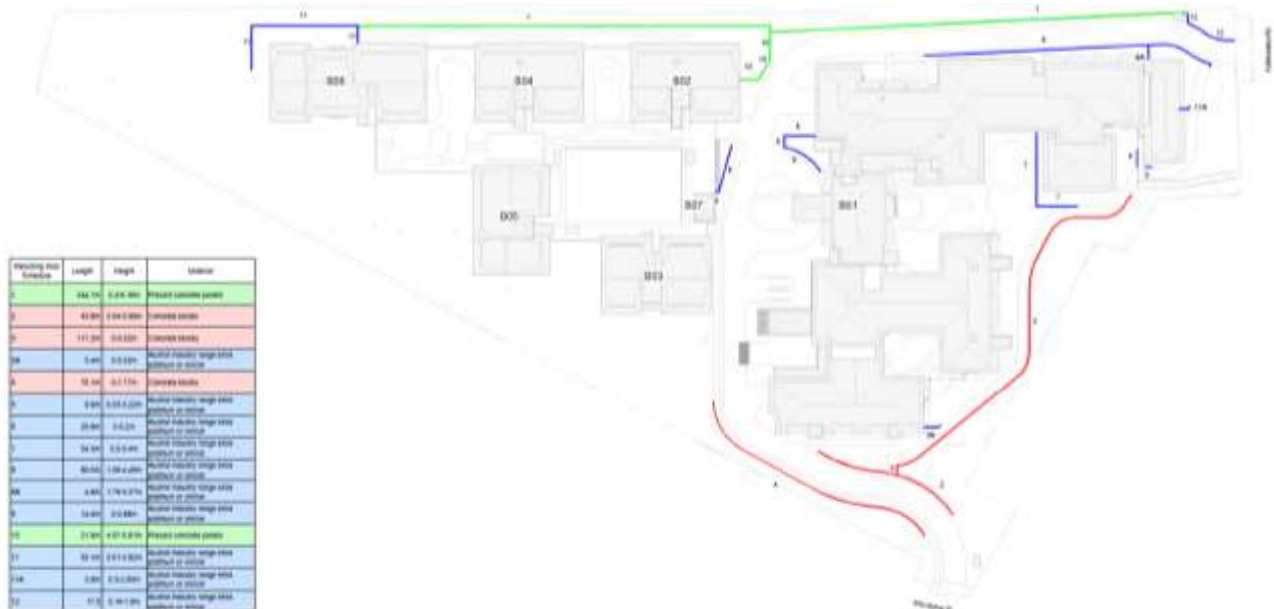
Recommended Advice Notes

- To arrange a pre-start meeting, please contact the Auckland Team leader, Compliance and Monitoring – Central. The conditions of consent should be discussed at this meeting. All additional information required by the Council should be provided a minimum of 2 days prior to the meeting.
- Litter such as plastic bags/bottles and building material wrappings shall be removed from the work site at the end of each workday.
- Adhesives, solvents, paints and other contaminants from building operations shall be prevented from entering stormwater drains and adjacent waterways.

Geotechnical

Auckland GeoMaps show the site mapped as susceptible to land instability based on the contours.

A number of retaining walls have been proposed as part of the proposed works. Retaining structures are noted proximal to site boundaries particularly north and west of the site with retaining up to 6.18 m depth.



The application is supported by a Geotechnical Assessment of Environmental Effects by Tonkin & Taylor Limited (reference: 30314.v2, dated: October 2019). The geotechnical report details the expected soil conditions across the site in context of the development presented in this application. The reporting discusses the expected engineering properties of the soils derived from historic geotechnical investigations, 20 hand auger boreholes, 6 machine boreholes, 16 Cone Penetrometer Tests and associated in-situ strength testing.

Based on intrusive testing, the site is underlain by topsoil and fill overlying East Coast Bays Formation soil and rock. Rock breaking is considered unlikely based on the intrusive investigation by the geotechnical specialist. I have assessed this application on the basis of no rock breaking being undertaken. Given the extent and depth of excavations, I recommended this to be assessed by a groundwater specialist and I understand you have sought their advice.

No mechanical settlement nor liquefaction concerns were identified in the above reporting for the developed site. In terms of slope stability, possible shear surfaces have been identified at depth which may cause instability.

Slope stability assessment was conducted for the post development. I note that the modelled slope stability utilised a reduced target factor of safety value relative to the Auckland Council Code of Practice for Land Development and Subdivision (2013) for transient and seismic conditions. A Letter RE: 223 Kohimarama Road and 7 John Rymer Place, Kohimarama, Geotechnical and Groundwater Response to s92 Question 14 by Tonkin and Taylor Limited (reference: 30314, dated: 27 May 2020) was provided following our request aligning with the required factor of safety values. The post development shows by means of an inground retaining, the slope can achieve acceptable factor of safety in all three conditions (as per Auckland Council Code of Practice for Land Development and Subdivision (2013)). I note that the calculated factor of safety for the seismic condition is conservative and assessed a peak ground acceleration for a 1 in 500 and 1 in 1000 year event where an assessment of a 1 in 150 year event is required.

Recommendations have been provided for foundation design and retaining wall design. There is a comment in G7 of the assessment which includes assumed a top down retaining wall construction method however this has not been recommended by the geotechnical specialists. Further, I note that the geotechnical specialist has deferred the construction methods for excavations and retaining construction to post detailed design (Section 8.5). I note that the Civil Design Report by Beca Limited (reference: 3124460, NZ1-16663405-6 0.6, revision: C, dated; 14 February 2020) includes recommendations for excavations including battered slope angles. I have requested that the specific angles be provided for however the applicants engineer wish to defer to a condition. Recommendations for earthworks cutting nor temporary retaining methods have not been provided

in the application. I consider this is important to minimise instability in relation to adjacent properties. The condition below for an engineer's work method is therefore recommended.

Assessment Conclusions

From the above information I can advise that the reporting, conclusions and recommendations of the above report are reasonable for the scale and magnitude of the works and indicate the site can be safely developed from a geotechnical/stability perspective, subject to the following conditions. If appropriately managed, no other properties are likely to be affected from soil instability issues arising from the earthworks. Refer to the recommended conditions below aligning with the engineering reporting.

Recommended Conditions

- All earthworks shall be managed to ensure that they do not lead to any uncontrolled instability or collapse affecting either the site or adversely affecting any neighbouring properties. In the event that such collapse or instability does occur, it shall immediately be rectified.
- The Consent Holder shall engage an engineer (who is familiar with Geotechnical Assessment of Environmental Effects by Tonkin & Taylor Limited (reference: 30314.v2, dated: October 2019)) to monitor all excavations, retaining and foundation construction. The supervising engineer's contact details shall be provided in writing to Auckland Council Team Leader Compliance and Monitoring – Central at least two weeks prior to earthworks commencing on site.
- The Consent Holder shall provide an engineer's work method written by a suitably qualified geotechnical engineer or engineering geologist for the contractor to undertake the earthworks with and include the recommendations provided within Geotechnical Assessment of Environmental Effects by Tonkin & Taylor Limited (reference: 30314.v2, dated: October 2019). The work method statement shall include filling specifications, filling methods, compaction standards and testing, excavation time frames, temporary propping/weatherproofing and/or sequencing of works. This shall be required to ensure fills are suitably compacted and stability is maintained throughout the civil works stage of the development. The work method shall be provided in writing to the satisfaction of Team Leader Compliance Monitoring Central, Auckland Council at least two weeks prior to earthworks commencing on site. No works onsite are permitted prior to written approval that the engineer's work method has been reviewed and accepted by Team Leader Compliance Monitoring Central, Auckland Council.
- The Consent Holder shall engage an engineer to advise Team Leader Compliance Monitoring Central, Auckland Council of timeframes for unsupported cuts adjacent to boundaries at least one week prior to excavations on boundaries being undertaken.

Recommended Advice Notes

- It is recommended that a visual inspection of the founding soils be undertaken by a geotechnical engineer or engineering geologist during the excavation works to determine the suitability of the subgrade and potential effects on the proposed foundations.
- Additional geotechnical investigations may be required for final design for Building Consent.

Signed:



Kuanjin (Jin) Lee
Development Engineer

Memorandum

To: Sarishka Gandhi | Traffic Engineer (AC)
From: Celeste Cupido | Senior Development Planner (AT)
Date: 21 May 2020
Subject: BUN60353138 – 223 Kohimarama Road and 7 John Rymer Place, Kohimarama

Introduction

Thank you for the opportunity to provide feedback on the proposal for a new retirement village at 223 Kohimarama Road and 9 John Rymer Place, Kohimarama (herein referred to as the 'site').

As part of our review and assessment, in the realm of the Auckland Unitary Plan (AUP) and the Transport Design Manual (TDM), the following application documents were considered:

- AEE prepared by Ryman Healthcare Limited, and subsequent s92 response prepared by Mitchell Daysh;
- TIA and subsequent s92 response, prepared by Commute Transportation Consultants; and
- Plans prepared by BECA.

In conducting this review, the following internal specialists were also consulted:

- Traffic Engineering
- Road Safety
- Stormwater
- Active modes, Walking and Cycling, Transport Mobility
- Connected communities
- P& I Integrated Network Planning
- Road Corridor
- ATOC

It should be noted that though a site visit would under normal circumstances be undertaken, this was not possible in this instance given the travel restrictions that were in place under Alert Level 4 in an attempt by government to contain the Coronavirus pandemic. Arrangements of site visits are not yet clear under Alert Level 3.

Site and Proposal

Key details regarding the site and proposal are outlined in the following table:

Site Address:	223 Kohimarama Road and 7 John Rymer Place, Kohimarama
AUP Zoning:	Residential – Mixed Housing Urban zone Residential – Mixed Housing Suburban zone
Proposal:	The proposal is to establish a comprehensive care retirement village on the ±3.12ha site, which will provide a full range of elderly housing options amidst a high level of amenity for residents.

Memorandum

The proposed village will comprise of 98 care rooms, 75 assisted living suites, 123 apartments, 192 car parking spaces (including 9 accessible car parks and 5 electric vehicle car parks) and 15 bicycle parking spaces.

Primary vehicular access will be provided via John Rymer Place and a secondary access from Kohimarama Road. The vehicle accesses, which will both have a 6m formed width accommodating two-way access, will be connected through a private internal road.

Access to the basement car parks will be provided using ramps with gradients of between 1:5 and 1:8. Bicycle parking will be provided at the basement level of Building B01 with space to accommodate 15 cycle parks.

The site does not have any existing vehicle crossings.

Overall, the proposal requires consideration as a **Discretionary** activity.

General Comments

Vehicular access to and from the site will be provided via two access points. The primary vehicle access will be provided via driveway from John Rymer Place, with a secondary access proposed via Kohimarama Road with a left in / left-out-only and right-turn-in movements being proposed for this access. Both vehicle accesses will be connected by an internal road that will run throughout the site.

The Transportation Assessment Report concludes that the additional traffic to be generated by the development can be safely accommodated on the surrounding road network and that the traffic management measures identified in the report (including the development's vehicle access points) will ensure that any adverse traffic effects, on traffic operations and on local residents, will be minimised.

We accept the findings of the TIA insofar it states that the additional traffic can be safely accommodated on the road network. However, some specific recommendations for the safe and effective management of the additional traffic generated, as well as a detailed discussion of some relevant aspects of the application are outlined below.

Specific Comments

S92 matters

The following s92 matters were raised by AT and responded to by the applicant:

Closure of Kohimarama Road access during school peak times

From a traffic operations perspective, concern was raised over the logistics of closing off the Kohimarama Road access during school pedestrian peak times. AT's Traffic Engineering Specialist requested further details as to how this would function. He raised concern that drivers may be reluctant to turn around by the time they observe the signage that the access is not to be used during certain times.

In their s92 response, the applicant confirmed that for vehicles exiting the site, the proposal is to restrict vehicles from using the northern part of the access road by placing signage directly north of the entrance to the B01 basement. This will ensure vehicles can view restrictions at the decision point and are able to divert to John Rymer Place instead.

Memorandum

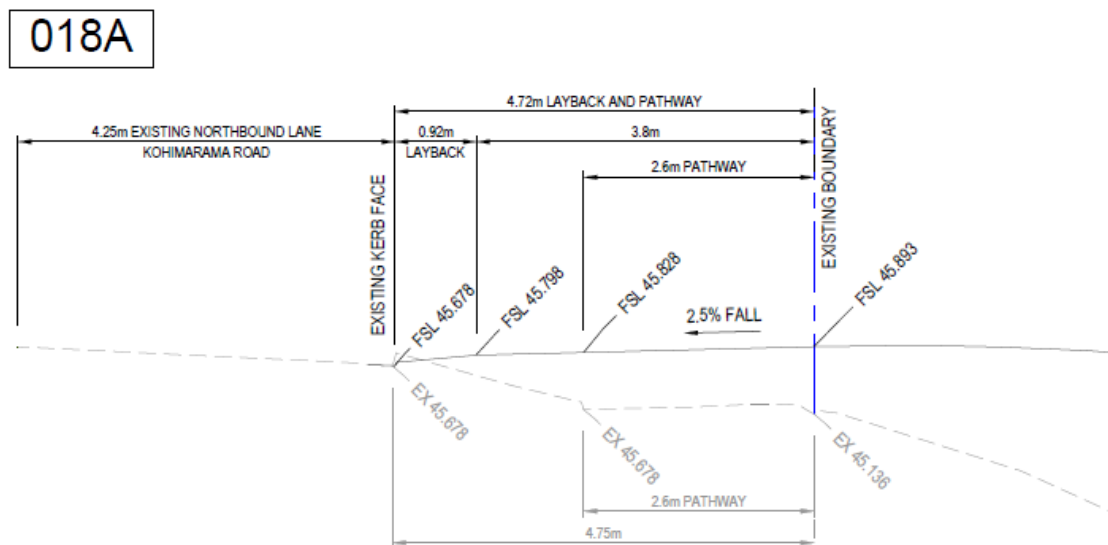
Also, for vehicles on Kohimarama Road, the applicant confirmed that signage will be installed at the vehicle access point. The applicant's representative has offered a consent condition which is consistent with the recommendation in the traffic report:

'Permanent signage at the Kohimarama Road access shall restrict vehicle movements into and out of the Kohimarama access during school pick up and drop off periods (between the hours of 8-9am and 2:30-3:30pm) during the School year.'

The AT Traffic Engineering specialist has assessed the applicant's s92 response and found that his concerns were satisfactorily addressed, and that from a traffic operations point of view, he has no remaining concerns.

Stormwater management

AT's Stormwater Specialist reviewed the proposal and required confirmation from the applicant that the existing drainage on/from Kohimarama Road will be managed within the site: "Please confirm that the existing drainage on/from Kohimarama Road (shown on drawing 004 revD) will be incorporated into the proposed drainage showing on drawing 006 revB". The applicant's s92 response confirmed that the existing 225mm diameter connection conveying the Kohimarama Road drainage will be conveyed into the proposed on-site stormwater drainage network (sketch 018A).



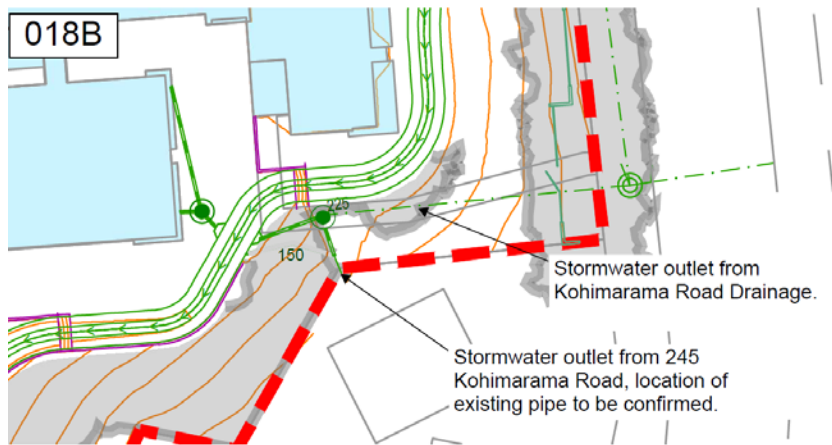
CENTRELINE OF NEW DRIVEWAY ENTRY OFF KOHIMARAMA ROAD

Furthermore, the Stormwater Specialist recommended that the proposed access off John Rymer Place be designed and constructed so that the primary surface flows from the site/proposed site road are captured within the site and are not allowed to flow to existing John Rymer Place road drainage. In their s92 response the applicant confirmed that the gradient of the access road at the John Rymer Place entrance, from the site boundary, slopes downward and away from John Rymer Place, and therefore the stormwater from the access road will not flow onto John Rymer Place.

Finally, it was recommended that the access off Kohimarama Road be designed and constructed so that the primary surface flows from Kohimarama Road do not enter the site. The applicant subsequently confirmed that the levels of the vehicle crossing at Kohimarama Road will be raised to provide 200mm freeboard above the road drainage channel to prevent surface flows from entering the site (sketch 018B overleaf).

Memorandum

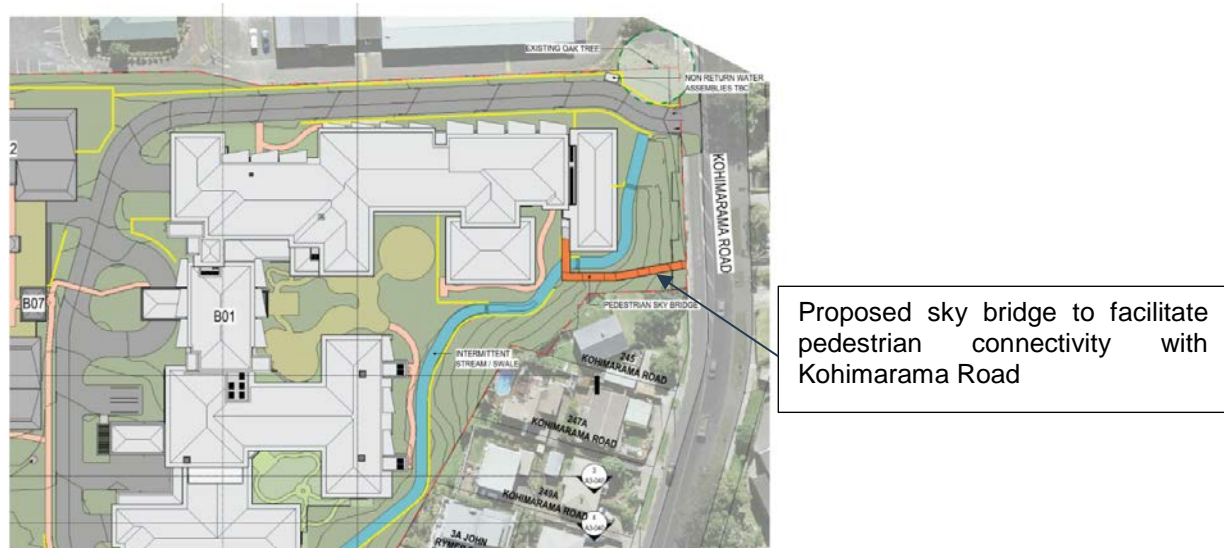
The Stormwater Specialist, upon assessment of the s92 response by the applicant, confirmed that the matters raised as part of the s92 request have been satisfactorily dealt with by the applicant.



Pedestrian connectivity

The applicant proposes a pedestrian path that would lead visitors and residents from John Rymer Place to the main entrance of Building B01, as well as pedestrian paths and boardwalks throughout the site. The pedestrian paths would also provide a series of loop walks within the site. AT's Integrated Networks Specialist raised concern around the lack of pedestrian connectivity along the "secondary" access to Kohimarama Road. This is especially so given that it is expected that most residents would want to use this access to head towards the local bus stops on Kohimarama Road. For this reason, it was recommended that appropriate footpaths be provided and that plans be amended accordingly.

In their s92 response the applicant motivated that the main pedestrian access to Kohimarama Road would be via a pedestrian sky bridge from building B01 to the southeast of the proposed vehicle access. The sky bridge is shown in orange on the image below (extract from Drawing 044-RCT-S01-010). The Specialist has noted that the sky bridge should be kept similar in width to a typical footpath in order to maximise its use and effectiveness.



Memorandum

Vehicle access and road safety

The TIA projects that a total of 759 vehicle trips can be expected to be generated by the retirement village per day. A peak hour trip generation of 41 trips is expected in the AM peak hour, 68 trips in the interpeak hour and 50 trips in the PM peak hour from the proposed retirement village.

The proposed accesses onto John Rymer Place and Kohimarama Road will each have a 6m formed access width. A vehicle access restriction (VAR) applies to the 53m-long Kohimarama Road frontage of the site. With the road frontage length, two vehicle crossings are permitted for the site, thus complying with the AUP(OP) requirement. Vehicle turning restrictions have been proposed at both vehicle access points to minimise disruption on the surrounding road network.

Proposed primary access - John Rymer Place access

The proposed crossing on John Rymer Place will be situated around 4.8m south of an existing vehicle crossing at 5 John Rymer Place. This complies with the AUP(OP) separation distance requirements.

The TIA recommends that general truck movements to the site be minimised during school peaks. Given the presence of a signalised intersection at John Rymer Place / Kohimarama Road / Allum Street, no heavy vehicle restrictions are considered necessary outside the school drop off and pick up periods.

It is noted that the RTS-6 Guide requirement does not require that parked vehicles be included in the sight distance measurement. However, John Rymer Place is regularly used for parking during school term times before and after school and it is therefore expected that parked cars would hinder the visibility of drivers turning onto John Rymer Place during these times.

As such, the TIA recommends the installation of permanent “No Stopping at All Times” (‘NSAAT’) markings restricting parking to the south of the proposed access for 10m, in order to improve sight distance for the proposed access (see indicative plan showing proposed markings below). In order to improve visibility at the access and thereby improve traffic safety outcomes, Auckland Transport agrees that this recommendation should be implemented. Given that the NSAAT parking restrictions are only proposed for 10m, the on-street parking loss is considered acceptable.



Finally, given that John Rymer Place is a cul-de-sac Road, trucks and other construction vehicles will turn right into the access and left from the access. The applicant proposes signage at the John Rymer Place access to advise semi-trailer trucks that they will be unable to turn left at the nearby signals.

Memorandum

Proposed secondary access - Kohimarama Road access

The proposed vehicle crossing on Kohimarama Road will be located 40m from the nearest neighbouring vehicle crossing, and therefore also complies with the AUP(OP) separation distance requirements.

As per the TIA, acceptable sight distances of 90m is available to the east and 150m to the west along Kohimarama Road. However, to achieve these sight distances, the trees along the Kohimarama Road boundary will have to be trimmed to ensure adequate sight distances. Thus, in order to improve safety into and out of Kohimarama Rd access point, located just before a bend, AT's Road Safety specialist recommends that trees are trimmed to provide 90m clear sight distance to the east of the vehicle access point.



Figure: Vegetation along Kohimarama Road frontage Source: TIA Report

Kohimarama Road between St Heliers Bay Road and Whytehead Crescent (south) carry average daily trips of 25,188 and Kohimarama Road between St Heliers Bat Road and Hopkins Crescent 4,213 average daily trips.

The TIA concludes that the intersection of John Rymer Place/ Kohimarama Road/ Allum Street can accommodate traffic from the proposed development while remaining within capacity and operating at an acceptable level. It is furthermore argued that the flush median that is available at the access intersection along Kohimarama Road will ensure that right turning vehicles waiting to enter the retirement village will not have an adverse effect on the through traffic on Kohimarama Road.

The applicant has proposed that a “No Right Turn” sign be placed at the Kohimarama access for exiting vehicles. Conflict between the retirement village traffic and the school is further proposed to be managed through restrictions on movements in and out of the Kohimarama Road access point between the hours of 8:15-9:15am and 2:30-3:30pm Monday to Friday. Automatic bollards are proposed to restrict movements for vehicles moving from the retirement village. For vehicles from Kohimarama Road, a sign is proposed advising road users of the restrictions.



Figure: Existing flush median along Kohimarama Road

Upon review of the applicant's proposal above, AT's Road Safety specialist has expressed concern over right turn movements both entering and exiting the site.

While the proposed 'right turn' ban when exiting the site is acknowledged, this will be difficult to enforce, and drivers will likely make this turn irrespective. The right-turn out will further be problematic due to the heavy traffic volumes. To effectively restrict right turn movements it is recommended that a physical raised traffic island be placed within the median.

The Specialist: Road Safety is also concerned with the right turn into the site from Kohimarama Road as drivers turning in will be looking for gaps in the northbound traffic and may not see or give attention to pedestrians on the footpath. Since this access is in close proximity to a secondary and primary school, there is likely to be high numbers of pedestrians, including school children, crossing over this accessway.

Furthermore, right turn manoeuvres are considered a high-risk movement and is more likely to involve death or serious injury and as a result should be removed from busy arterial roads where possible. In this situation, the site has alternative access from John Rymer Place and therefore can access the right turn at the signalised intersection.

Therefore, after further assessment, we recommend and condition the access be formed as a left in / left out only, with a solid traffic island on the median on Kohimarama Rd.

Traffic modelling assessment - ATOC

ATOCs Traffic Signals Engineer has assessed the traffic modelling provided by the applicant. It was found that the increased filtering of right-turn traffic from Kohimarama Road (north approach) onto John Rymer Place may pose safety risk due to the type of road user going into the retirement village and heavy two-lane opposing through traffic (800 vehicles/h at PM peak).

Use of a signal-controlled right-turn phase is therefore recommended. The Traffic Engineer advised that due to physical layout thereof, the intersection will be running lead/ lag right turn with filtering options. This will increase delays for through movement on Kohimarama Road but will improve the safety of the intersection.

Memorandum

Additional hardware will be required for the new SB right turn, an additional departure loop at the right turn lane, as well as new intersection software. A detailed design plan will have to be provided for review by the ATOC's Traffic Engineer.

Parking provision

A total of 192 car parking spaces will be provided, including 9 accessible car parking spaces and 5 electric vehicle carparks. Parking will mainly be provided in a basement level under B01 and under the podium. Access to the basement carparks will be provided by a series of ramps with a gradient of between of between 1:5 and 1:8. Fifteen bicycle parking spaces and one loading bay will also be provided.

The number of parking spaces being provided well exceeds the minimum required number of parking spaces of 163. As a result, it is expected that the parking needs of the users will be met on site and the TIA concludes that there will be no off-site parking effects.

Car parking dimensions and manoeuvrability has been designed in accordance with AS/NZS 2890.1:2004.

Pedestrian safety and circulation

Pedestrian access

Footpaths of around 1.8m width are provided on both sides of John Rymer Place. A pedestrian footpath is located on both sides of Kohimarama Road with a width of between 2m and 2.5m. Within the development, pedestrian footpaths will be provided throughout the retirement village and will be separated from vehicle traffic to ensure a safe pedestrian environment.

Connection to the wider pedestrian network will be available at John Rymer Place via a separate pedestrian access adjacent to the vehicle crossing and via a Pedestrian Sky Bridge connecting to Kohimarama Road from B01. AT's Integrated Networks Specialist has noted that, in order to optimise use and safety, the width of the sky bridge should be similar to normal footpath width. Both access points will connect to the footpath network available on all surrounding streets.

Fencing will be installed around the perimeter of the site, which will further promote pedestrian safety.

Pedestrian safety

Given the nearby location of Selwyn College and St Thomas School, the impact of the proposed vehicle access points on pedestrians have been carefully considered.

Both vehicle access points will be designed to AT GD019A vehicle crossing standard giving priority to pedestrians. Accesses will be designed as narrow as possible to ensure minimal width for children to cross. Speed control devices (e.g. speed bumps) will be installed on the Kohimarama Road access to limit the speed of approach vehicles on the crossing. Furthermore, the use of the Kohimarama Road access point during school peak times will be limited in order to reduce the likelihood of conflicts between pedestrians and vehicles.

During the construction phase, with a high number of pedestrians expected (due to the proximity of the access to the schools and neighbouring properties), the TIA recommends that the John Rymer Place access is controlled by a full-time Traffic Controller (TC). The TC spotter will assist in avoiding conflict between construction vehicles, pedestrians and vehicles on John Rymer Place. This will include stopping or slowing pedestrians when a truck is turning into the site and stopping trucks exiting when pedestrians are approaching to enable them to safely cross the access point.



Memorandum

Taking into account the width of John Rymer Place and the ability for vehicles to park on both sides of the road, a truck could potentially block eastbound vehicles while queuing at the intersection. As such, the TIA recommends that temporary no stopping at all time markings (NSAAT) be installed on John Rymer Place between the access and Kohimarama Road for the duration of construction to minimise delays to other road users (refer image below taken from the applicant's TIA).



Cycleway link to Kohimarama Road

AT is in the process of investigating an active mode connection from Kohimarama, and from Meadowbank, to the Glen Innes to Tamaki Drive Shared Path - Te Ara ki Uta ki Tai. The project is the Orakei Local Board's 'One Local Initiative'. AT's Senior Transport Planner has confirmed that at this stage they do not wish to pursue the potential for a cycleway connection running through the application property.

At the same time however, Selwyn College has indicated that they are keen for their own connection to Te Ara ki Uta ki Tai (their school enrolment zone is on both sides of the Pourewa Valley). This does not form within the matters of discretion for AT however and is recommended for AC's further assessment.

Recommended Conditions

Overall, should Auckland Council approve the proposed activity/development, we advise that it be subject to the following conditions of consent:

Construction Traffic Management Plan

- x. Prior to the commencement of any works on the site, the consent holder shall submit to and have approved by the Council's Team Leader Central Monitoring, a Construction Traffic Management Plan (CTMP) The CTMP shall be prepared in accordance with the Council's requirements for traffic management plans or CTMPs (as applicable) and New Zealand Transport Authority's Code of Practice for Temporary Traffic Management and shall address the surrounding environment including pedestrian and bicycle traffic. No construction activity shall commence until the CTMP has been approved by the Council's Team Leader Central and all construction traffic shall be managed at all times in accordance with the approved CTMP.

Memorandum

Turning movement restriction

- x. The vehicle access on Kohimarama Road shall be permanently restricted to left turn in and left turn out movements only by TDM's accessway design standards, traffic island on Kohimarama Rd, notification of residents and signage.
- x. A solid traffic island shall be designed and constructed along Kohimarama Road, adjacent to the site's left in / left out vehicle access, to prevent all right turns by vehicles exiting and entering the site. The applicant shall submit an updated roading plan incorporating the island for Auckland Transport's review. Design details of this island will be further assessed at Engineering Approval Stage (EPA).
- x. The right turn into John Rymer Place, at the signalised intersection of Kohimarama Rd and John Rymer Place, shall be formally signal controlled by including a right turn arrow signal aspect to the existing signal poles. A detailed design plan for the signalised intersection, including all required hardware and software changes, shall be provided by the applicant for approval by Auckland Transport at the EPA stage. This shall be done at the consent holder's expense.
- x. Semi-trailer trucks exiting the site shall be permanently restricted from left-turn movements at the nearby signalised intersection of Kohimarama Road with John Rymer Place.

Avoid damaging assets

- x. Unless specifically provided for by this consent approval, there shall be no damage to public roads, footpaths, berms, kerbs, drains, reserves or other public asset as a result of the earthworks and construction activity. In the event that such damage does occur, the Council's Team Leader Central Monitoring will be notified within 24 hours of its discovery. The costs of rectifying such damage and restoring the asset to its original condition shall be met by the consent holder.

Crossings and footpaths

- x. The new vehicle crossings shall be designed and formed to TDM Technical Standards as per the drawing NO GD019A. This shall be undertaken at the consent holder's expense and to the satisfaction of the Council's Team Leader Central Monitoring.

Road markings

- x. In order to improve available sight distances at the vehicle access, permanent "No stopping at all times" (NSAAT) markings shall be implemented on the northern side of John Rymer Place, to the west of the proposed vehicle access for a distance of 10m.
- x. In order to prevent trucks from blocking eastbound vehicles while queuing at the intersection, temporary "No stopping at all times" (NSAAT) markings shall be implemented on the northern side of John Rymer Place, between the proposed vehicle access and Kohimarama Road for the duration of the construction period.

Resolutions

- x. The consent holder shall submit a Resolution report for approval by Auckland Transport Traffic Control Committee to legalise the proposed traffic control devices (e.g. NSAAT road markings along John Rymer Place). A copy of the Resolution from Traffic Control Committee shall be submitted to the Council's Team Leader Central Monitoring prior to the commencement the activity provided for by this consent approval.

Advice note:

Further information on the resolution process can be found in the following the link:
<https://at.govt.nz/about-us/working-with-at/traffic-and-parking-controls>.



Memorandum

Signage

- x. Permanent signage shall be erected at the John Rymer Place access to advise semi-trailer trucks that they will be unable to turn left at the nearby signals.
- x. Permanent signage shall be erected at the Kohimarama Road access to restrict all vehicle movements into and out of the Kohimarama Road access during school pick up and drop off periods (between the hours of 8-9am and 2:30-3:30pm) for the duration of the school year.
- x. A “No Right Turn” sign shall be erected at the Kohimarama Road access to inform vehicle exiting the site of the turning restriction.

Landscaping

- x. The vegetation located within the site along the road frontage of Kohimarama Road shall be suitably trimmed and regularly maintained, for a distance of 90m immediately east of the proposed vehicle access, to ensure adequate visibility for vehicles exiting the site onto Kohimarama Road.
- x. Any vegetation located within the visibility splays/triangles of the Kohimarama Road vehicle access shall be trimmed and maintained at a maximum height of 600mm.



MEMO

Date: 22/05/2020

To: Sandy Hsiao Planner

From: Sarishka Gandhi Traffic Engineer
Regulatory Engineering - Central

Subject: Traffic Engineering Review
Resource Consent Application – BUN60353138
223 Kohimarama Road and 9 John Rymer Place

1.0 INTRODUCTION

Consent is being sought for a proposed comprehensive care retirement village at 223 Kohimarama Road and 7 John Rymer Place, Kohimarama, Auckland. This report assesses the proposal against the Auckland Unitary Plan -Operative in Part AUP (OP).

In preparation of my peer review report I have taken the following documents into consideration:

- Traffic Assessment report by Commute Transportation dated 14 February
- AEE and associated plans.
- S92 response by Commute Transportation dated 8 April 2020 and associated plans.
- Final further information response by Mitchell Daysh, dated 24 April 2020 and associated plans

2.0 TRAFFIC ENGINEERING ASSESSMENT

2.1 Parking

a) Parking Numbers

The proposed activity is located in the Residential – Mixed Housing Urban Zone. The minimum parking for retirement village is 0.7 per unit plus 0.2 visitor space per unit plus 0.3 per bed for rest home beds within a retirement village. There is no maximum. The proposal provides 123 independent apartments, 75 assisted living suites and 98 care beds. In total it is required to provide 163 spaces.

The proposed site plan shows a total of 190 car parking spaces provided on the site. I have reviewed the proposed number of parking spaces and concur that they comply with the requirements as per Table E27.6.2.4 of AUP (OP).

b) Parking Layout

I have reviewed the proposed parking space dimensions, manoeuvring dimensions and associated gradients and concur that they comply with the requirements of the AUP (OP).

A pick-up and drop-off area is also proposed as a part of the proposal. Through the s92 query we requested the applicant to provide suitable signage and marking to clearly indicate the area for potential users. The applicant agreed to this request and we recommend a condition of

consent in this respect. Also, the tracking curves provided demonstrate that vehicles could safely manoeuvre in and out of the pick-up and drop-off area.

2.2 Traffic Generation

The applicant stated that the proposed 198 units of the integrated residential development is less than standard T2 of Table E27.6.1.1. Thus, there is no requirement to consider the traffic generating impacts of the proposal.

Nevertheless, it is important to understand the potential trip generation to understand its effect and ensure an appropriate access strategy is provided.

The applicant stated that the proposed development is estimated to generate approximately 41 vehicle trips during the AM peak hour, 50 trips during the PM peak hour and 68 trips in the interpeak hour. The peak hour trip rates have been obtained from two operational Ryman retirement villages and were preferred over the RR453 NZTA standard. The applicant stated that the peak hour rates from operational Ryman facilities within Auckland are considered more relevant than the RR 453 standard. I agree with the applicant. I have reviewed the traffic generation estimate and concur that it has been applied and calculated correctly. The traffic generated also doesn't cause any adverse effects on the surrounding road network as indicated by the SIDRA analysis carried out (which showed favourable Level of Service after the commencement of the development). Therefore, the trip generation analysis provided by the applicant is acceptable.

2.3 Bicycle Parking

In accordance with standard T83 of Table E27.6.2.5 of AUP (OP), the proposed development is required to provide 8 visitor bicycle space and 5 secure bicycle spaces.

The proposed site plan shows a total of 15 bicycle parking spaces provided on the site, in the basement area of B01. I have reviewed the number of bicycle spaces and concur that they comply with the requirements of Table E27.6.2.5.

2.4 Disabled Parking

The proposed parking layout plan shows 8 disabled parking space on the site. I have reviewed the parking space dimensions, number of disabled spaces and location of disabled spaces and concur that they comply with NZS4121:2001.

2.5 Loading Space

In accordance with Table E27.6.2.7 of AUP (OP), the proposed development is required to provide one loading space.

The plans provided shows a loading space adequate to accommodate refuse collection trucks and occasional delivery trucks. I have reviewed the size of the loading space, including vertical clearance requirements and concur that it complies with Table E27.6.3.2.1 of AUP (OP).

2.6 Vehicle crossing and Access widths

It is proposed to provide two accesses to serve the proposal one on John Rymer Place and another on Kohimarama Road. Both serve more than 10 or more parking spaces.

The proposed crossing on John Rymer Place will be 6.0 m and the crossing on Kohimarama Road is also proposed to be 6.0 m wide. I have reviewed the proposed crossing width and concur that it complies with standard T151 of Table E27.6.4.3.2 AUP (OP).

In accordance with standard T151 of Table E27.6.4.3.2 AUP (OP), any vehicle access serving 10 or more car parking spaces on the site shall have a minimum formed access width of 5.5 metres. The formed access width is proposed to be 6 m connected the crossings on John Rymer Place and Kohimarama Road. Therefore, this complies with the requirement.

2.7 Vehicle Access Gradients

I have reviewed the vehicle access gradients and concur that they comply with the requirements of the AUP (OP).

The proposed driveway long sections show a 1in20 access platform over 4m length at the road boundary. This complies with the requirements as per E27.6.4.4(3) of AUP (OP).

I have reviewed the rest of the gradients along the entire length of the vehicle access and ramps connecting to the basement car parks and concur that they comply with the requirements of the AUP (OP).

2.8 Number of Vehicle Crossing and Separation Distance

I have reviewed the proposed number of vehicle crossings along the site frontage and concur that they comply with standard T146 of Table E27.6.4.2.1 of AUP (OP).

I have reviewed the separation distance between proposed vehicle crossings and neighbouring vehicle crossings and concur that it complies with standard T146 of Table E27.6.4.2.1 of AUP (OP).

I noted the two vehicle crossings within the subject site have a separation distance of approximately 40 m, therefore this complies with the 6m requirement as per Table E27.6.4.2.1 of AUP (OP).

2.9 Vehicle Access Restriction

I have reviewed the proposed vehicle crossing onto Kohimarama Road and concur that it infringes E27.6.4.1.3(c) of AUP (OP).

The proposal provides on-site manoeuvring such that vehicles could go into and out of the property in forward motion from the access. Restriction is proposed on the right turning movements out of the access point onto Kohimarama Road at all times. There is adequate sight distance available on both sides of the crossing.

Further, due to the presence of Selwyn College in close proximity to the proposed Kohimarama Road crossing the applicant proposed restrictions on movements in and out of the Kohimarama Road crossing between the hours of 8:15-9:15 am and 2:30-3:30 pm. To enforce this the applicant proposed bollards to restrict vehicles from the proposed village and a sign advising restrictions for the vehicles from Kohimarama Road.

For the reasons stated above, I am satisfied with the proposed infringement from a traffic safety perspective.

2.10 Sight Distance

I have reviewed the sight distances from both sides of the vehicle crossing on John Rymer Place and concur that they comply with the requirements of the RTS6 Guidelines for Visibility at Driveways. However, the applicant stated that the on-street south of the crossing is used for parking during the school term for most part of the day and could hinder the visibility of sightlines. To mitigate this the applicant proposed No Stopping at All Times (NSAAT) markings to the south of the proposed crossing for 10 m. We consider this acceptable subject to Auckland Transport's approval.

2.11 Lighting

The applicant has stated suitable lighting will be provided to comply with the requirements of the Unitary Plan.

The provided lighting plan shows the locations of the light poles and associated lux diagram.

I have reviewed the proposed lighting within the site and concur that it complies with the requirements as per E27.6.3.7 AUP (OP).

I recommend that suitable lighting is provided in the car parking area in compliance with section E24 of the AUP (OP).

2.12 Road Safety

An analysis of crashes in the vicinity of the site accesses was provided in Section 3.4 of the TA. We agree with the conclusions provided by the applicant's traffic engineer that the crash history does not indicate any pattern of crashes related to the development site or that this development would exacerbate any existing traffic issues on the road.

2.13 Auckland Transportation (AT) consultation

AT has been consulted for their comments. In general, they are supportive of the proposal. AT has proposed recommendations including those related to NSAAT lines on John Rymer Place (permanent and temporary), construction traffic management and access on Kohimarama Road. Their full memo is attached to this memo.

2.14 Construction traffic management

It is standard practice that the applicant is to submit a Construction Traffic Management Plan (CTMP) so that any potential adverse effects of demolition/construction traffic will be mitigated. The CTMP is to be approved by Auckland Council and this requirement should be included in the conditions of consent. In this case the CTMP will likely be developed by contractor as they will have the best information regards the staging of the development.

The CTMP needs to address how deliveries would be made to the site, location of loading areas, how heavy or over dimension vehicles would be brought to and removed from the site, etc.

The CTMP should include details (among other general issues listed in the standard CTMP list) of hours of operation, location of parking for workers or sub-contractors who need to have their vehicles on or close to the site, wheel washing, maintenance of pedestrian access, adequate signage and ensuring that access to neighbouring properties is not compromised.

Further, as mentioned earlier (in section 2.13), in order to prevent trucks from blocking eastbound vehicles while queuing at the intersection, temporary "no stopping at all times" (NSAAT) markings were recommended by AT for the duration of construction to minimize delays to other road users.

3.0 CONCLUSION AND CONDITIONS OF CONSENT

In general, I am satisfied with the proposal from a traffic perspective. I support this proposal subject to the following conditions of consent:

- a) Prior to the operation of the activity all access, parking and manoeuvring areas shall be formed, sealed with an all-weather surface and drained in accordance with the approved plans to the satisfaction of the Team Leader Central Area Monitoring.
- b) Prior to the occupation of operation of the activity, the 190 car parking spaces (including 8 disabled parking spaces) shall be marked and identified through signage to the satisfaction of the Team Leader Central Area Monitoring.
- c) Prior to construction of any bicycle parking area/s, confirmation shall be provided to the Team Leader Central Area Monitoring that the layout, quantity(15), design and security of bicycle parking facilities located either in public or private areas, meet the minimum requirements of the Auckland Transport Code of Practice 2013, Part 13.6 for Cycle Parking.
- d) Prior to the operation of the activity, the consent holder shall install appropriate signage and line marking at the loading space to deter others from parking in the area.
- e) Prior to the operation of the activity, the consent holder shall provide suitable lighting in compliance with Section E24 of the AUP (OP).
- f) Prior to the operation of the activity, the consent holder shall install directional signage at [Kohimarama Road exit] restricting [right hand turns] onto [Kohimarama Road]. This shall be undertaken to the satisfaction of the Team Leader Central Area Monitoring.
- g) Prior to the occupation of residential units, the consent holder shall install the bollards detailed in [section 2.9 of this report/section 5.1 of the TA] and directional signage at [the entrance of the Kohimarama Road access] in order to ensure that vehicle movements are restricted into and out of Kohimarama Road Access between 8:15-9:15 am and 2:30-3:30 pm. This shall be undertaken to the satisfaction of the Team Leader Central Area Monitoring.
- h) Prior to the commencement of construction or demolition works, the consent holder shall submit a detailed Construction Traffic Management Plan (CTMP) to Auckland Council for approval. The CTMP shall include the following aspects of the construction process:
 - Provide hours of work, staging of the development and construction period.
 - Provide parking management plan for visitors and construction traffic. Parking must be contained within the site.
 - Provide location of loading / working areas.
 - Construction loading or unloading from the street is to be permitted only with the approval of Auckland Transport.
 - Truck operation time including picking up and dropping off machinery shall be limited to outside the peak hours, between 9am and 3pm on Monday to Friday.
 - The CTMP is to prohibit truck and trailer deliveries to or from the site from 7am to 9am and 4pm to 6pm on weekdays.
 - Provide cleaning facilities within the site to thoroughly clean all vehicles prior to exit to prevent mud or other excavated material from being dropped on the road. In the event that material is dropped on the road resources should be on hand to clean-up as soon as possible.
 - The CTMP needs to address the transportation and parking of oversize vehicles such as cranes.
 - Provide traffic management plans in compliance with the latest edition of the NZTA “Code of Practice for Temporary Traffic Management” (COPITM) document.

- Provide pedestrian management plan including temporary pedestrian routes which must be easily traversable, well-marked and safely separated from moving vehicles.
- The traffic/pedestrian management plans must be approved by Auckland Transport prior to the commencement of construction works.
- The site access point must be clearly signposted and ensuring that access to neighbouring properties is not compromised.

4.0 ADVICE NOTES

- a) This assessment does not include any civil works, common access way and structural assessment.
- b) A vehicle crossing application shall be approved by Auckland Transport prior to construction of new vehicle access to the site or altering/widening of the existing vehicle crossing.
- c) Any permanent traffic and parking changes within the road reserve (including the implementation of broken yellow lines, changes to the existing broken yellow lines etc.) as a result of the development will require Traffic Control Committee (TCC) resolutions. The resolutions, prepared by a qualified traffic engineer, will need to be passed so that the changes to the road reserve can be legally implemented and enforced. The resolution process may require public consultation to be undertaken in accordance with Auckland Transport's standard procedures. It is the responsibility of the consent holder to prepare and submit a permanent Traffic and Parking Changes report to AT TCC for review and approval.
- d) That a Corridor Access Request (CAR) application is required from Auckland Transport for any works within the road reserve that affects the normal operation of the road, footpath or berm.
- e) That any works done on land affected by an Auckland Transport Designation need written consent from AT before the works can begin.
- f) AT will manage the road network according to its own policies and strategic objectives. The existing parking may become further restricted in the future or reallocated for alternative uses such as bus stops, pedestrian amenity, cycling facilities etc.

Technical Memo – Specialist Unit

To:	Sandy Hsaio, Planner - Auckland Council, Central Resource Consenting
From:	Christina Bloom, Specialist, Earth, Streams and Trees Team, Specialist Unit.
Date:	04 June 2020

1.0 APPLICATION DESCRIPTION

Application and property details

Applicant's Name:	Ryman Healthcare
Application number:	LUS60353161 & LUC60353160 (BUN60353138)
Activity type:	Earthworks & Streamworks
Purpose description:	Earthworks over 25,377 m ² and streamworks to divert 67 metres of stream channel on site and construct 171m of new stream channel on site.
Site address:	223 Kohimarama Road & 7 John Rymer Place

2.0 PROPOSAL, SITE AND LOCALITY DESCRIPTION

2.1 Proposal relevant to this consent only

A full description of the proposal is provided in the following documents:

Application *'Ryman Healthcare Limited: Proposed Comprehensive Care Retirement Village – 223 Kohimarama Road and 7 John Rymer Place, Kohimarama, Auckland: Volume One – Resource Consent Applications and Assessment of Environmental Effects'* report prepared by Ryman Healthcare, dated February 2020. (hence with referred to as AEE)

Further Information: *'Response to Items 70, 71 and 72 of the Section 92 Request for Further Information for the Kohimarama Village Resource Consent Application'*, prepared by Freshwater Solutions, dated 20 May 2020. (hence with referred to as S92 Responses)

'Appendix H: Memorandum– Subject: Ryman Kohimarama Road – Section 92 Queries for the Kohimarama Village Resource Consent Application ref. 3124460-221-S92' from Conor O'Boyle (Beca) to Karen Joubert (Mitchell Daysh), dated 17 April 2020.

'Memorandum: Ryman Kohimarama Road – Stormwater Queries ref. 3124460-221-SW' from Conor O'Boyle (Beca) to Arsini Hanna (Auckland Council, CC: Karen Joubert (Mitchell Daysh),

dated 8 May 2020.

'Email – RE: BUN60353138 Ryman Healthcare 223 Kohimarama Road and 9 John Rymer Place' from Karen Joubert (Mitchell Daysh) to Russel Butchers (Auckland Council & Sandy Hsiao (Auckland Council), CC: Christina Bloom (Auckland Council), dated 20 May 2020 at 16:37.

'Memorandum: Re: Further Information Response – 223 Kohimarama Road and 7 John Rymer Place, Kohimarama' prepared by Mitchell Daysh to Sandy Hsiao and Russell Butchers (Auckland Council), dated 21 July 2020.

Plans: *'Concept Design Cut and Fill Plan – Kohimarama Retirement Village'* drawing number 044-RCT_401_C0-051 rev. C, plan prepared by Beca, dated 6 February 2020.

'Concept Design Erosion and Sediment Control Plan – Kohimarama Retirement Village' drawing number 044-RCT_401_C0-061 rev. C, plan prepared by Beca, dated 6 February 2020.

'Concept Erosion and Sediment Control Details – Kohimarama Retirement Village' drawing number 044-RCT_401_C4-061 rev. C, plan prepared by Beca, dated 6 February 2020.

'Concept Design Retaining Wall Layout – Kohimarama Retirement Village' drawing number 044-RCT_401_C0-071 rev. C, plan prepared by Beca, dated 6 February 2020.

'Concept Design Open Channel Long Section – Kohimarama Retirement Village' drawing number 044-RCT_401_C3-061 rev. C, plan prepared by Beca, dated 6 February 2020.

'Schematic of the Concept Attenuation System and Stream Outlet– Kohimarama Retirement Village' drawing number 044-RCT_401_C3-081 rev. C, plan prepared by Beca, dated 6 February 2020.

'Concept Design Open Channel Cross Sections sheet 1 of 2– Kohimarama Retirement Village' drawing number 044-RCT_401_C3-086 rev. C, plan prepared by Beca, dated 6 February 2020.

'Concept Design Open Channel Cross Sections sheet 2 of 2– Kohimarama Retirement Village' drawing number 044-RCT_401_C3-087 rev. C, plan prepared by Beca, dated 6 February 2020.

'Kohimarama Retirement Village – Landscape Master Plan' drawing number SK100, plan prepared by Design Squared Landscape Architects, dated 3 April 2020.

'Kohimarama Retirement Village – Additional Native Planting Plan' drawing number SK111, plan prepared by Design Squared Landscape Architects, dated 3 April 2020.

'Kohimarama Retirement Village – Riparian Planting' drawing number SK113, plan prepared by Design Squared Landscape Architects, dated 3 April 2020.

The applicant is seeking resource consent to carry out earthworks and to divert streams within the site at 223 Kohimarama Rd, Kohimarama, to enable the development of the site for the construction of a retirement village. Approximately 2.54ha of earthworks are proposed across the site to establish building platforms and install associated roading and infrastructure. Approximately 67m of stream channel will be infilled and existing flows diverted via a newly constructed stream channel through the site with a length of 171 m.

2.3 Site Description

There are three watercourses (A, B and C) within the Site which are highly modified with limited ecological values.

Watercourse A has the highest ecological values of these streams including supporting moderate populations of banded kōkopu. All three streams flow towards the south and then west to the stormwater inlet near John Rymer Place, the flows are piped for about 300 metres before discharging into an unnamed tributary of the Pourewa Creek.

The Pourewa Creek, which is the ultimate receiving environment for the wider catchment, is a large permanent slow flowing watercourse that is swampy in nature which drains a Significant Ecological Area ('SEA') and the coastal forest of Kepa Reserve before discharging to Hobson Bay and ultimately, the Hauraki Gulf.

3.0 REASON FOR CONSENT

3.1 Reasons for consent

Earthworks

Regional land use consent for earthworks is sought for a for **restricted discretionary** earthworks activities under E11.4.1 (A8) & (A9) for earthworks greater than 2,500 m² on land with a slope greater than 10 degrees (A8) and within the Sediment Control Protection Area being 50 metres landwards of a stream (A9) with a total earthworks area of approximately 25,377 m².

Streamworks

Regional land use consent for streamworks is sought for a **Discretionary** activity under rule E3.4.1(A19) of the Auckland Unitary Plan: Operative in Part (AUP:OP) as the proposal seeks to divert the streams running through the site.

Regional land use consent for streamworks is sought for a **Discretionary** activity under rule E3.4.1(A44) of the Auckland Unitary Plan: Operative in Part (AUP:OP) as the proposal seeks to install a temporary diversion structure which does not meet the activity standards in E3.1.15, specifically standards E3.6.1.15(3) as the structure will be in place for longer than 14 days within any 6 month period and E3.6.1.14(1) as the diversion structure will be longer than 30 metres.

Regional land use consent for streamworks is sought for a **Restricted Discretionary** activity under rule E3.4.1(A46) of the Auckland Unitary Plan: Operative in Part (AUP:OP) as the proposal seeks to remove an existing reclamation not complying with the standards in E3.6.1.24.

Overall, the assessment of this activity is considered a **Discretionary Activity** and has been assessed accordingly.

4.0 TECHNICAL ASSESSMENT OF EFFECTS

4.1 Assessment of effects on the environment

Earthworks

Erosion and Sediment Control

The applicant implies in their AEE that the earthworks have the potential to cause erosion and generate sediment which may be discharged to the receiving environment during the construction phase of the project. In order to manage these potential effects related to sediment discharges associated with the earthworks, the applicant has proposed to undertake the earthworks in accordance with Auckland Council Guidance Document 005, *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region*, June 2016, Incorporating Amendment 1 (GD05). The applicant has provided an erosion and sediment control plan based on the guidance of GD05. This plan proposes a variety of controls to be established across the site to minimise the potential for erosion to occur and for sediment to be discharged during the earthworks operation.

A stabilised construction entrance will be constructed off John Rymer Place and utilised during the works to ensure the entrance and roads within the site will not become a source of sediment, reducing the risk of construction vehicles tracking sediment out onto the public roads. Clean water diversion bunds are proposed to be constructed uphill of the earthworks area to ensure surface water is directed around the earthworks area to prevent clean water entering the site and contributing to the amount of water that needs to be treated on the site.

One sediment retention pond (SRP) is proposed as the main method of sediment control for bulk earthworks. Catchment size for the SRP is proposed to be less than 5.0ha (being 2.54ha) and the pond will also have a 3% storage capacity. Dirty water diversion bunds are proposed to be constructed to convey sediment laden water to the SRP for treatment prior to discharge and silt fences are proposed to be installed below the dirty water diversion bunds as an additional layer of security to ensure that sediment laden water does not enter the adjacent properties on John Rymer Place or the nearby watercourses and stormwater network.

Chemical Treatment

The applicant has not confirmed that the SRP will be chemically treated. Rainfall activated chemical treatment is recommended for the SRP as it is considered to be industry best practice and it will significantly improve the sediment removal efficiency of the SRP, thereby reducing potential sediment discharges to the immediate receiving environment. As such, it is recommended that a chemical treatment management plan for the treatment of the SRP be provided prior to the commencement of earthworks and that this plan be implemented throughout the earthworks phase of the project. This is to ensure that the chemicals proposed, and the method of dosing are appropriate for the site and are used effectively and sparingly.

Seasonal Restriction

The site is steep with gradients up to 24% and given the sensitivity of the receiving environment, it is considered that earthworks of this nature impose a higher risk if undertaken outside of the Auckland Council earthworks season (1 October – 30 April of any year). As such, a seasonal restriction has been recommended to ensure that the potential effects associated with the proposal are managed appropriately should winter works be proposed.

Streamworks

Streamworks are proposed to infill sections of intermittent streams A & C comprising a total length of 67 m and stream bed area of 42.9 m². The applicant has proposed to mitigate the proposed stream loss by constructing a new stream channel and daylight piped sections of the streams for a total length of 171 metres stream length with streambed area of 109.44 m² on the subject site which will divert the stream flow to a new course. The applicant has provided an indicative streamworks methodology and an ecological assessment including a stream ecological valuation (SEV) and environmental compensation ratio (ECR) for the proposed streamworks. These items are discussed in detail below and are considered against the relevant objectives and policies of the AUP:OP in determining the appropriateness of the stream diversion & mitigation proposal.

Avoidance

Prior to assessing the diversion proposal, the appropriateness of the activity was considered against objective E3.2(6) and policy E3.3(13) which state:

- *Reclamation and drainage of the bed of a lake, river, stream and wetland is avoided, unless there is no practicable alternative; and*
- *Avoid the reclamation and drainage of the bed of lakes, rivers, streams and wetlands, including any extension to existing reclamations or drained areas unless all of the following apply:*
 - (a) there is no practicable alternative method for undertaking the activity outside the lake, river, stream or wetland;*
 - (b) for lakes, permanent rivers and streams, and wetlands the activity is required for any of the following:*

- (i) as part of an activity designed to restore or enhance the natural values of any lake, river, stream or wetland, any adjacent area of indigenous vegetation or habitats of indigenous fauna;
 - (ii) for the operation, use, maintenance, repair, development or upgrade of infrastructure; or
 - (iii) to undertake mineral extraction activities; and
- (c) the activity avoids significant adverse effects and avoids, remedies or mitigates other adverse effects on Mana Whenua values associated with freshwater resources, including wāhi tapu, wāhi taonga and mahinga kai.

Based on Council’s advice, the applicant revised their proposal in order to minimise impact on the streams, through diversion and daylighting, rather than reclamation of the streams on site. As such, I consider that the proposal is generally consistent with objective E3.2(6) and policy E3.3(13) to the extent possible in order to develop the site as the AUP:OP envisages.

Stream Ecological Valuation and Environmental Compensation Ratio

The applicant’s Ecologist (Freshwater Solutions) undertook stream ecological valuations (SEVs) at the site using the SEV methodology stated in Auckland Council’s Technical Report, *Stream Ecological Valuation (SEV): a method for assessing the ecological functions of Auckland Streams* (TR2011/009), to determine the current and potential ecological value of the streams to be lost and calculate the subsequent environmental compensation ratios (ECRs) to be used in determining the quantum of mitigation required to address the proposed stream loss. A summary of the SEV scores and ECR calculated by Freshwater Solutions on behalf of the applicant are summarised in tables 1 & 2 below:

Table 1: Predicted SEV scores & calculated ECR values

Impact	Impact Scores			Restore	Restoration Scores		ECR Value
	SEVi-C	SEVi-P	SEVi-I		SEVm-C	SEVm-P	
Stream A & C	0.532	0.646	0.000	New stream - upper	0.000	0.465	2.09
Stream A & C	0.532	0.646	0.000	New stream - lower	0.000	0.545	1.78

Table 2: Stream mitigation calculations

Impact reach			ECR		Restoration / realigned reach					Length to restore (m)	Outstanding area not mitigated (m ²)	
Stream	Length (m)	Width (m)	ECR	ECR x Area	Stream	Length (m)	Width (m)	Area (m ²)	length required to be restored (m)			
A and C	67	0.64	42.9	1.78	76.3	New stream - lower	99.0	0.640	63.4	119.1	99.0	7.3
A and C	-	-	7.3	2.09	15.1	New stream - upper	72.0	0.640	46.1	23.6	23.6	-
											122.6	

- Notes:**
- (a) = Streambed area impacted based on channel widths at 10 SEV cross sections;
 - (b) = Length of channel to restore and create and calculated by ('ECR x Area' / 'Stream Width'). The length to create defaults to 1:1 length if shorter than that impacted.
 - (d) = Amount of streambed area that has not been mitigated for and is transferred to 'Impact reach Area' on the next row if applicable for additional compensation calculation using next available restoration reach. The outstanding amount is determined by ('Restoration reach Area available' - 'ECR x Area') / ECR value. The values in the orange square are outstanding amounts that are transferred to the next row in the 'Impact reach Area' column (a).

As the applicant is proposing a new stream channel which is 171m long and 0.64 m wide, a total of 109.44 m² of stream channel will be created and the required area, as recommended by the ECR calculations, would be achieved. The new channel has been split into an upper and lower reach due to site constraints requiring a difference in channel construction and the inclusion of 3 weirs in the upper reach, resulting in a lower potential SEV score for this stream.

Based on the applicant's S92 responses, it is considered that the mitigation proposal offered by the applicant is appropriate to address the loss of streams at the development site and will result in a net gain of an additional 48.4 metres in stream length/30.98 m² of stream being created in addition to what is required to achieve no net loss.

Mitigation (Diversion) Proposal

The applicant has provided a newly created stream diversion on site which follows the general alignment of the existing stream channel, and includes daylighting sections of the watercourses which were previously piped and as such, this diversion can be considered as mitigation; which is defined as reducing the severity of the effect at the point of impact. The proposed stream diversion has been designed to provide additional stream length on site, in order to mitigate other adverse effects on habitat, fish passage and hydraulic function, demonstrated by the lower potential SEV scores of the newly created diversion, as compared to the potential SEV scores for the existing (impact) stream.

Due to the nature of the site and the proximity of the newly constructed stream to the existing streams which are to be infilled, it is not possible to construct the new stream channel and divert the flows from the existing streams into the new stream diversion prior to infilling the streams, as is typically done for stream diversions. In this instance, the existing streams will be temporarily diverted through the use of piping of upstream flows, diversion channels and attenuation basins in order to enable the works to infill the existing streams and to create the new stream channel. It is standard practice to allow for dam & diversion methodologies to allow temporary stream diversions in order to undertake streamworks.

The applicant has indicated that they anticipated that there will be a delay of 21-23 months between the commencement of the streamworks & infilling of the existing streams on site and the livening of the newly created stream diversion. The level of effect as a result of this time lag has been considered to be acceptable, however, recommendations to ensure that this is the case have been included below.

There has also been discussion as to whether a bond would be required to ensure that the new stream channel is created and that the works do not result in stream reclamation, if left incomplete, however, many other aspects of the stormwater for the wider site are dependent upon the stream diversion and it is the opinion of Arsini Hanna (Senior stormwater specialist, Auckland Council) and Maree Gleeson (Healthy Waters, Auckland Council) that stream diversion must be constructed as per the application materials for the stormwater connections to be accepted and for the site's stormwater infrastructure to function appropriately. I agree with this opinion that a bond to ensure that the stream is created is not required.

As noted above, the applicant has proposed to mitigate the proposal's stream loss in the form of a newly constructed stream channel. The appropriateness of the proposed mitigation package is considered regarding Policy E.3.3 (4) of the AUP:OP where it's stated that restoration and enhancement actions for a specific activity should:

- a) *be located as close as possible to the subject site*
- b) *be 'like-for-like' in terms of the type of freshwater system affected*
- c) *preferably achieve no net loss or a net ecological gain in the natural values including ecological values*
- d) *consider the use of biodiversity offsetting as outlined in Appendix 8 Biodiversity Offsetting*

It is considered that the mitigation proposal is consistent with these policies and is discussed in further detail below.

Proximity

The proposed mitigation proposed is to be undertaken on the subject site, within a similar alignment and on the same stream reach as that being impacted. The concept of proximity is therefore met.

Like for like

The mitigation (diversion) proposal is to be undertaken on a watercourse of the same class (i.e., intermittent) as the intermittent streams are being lost and an intermittent stream is being created. The new stream will be located on the subject site, effectively diverting upstream flows to a new course and will be constructed to a similar width to that being lost. Overall, it is considered that the mitigation proposal meets the like for like criteria, being like for like in terms of aquatic habitat.

No net loss

Generally speaking, the amount of stream required to be enhanced is relative to the amount of stream to be removed. As discussed above, the SEV and ECR values are considered appropriate and it is anticipated that the mitigation (diversion) works will result in an outcome that achieves no net loss and a net gain overall.

While the quantum of mitigation is considered appropriate, the application contains little in the way of detail regarding a native plant schedule, planting densities, planting methodology, pest control and plant maintenance. As such, it is recommended that the applicant provide a final Stream Channel Design and Enhancement Plan that includes this detail and is in accordance with Auckland Council's Technical Publication 148: *Riparian Zone Management Strategy for the Auckland Region*, for Council approval. A recommendation to this effect has therefore been included below.

Stream design

The ecology report and assumptions in the SEV calculator for the proposed stream channel provides detail of the constructed stream. This includes:

- Reconstructing the stream with meanders and variation in hydrology.
- Creation of cascades, run, riffle and pool sequences.
- Addition of some hard substrate.

- Woody debris in the stream to increase fish habitat and refuge space.
- Addition of 3 weirs including a low flow channel with mussel spat ropes to provide fish passage for climbing species of native freshwater fish (including ongoing maintenance of mussel spat ropes for the life of the structures).
- Stabilised banks and channel to avoid erosion and potentially adverse sedimentation effects on water quality.

Regardless, it is recommended that a final stream design be submitted to Council for approval prior to construction of the new stream channel so that the detail above can be shown on design drawings. This is also to ensure that the assumptions modelled by the predicted SEV values are constructed and to confirm final detail such as frequency of input for hard substrate such as rocks and the final riparian planting plan.

The applicant has proposed the addition of mussel spat ropes to the low flow channels of the weirs, as per Image 1, to provide on-going fish passage for climbing species. Mussel spat ropes require on-going maintenance and a recommendation to include spat rope maintenance in the Stormwater Management Plan, a plan recommended by Council’s Stormwater Specialist, has been included below.

Due to a level of uncertainty when creating freshwater bodies, it is recommended that an SEV be undertaken five years following permanent diversion to ensure that the new stream achieves its predicted value to address the proposed stream loss. If it does not meet the predicted values of 0.465 for the upper section and 0.545 for the lower reach, it is recommended that a further mitigation plan be provided to Council for approval so that further works can be undertaken in order to ensure that the SEV of the new channel meets the predicted values for each reach. Recommendations to this effect have therefore been included below.

Image 1: Conceptual drawing showing mussel spat rope in the weir low flow channel to provide fish passage for climbing species.

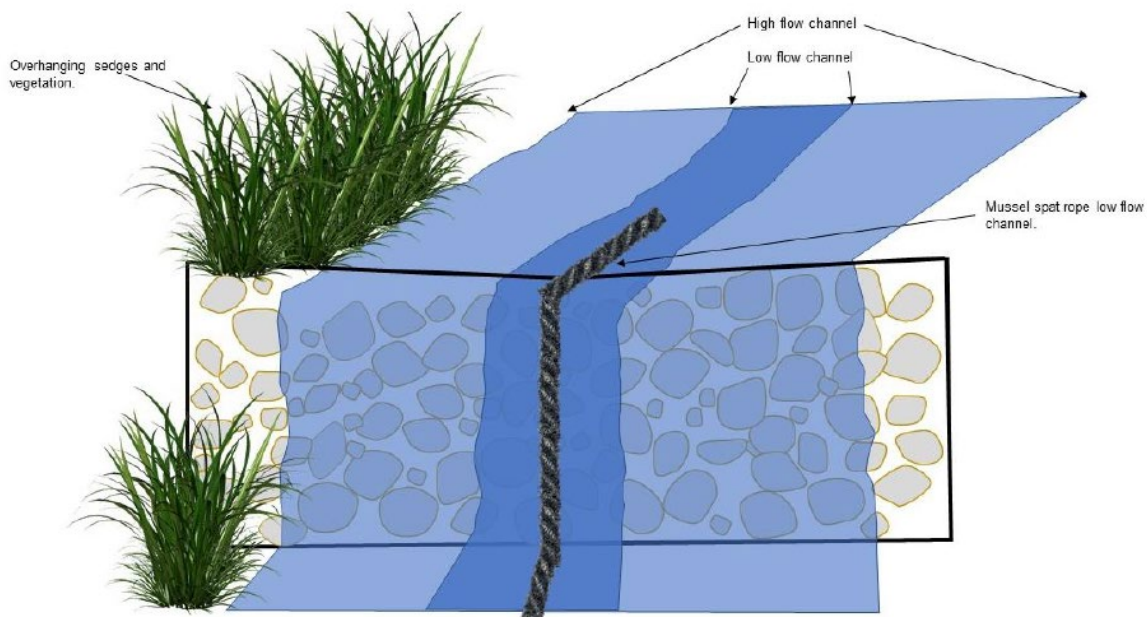


Image 2: Cross section showing indicative riparian planting along new stream (note: example of retaining wall on left bank).



Image 3: Indicative habitat creation in new channel & horizontal realignment.

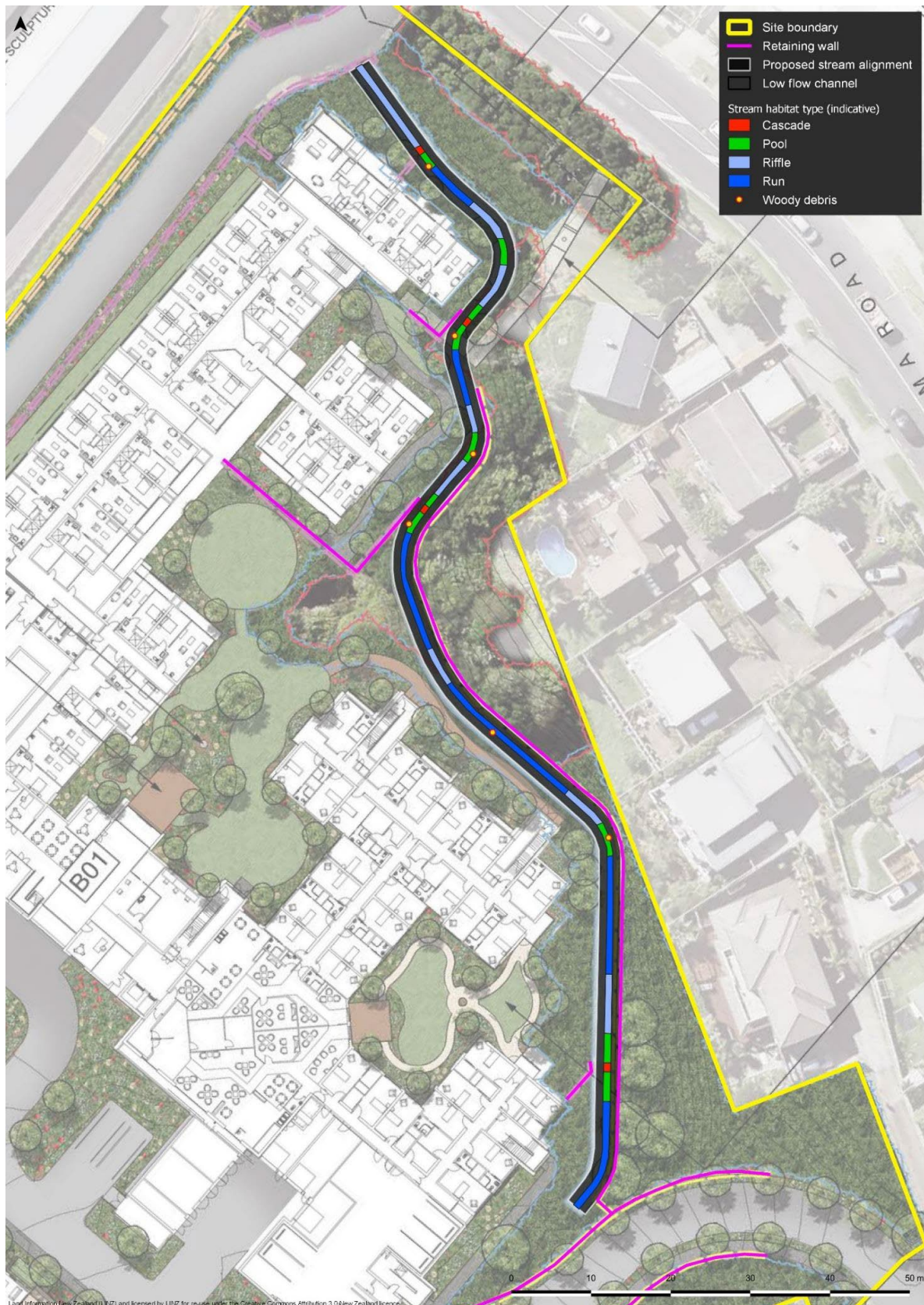
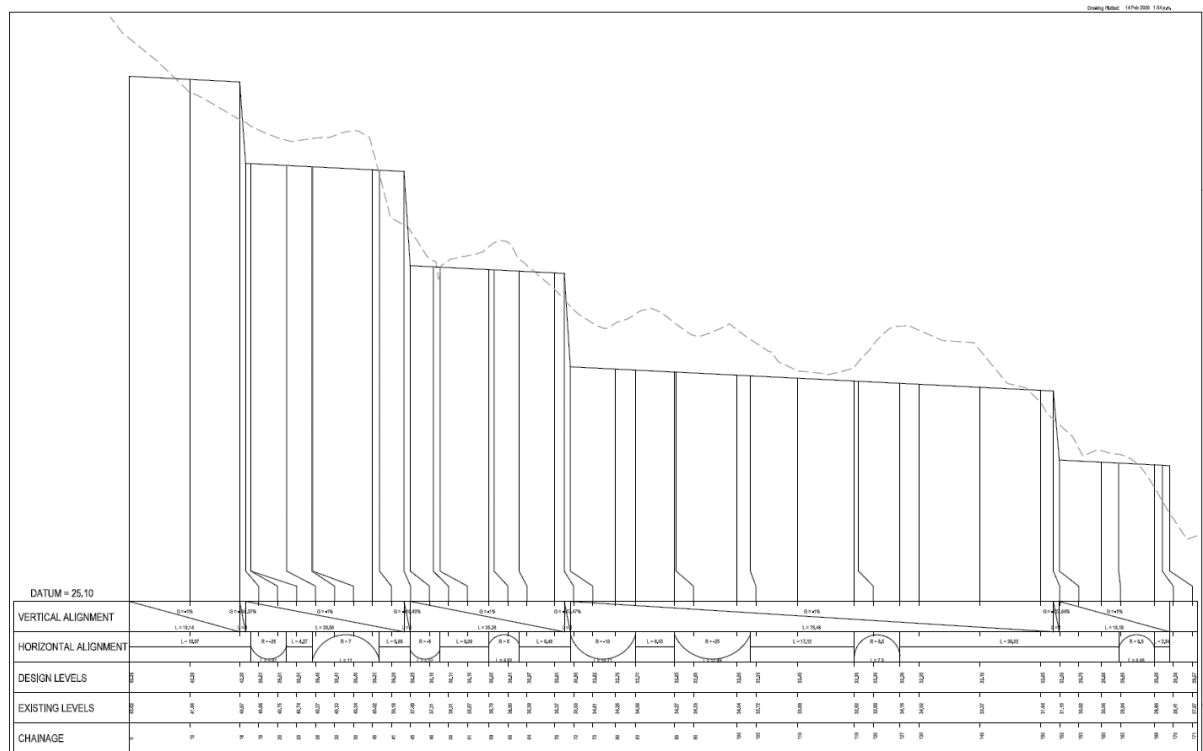


Image 4: Plan showing vertical realignment of stream from Beca: Concept design open channel long section 044-RCT_401_C3-061 rev. C



Streamworks methodology

The applicant has provided an indicative streamworks methodology as part of their S92 response but has stated that the erosion and sediment control methodology will be confirmed by the contractor prior to commencement of works. In summary, the existing streams will be infilled initially as part of bulk earthworks, requiring stream flow to be diverted temporarily around the earthworks area. Following completion of the earthworks, the new stream channel will be constructed. The proposed methodology includes:

1. Clear vegetation adjacent to the watercourses that is to be removed as part of the proposed works, as identified on the landscaping plans. Note: **Restricted discretionary** consent for alteration or removal of vegetation within 10 metres of an urban stream is required under E15(A19).
2. Install super silt fences around the open watercourses prior to earthworks being undertaken within the catchment of the watercourses.
3. Install erosion and sediment control prior to commencing earthworks on-site in accordance with GD05.
4. Relocate any fish or eels found in the watercourses and install a downstream fish barrier in accordance with the fish capture and relocation plan.
5. Dewater the watercourses in accordance with section G1.0 of GD05 and divert all upstream flows around the works area
6. Block the downstream inlets from the streams into the stormwater network permanently.
7. Remove the super silt fence around the existing open watercourse,
8. Install the proposed inlet structures from the stream and connection to the proposed piped network with a temporary sediment retention pond upstream of the inlet.
9. Backfill and excavate the stream to the proposed design levels and install the retaining wall along the left back of the stream.
10. Install the proposed drop structure / weirs.
11. Form the proposed profile of the new stream and banks.
12. Apply ecological treatments to the watercourse and stabilise.
13. Infill the temporary sediment retention pond upstream of the inlet.

14. Install proposed outlets and associated energy dissipation treatments for all reticulated stormwater discharges to the watercourse.
15. A final inspection of the stream works is to be undertaken by the ecologist and civil engineer.
16. Permanently divert the reticulated stormwater from off-site sources to the watercourse, including all subsoil drainage, once constructed.
17. Remove the temporary downstream fish barrier to allow for the migration of fish and eels to the watercourse

Any pumps used for de watering shall contain a screen to prevent fish from entering the pump.

No machinery shall enter the wetted cross section of the watercourse bed. Fuelling of machinery to be carried out away from the water body.

Native fish capture and relocation is recommended, and that a Native Fish Capture and Relocation Plan be provided to Council for approval prior to streamworks commencing to ensure that native fish are salvaged, and biodiversity of native aquatic fauna are protected.

It is my opinion that the streamworks can be undertaken in accordance with GD05 using a best practice dam and divert methodology to manage potential sediment discharges during the bulk earthworks stage and following that, the new stream channel will be constructed offline. Although the applicant has provided indicative information regarding this, more detail is required to ensure the potential for sediment discharges are managed throughout the works. As such, I recommend that a final streamworks methodology, drafted under the guidance of GD05, be submitted for Council approval prior to streamworks commencing.

Conclusion

For the earthworks, provided the erosion and sediment controls are installed, constructed and maintained in accordance with the Application Report, supporting documentation, the recommendations above and any additional requirements as deemed necessary by the guidance outlined in GD05, I consider the resulting effects on the environment from sediment discharges during the earthworks will be appropriately managed.

For the streamworks, provided the works are undertaken in accordance with the Application Report, Ecological Assessment, Technical Publication 148, New Zealand Fish Passage Guidelines (2018), the recommendations above, and provided the works are adequately monitored and maintained, I considered that the ecological effects associated with the temporary stream diversion and the construction of the new stream channel, and sediment disturbance associated with in-stream works, can be appropriately managed and there will be no net loss in terms of aquatic habitat. Recommendations to ensure this is the case have been included below.

5.0 STATUTORY CONSIDERATIONS

5.1 Objectives and Policies of the Auckland Unitary Plan: Operative in Part (AUP:OP):

Relevant regional land disturbance objectives and policies are found in chapter E11.2 and E11.3 respectively, of the AUP:OP; Objectives 1-3 and Policies 1, 2 and 4-7 are considered relevant in this particular case. These objectives and policies seek to ensure that earthworks are undertaken in a manner that protects people and the environment, does not exacerbate natural hazards and minimises sediment generation.

The objectives and policies within Chapter E3 and Regional Policy Statement Chapter B7, Natural Resources, listed below are relevant to the planner's assessment of this application.

It is considered that the proposed stream diversion & mitigation is consistent the objectives and policies identified below, specifically those that seek to avoid effects, the maintenance or enhancement of degraded freshwater systems and the directive regarding offset & mitigation proposals.

- B7.3.1 (1) Degraded freshwater systems are enhanced.
- B7.3.1 (2) Loss of freshwater systems is minimised.
- B7.3.1 (3) The adverse effects of changes in land use on freshwater are avoided, remedied or mitigated.
- B7.3.2 (6) Restore and enhance freshwater systems where practicable when development, change of land use, and subdivision occur.
- E3.2 (2) Auckland's lakes, rivers, streams and wetlands are restored, maintained or enhanced.
- E3.3 (2) Manage the effects of activities in, on, under or over the beds of lakes, rivers, streams or wetlands outside the overlays identified in Policy E3.3 (1) by: (a) avoiding where practicable or otherwise remedying or mitigating any adverse effects on lakes, rivers, streams or wetlands; and (b) where appropriate, restoring and enhancing the lake, river, stream or wetland.
- E3.3 (3) Enable the enhancement, maintenance and restoration of lakes, rivers, streams or wetlands.
- E3.3 (4) Restoration and enhancement actions, which may form part of an offsetting proposal, for a specific activity should:
 - (a) be located as close as possible to the subject site;
 - (b) be 'like-for-like' in terms of the type of freshwater system affected;
 - (c) preferably achieve no net loss or a net gain in the natural values including ecological function of lakes, rivers, streams or wetlands; and
 - (d) consider the use of biodiversity offsetting as outlined in Appendix 8 Biodiversity offsetting.
- (c) the activity avoids significant adverse effects and avoids, remedies or mitigates other adverse effects on Mana Whenua values associated with freshwater resources, including wāhi tapu, wāhi taonga and mahinga kai.

5.2 Other Statutory documents

The following statutory documents are considered relevant to the planner's assessment of the application:

- **National Policy Statement: Freshwater Management 2014 (NPS: Freshwater Management)**

As the application relates to works within and adjacent to streams, the NPS Freshwater Management is considered relevant to this application. Objectives of the NPS: Freshwater Management centre on safeguarding the life supporting capacity, ecosystem processes and indigenous species of water bodies in terms of water quality and quantity.

- **New Zealand Coastal Policy Statement 2010 (NZCPS)**

As the ultimate receiving environment is the coastal marine environment, the NZCPS is considered relevant to this application. The NZCPS seeks to protect the coastal environment and its special values and states that adverse effects of development should, as far as practicable, be avoided.

- **Hauraki Gulf Marine Park Act (HGMPA) 2000**

As the ultimate receiving environment includes the Hauraki Gulf, the HGMPA is considered relevant to this application. The HGMPA seeks to recognise the national significance and life-supporting capacity of the Hauraki Gulf along with enhancing its natural, historic and physical resources where appropriate.

5.3 Duration of consent:

For the streamworks, a 5-year lapse period is recommended in order to provide for delays in the commencement or completion of the works. For all structures in the stream, a 35-year expiry is recommended, the maximum allowed under the RMA (1991).

For the earthworks, it is considered appropriate to set a standard term of 5 years for the consent to allow for any unforeseen delays in completing the work.

6.0 RECOMMENDATION AND CONDITIONS

6.1 Adequacy of information

The above assessment is based on the information submitted as part of the application. It is considered that the information submitted is enough to enable the consideration of the above matters on an informed basis:

- a. The level of information provides a reasonable understanding of the nature and scope of the proposed activities as it relates to the relevant planning documents.
- b. The extent and scale of any adverse effects on the environment can be understood and assessed, but detail around the final works approach is incomplete and further recommendations have been made to bridge the information gaps.

6.2 Recommendation

The assessment in this memo does not identify any reasons to withhold consent, and the aspects of the proposal considered by this memo could be granted consent, subject to recommended conditions, for the following reasons:

1. The sensitivity of the receiving environment to the adverse effects of potential sediment discharge will not be compromised given the expected level of discharge, the application of suitable control technologies and appropriate on-site management techniques.
2. Subject to the imposition of consent conditions, it is considered that the effects on the receiving environment will be appropriately managed.
3. The applicant has proposed the best practicable option to mitigate the ecological effects associated with the loss of stream channel.

6.3 Conditions

It is considered appropriate to recommend a suite of consent conditions relating to; maintenance and monitoring of erosion and sediment controls, realignment and creation of the stream bed, and management of water and native fish through implementation of an appropriate streamworks methodology. The inclusion of these conditions is consistent with similar earthworks and streamworks operations granted consent for in the Auckland Region, and the wider site, and will ensure that the effects of the proposed streamworks will be appropriately managed.

6.4 General conditions

The following general conditions are recommended:

- X.1 The earthworks & streamworks shall be undertaken in accordance with the following plans and information, unless a higher standard is details in the conditions below, in which case this higher standard shall apply:

Application *'Ryman Healthcare Limited: Proposed Comprehensive Care Retirement Village – 223 Kohimarama Road and 7 John Rymer Place, Kohimarama, Auckland: Volume One – Resource Consent Applications and Assessment of Environmental Effects'* report prepared by Ryman Healthcare, dated February 2020.

Further Information: *'Response to Items 70, 71 and 72 of the Section 92 Request for Further Information for the Kohimarama Village Resource Consent Application'*, prepared by Freshwater Solutions, dated 20 May 2020.

'Appendix H: Memorandum– Subject: Ryman Kohimarama Road – Section 92 Queries for the Kohimarama Village Resource Consent Application ref. 3124460-221-S92' from Conor O'Boyle (Beca) to Karen Joubert (Mitchell Daysh), dated 17 April 2020.

'Memorandum: Ryman Kohimarama Road – Stormwater Queries ref. 3124460-221-SW' from Conor O'Boyle (Beca) to Arsini Hanna (Auckland Council, CC: Karen Joubert (Mitchell Daysh)), dated 8 May 2020.

'Email – RE: BUN60353138 Ryman Healthcare 223 Kohimarama Road and 9 John Rymer Place' from Karen Joubert (Mitchell Daysh) to Russel Butchers (Auckland Council & Sandy Hsiao (Auckland Council), CC: Christina Bloom (Auckland Council)), dated 20 May 2020 at 16:37.

'Memorandum: Re: Further Information Response – 223 Kohimarama Road and 7 John Rymer Place, Kohimarama' prepared by Mitchell Daysh to Sandy Hsiao and Russell Butchers (Auckland Council), dated 21 July 2020.

Plans: *'C oncept Design Cut and Fill Plan – Kohimarama Retirement Village'* drawing number 044-RCT_401_C0-051 rev. C, plan prepared by Beca, dated 6 February 2020.

'Concept Design Erosion and Sediment Control Plan – Kohimarama Retirement Village' drawing number 044-RCT_401_C0-061 rev. C, plan prepared by Beca, dated 6 February 2020.

'Concept Erosion and Sediment Control Details – Kohimarama Retirement Village' drawing number 044-RCT_401_C4-061 rev. C, plan prepared by Beca, dated 6 February 2020.

'Concept Design Retaining Wall Layout – Kohimarama Retirement Village' drawing number 044-RCT_401_C0-071 rev. C, plan prepared by Beca, dated 6 February 2020.

'Concept Design Open Channel Long Section – Kohimarama Retirement Village' drawing number 044-RCT_401_C3-061 rev. C, plan prepared by Beca, dated 6 February 2020.

'Schematic of the Concept Attenuation System and Stream Outlet– Kohimarama Retirement Village' drawing number 044-RCT_401_C3-081 rev. C, plan prepared by Beca, dated 6 February 2020.

'Concept Design Open Channel Cross Sections sheet 1 of 2– Kohimarama Retirement Village' drawing number 044-RCT_401_C3-086 rev. C, plan prepared by Beca, dated 6 February 2020.

'Concept Design Open Channel Cross Sections sheet 2 of 2– Kohimarama Retirement Village' drawing number 044-RCT_401_C3-087 rev. C, plan prepared by Beca, dated 6 February 2020.

'Kohimarama Retirement Village – Landscape Master Plan' drawing number SK100, plan prepared by Design Squared Landscape Architects, dated 3 April 2020.

'Kohimarama Retirement Village – Additional Native Planting Plan' drawing number SK111, plan prepared by Design Squared Landscape Architects, dated 3 April 2020.

'Kohimarama Retirement Village – Riparian Planting' drawing number SK113, plan prepared by Design Squared Landscape Architects, dated 3 April 2020.

Advice Note: *In the event that minor amendments to the Erosion and Sediment Control Plan are required, any such amendments should be limited to the scope of this consent. Any amendments which affect the performance of the Erosion and Sediment Control Plan may require an application to be made in accordance with section 127 of the RMA. Any minor amendments should be provided to the Council prior to implementation to confirm that*

they are within the scope of this consent.

Pre-commencement

X2. Prior to the commencement of any earthworks or streamworks activity on the subject site, the consent holder shall hold a pre-start meeting that:

- is located on the subject site
- is scheduled **not less than five days** before the anticipated commencement of earthworks
- includes Auckland Council Compliance Monitoring officer[s]
- includes representation from the contractors who will undertake the works

The meeting shall discuss the erosion and sediment control measures, the earthworks and streamworks methodologies and shall ensure all relevant parties are aware of and familiar with the necessary conditions of this consent.

The following information shall be made available at the pre-start meeting:

- Timeframes for key stages of the works authorised under this consent,
- Resource consent conditions,
- Erosion and Sediment Control Plans,
- Chemical Treatment Management Plan,
- Streamworks methodology,
- Stream Channel Design and Enhancement Plan and
- Native Fish Capture & Relocation Plan.

A pre-start meeting shall be held prior to the commencement of the earthworks or streamworks activity in each period between October 1 and April 30 that this consent is exercised.

Advice Note: To arrange the pre-start meeting please contact the Team Leader Compliance Monitoring Central to arrange this meeting on monitoring@aucklandcouncil.govt.nz, or 09 301 01 01. The conditions of consent should be discussed at this meeting. All additional information required by the Council should be provided 2 days prior to the meeting.

Seasonal Restriction

X3. No earthworks and / or streamworks on the site shall be undertaken between 1 May and 30 September in any year, without the prior written approval of the Team Leader Compliance Monitoring Central. Revegetation/stabilisation is to be completed by 30 April in accordance with measures detailed in Auckland Council Guidance Document GD05; Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region and any amendments to this document.

Earthworks

X4. Pursuant to section 125 of the RMA, consent LUC60353160 shall expire five years after the date it is granted unless it has been surrendered or cancelled at an earlier date in accordance with the RMA.

X5. Prior to the commencement of any earthworks at the site, a Chemical Treatment Management Plan (CTMP) shall be submitted for the written approval of the Team Leader Compliance Monitoring Central. The plan shall include as a minimum:

- a) Specific design details of the chemical treatment system based on a rainfall activated methodology for the site's sediment retention pond;
- b) Monitoring, maintenance (including post storm) and contingency programme (including a record sheet);
- c) Details of optimum dosage (including assumptions);
- d) Results of initial chemical treatment trial;

- e) A spill contingency plan; and
- f) Details of the person or bodies that will hold responsibility for long term operation and maintenance of the chemical treatment system and the organisational structure which will support this system.

X6. The sediment retention pond shall be chemically treated in accordance with the approved Chemical Treatment Management Plan (CTMP). Any amendments to the CTMP shall be submitted in writing to the Team Leader Compliance Monitoring Central, for written approval prior to implementation.

X7. Prior to any earthworks commencing, a certificate signed by an appropriately qualified and experienced person shall be submitted to the Team Leader Compliance Monitoring Central, to certify that the erosion and sediment controls have been constructed in accordance with the approved erosion and sediment control plans and Auckland Council Guidance Document GD05; Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region

Certified controls shall include but are not limited to the sediment retention ponds, clean and dirty water diversion bunds. The certification for these and any subsequent measures shall be supplied immediately upon completion of construction of those measures. Information supplied, if applicable, shall include:

- a) Contributing catchment area;
- b) Shape of structure (dimensions of structure);
- c) Position of inlets/outlets; and
- d) Stabilisation of the structure.

X8. The operational effectiveness and efficiency of all erosion and sediment control measures specifically required by the approved Erosion and Sediment Control Plan shall be maintained throughout the duration of earthworks activity, or until the site is permanently stabilised against erosion.

X9. Erosion and sediment control measures shall be constructed and maintained in general accordance with Auckland Council Guidance Document GD05; Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, and any amendments to this document, except where a higher standard is detailed in the documents referred to in conditions above or below, in which case the higher standard shall apply.

X10. Earthworks shall be managed to avoid deposition of earth, mud, dirt or other debris on any road or footpath resulting from earthworks activity on the subject site. In the event that such deposition does occur, it shall immediately be removed. In no instance shall roads or footpaths be washed down with water without appropriate erosion and sediment control measures in place to prevent contamination of the stormwater drainage system, watercourses or receiving waters.

Advice Note: *In order to prevent sediment laden water entering waterways from the road, the following methods may be adopted to prevent, or address discharges should they occur:*

- *provision of a stabilised entry and exit(s) point for vehicles*
- *provision of wheel wash facilities*
- *ceasing of vehicle movement until materials are removed*
- *cleaning of road surfaces using street-sweepers*
- *silt and sediment traps*
- *catchpit protection*

In no circumstances should the washing of deposited materials into drains be advised or otherwise condoned.

It is recommended that you discuss any potential measures with the Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact the Team Leader Compliance Monitoring Central for more details. Alternatively, please refer to Auckland Council Guidance Document GD05, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region.

X11. The site shall be progressively stabilised against erosion at all stages of the earthworks activity and shall be sequenced to minimise the discharge of sediment to surface water.

Advice Note: *Earthworks shall be progressively stabilised against erosion during all stages of the earthwork activity. Interim stabilisation measures may include:*

- *the use of waterproof covers, geotextiles, or mulching*
- *top-soiling and grassing of otherwise bare areas of earth*
- *aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward*

It is recommended that you discuss any potential measures with the Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact the Team Leader Compliance Monitoring Central for more details. Alternatively, please refer to Auckland Council Guidance Document GD05, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region.

X12. Upon completion or abandonment of earthworks on the subject site all areas of bare earth shall be permanently stabilised against erosion to the satisfaction of the Team Leader Compliance Monitoring Central.

Advice Note: *Should the earthworks be completed or abandoned, bare areas of earth shall be permanently stabilised against erosion. Measures may include:*

- *the use of mulching;*
- *top-soiling, grassing and mulching of otherwise bare areas of earth; and*
- *aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.*

The on-going monitoring of these measures is the responsibility of the consent holder. It is recommended that you discuss any potential measures with the Council's monitoring officer who will guide you on the most appropriate approach to take. Please contact the Team Leader Compliance Monitoring Central for more details. Alternatively, please refer to Auckland Council Guidance Document GD05, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region.

Streamworks

X13. Pursuant to section 125 of the RMA, consent LUS60353161 for works in the streams shall lapse five years after the date it is granted unless the consent is given effect to or the Council extends the lapse period.

X14. Pursuant to section 125 of the RMA, consent LUS60353161 for structures in the streams shall expire thirty-five years after the date it is granted unless it has been cancelled or surrendered at an earlier date in accordance with measures outlined in the RMA.

X15. Prior to streamworks commencing, a final streamworks methodology shall be prepared and submitted to the Team Leader Compliance Monitoring Central for written approval. The streamworks methodology shall be prepared in accordance with Auckland Council Guidance Document GD05; Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (section G4 Works within a watercourse) and shall be implemented for the duration of streamworks.

X16. Prior to streamworks commencing, including any de-watering, the consent holder shall submit a Native Fish Capture and Relocation Plan to the Team Leader Compliance Monitoring Central for written approval. This plan shall detail how native fish will be salvaged prior to dewatering of the streams on site and shall include but not be limited to:

- a. Methodologies to capture fish.
- b. Fishing effort and regression model.
- c. Confirmation that a qualified ecologist shall undertake the capture and relocation.
- d. Details of the relocation site including population capacity.

- e. Storage and transport measures including prevention of predation and death during capture.
- f. Euthanasia methods for diseased or pest species.

X17. A suitably qualified and experienced ecologist shall conduct the fish capture and relocation as per the approved Native Fish Capture and Relocation Plan and shall be on site during the dewatering process to rescue and relocate any fish still present.

X18. No machinery shall enter the wetted cross section of the bed of any stream. All machinery shall be operated (including maintenance, lubrication and refuelling) in a way, which ensures no hazardous substances such as fuel, oil or similar contaminants are discharged. In the event that any discharge occurs, works shall cease immediately, and the discharge shall be mitigated and/or rectified to the satisfaction of the Team Leader Compliance Monitoring Central.

Advice Note: *Refuelling, lubrication and maintenance activities associated with any machinery should be carried out away from any water body with appropriate methods in place so if any spillage does occur that it will be contained and does not enter the water body. If a construction management plan is required under any land use consent, you are advised to include any maintenance / servicing areas as part of that construction management plan.*

X19. Prior to construction of the new stream channel, a final Stream Channel Design and Enhancement Plan shall be prepared and submitted to the Team Leader Compliance Monitoring Central. No streamworks activity on the subject site shall commence until confirmation from council is provided that the Stream Restoration and Enhancement Plan is satisfactory. The final Stream Channel Design and Enhancement Plan be prepared in accordance with Technical Publication 148, Riparian Zone Management Strategy for the Auckland Region (TP148) and shall include but is not be limited to:

- a. Details of the stream mitigation works that result in:
 - i. At least 171 m and 109.44 m² of constructed stream at the point of impact (on-site).
 - ii. Riparian planting along the full length of the newly constructed stream channel to an average width of 10m either side of the channel.
- b. Final stream channel design including, but not limited to:
 - i. Details of stream design with meanders and variation in hydrology.
 - ii. Use & frequency of hard substrate for habitat enhancement,
 - iii. Details of creation of cascades, run, riffle and pool sequences,
 - iv. Details of weirs, including provision of fish passage for climbing species through mussel spat ropes or other approved methodology included in the New Zealand Fish passage Guidelines
- c. Site preparation details including timing;
- d. Pest plant and animal control methodologies;
- e. Plant species, numbers and densities to be planted;
- f. Planting methodologies;
- g. Annual planting maintenance details;
- h. Eco-sourcing details; and
- i. A detailed ecological methodology to ensure the proposed SEV values indicated within the document titled '*Response to Items 70, 71 and 72 of the Section 92 Request for Further Information for the Kohimarama Village Resource Consent Application*', prepared by Freshwater Solutions, dated 20 May 2020, referenced in Condition 1 are monitored at year 1, 3, 5 after the completion of the diversion & planting to provide a trajectory.

X20. Creation and livening of the stream diversion and enhancement as outlined within the approved Stream Channel Design and Enhancement Plan required under condition **X19** above, shall be implemented and completed with 24 months of the commencement of streamworks authorised under this consent and maintained thereafter, in accordance with that plan.

- X21. Following the physical completion of the stream diversion and enhancement works as required by condition **X19**, the consent holder shall have a land covenant prepared under section 108(2)(d) of the RMA covering the legal protection and ongoing maintenance of the new stream channel and planting in perpetuity, for registration on the existing Certificate of Titles at (Lot 1 DP332282 – 223 Kohimarama Rd & Lot 51 DP 163242 – 7 John Rymer Place).

A draft copy of the covenant shall be submitted to Auckland Council Team Leader Compliance Monitoring Central for written approval within **two months** following the completion of the stream restoration and enhancement works, and prior to being registered. The covenant shall be registered against the Certificate of Title and a copy of the updated Certificate of Title shall be provided to the Team Leader Compliance Monitoring Central within **three months** of obtaining Council approval.

- X22. Plant and animal pest management and maintenance measures as required by the Stream Restoration and Enhancement Plan shall be implemented for a period of no less than 5 years or until canopy closure of the riparian planting is achieved. The 5-year period shall commence once all the diversion & riparian planting works have been completed.
- X23. Written confirmation in the form of a Stream Restoration and Enhancement Completion Report shall be provided to the Team Leader Compliance Monitoring Central, within **30 days** of the stream restoration and enhancement work being implemented and completed.
- X24. Upon 1, 3 & 5 years following permanent diversion of stream flow to the new stream channel and completion of the riparian planting, a Stream Ecological Valuation (SEV) shall be undertaken to confirm whether the new stream is on a trajectory to achieve the predicted stream ecological value of 0.545 for the lower reach and 0.465 for the upper reach. SEV results shall be incorporated into a Stream Ecological Report (SER) and provided to Council within 2 months following the SEV being undertaken. The SER shall include (but not be limited to) confirmation as to whether the streams are on a trajectory to achieve their predicted ecological value.
- X25. Where the monitoring concludes that the SEV values of the constructed stream are not on a trajectory to achieve the predicted SEV values, a Further Mitigation (and/or Offset) Works Plan shall be prepared, to the satisfaction of the Team Leader Compliance Monitoring Central, within 2 months following the SEV undertaken 5 years from the livening of the diversion stream required by condition **X24** being undertaken. The plan shall include, *without limitation, repairs or improvements of existing diversion & mitigation work to achieve the anticipated SEV scores and/or additional offset works to achieve no net loss*, provision to update the plan as required following further monitoring at two yearly intervals until such time that the requirements of the Further Mitigation Works Plan and the predicted SEV scores of 0.545 for the lower reach and 0.465 for the upper reach are on a trajectory to achieve the predicted scores.
- X26. The consent holder shall implement any additional works identified by the Further Mitigation Works Plan within 6 months following the approval by the Team Leader Compliance Monitoring Central or during the next planting season (whichever is appropriate to the measures adopted).
- X27. The consent holder shall ensure that the three upper weirs in the stream bed provide and maintain mussel spat ropes in order to provide for on-going fish passage for climbing species. The operational effectiveness and efficiency of the weirs and mussel spat ropes shall be maintained throughout the duration of this consent once the works have been completed.

Advice note: *Spat ropes require on-going maintenance which should be provided for in any stormwater maintenance plans to be maintained throughout the life of the structures.*

Advice note: *The Department of Conservation must be notified of the intention to erect or place any structure likely to impede fish passage. This includes weirs, culverts, fords, dam or diversion structures (Part VI of the Freshwater Fisheries Regulations 1983).*

7.0 REVIEW

Memo prepared by:

Christina Bloom




**Specialist – Earth and Stream works
Specialist Unit, Resource Consents**

Date:

9 July 2020

Technical memo reviewed and approved for release by:

David Hampson



**Team Leader - Earth, Streams & Trees
Specialist Unit, Resource Consents**

Date:

9 July 2020

Drilling and construction of a bore

Controlled Activity Application Technical memo Specialists Unit – Resource Consents

1.0 APPLICATION DESCRIPTION

Application and Property Details

Applicant's Name:	Ryman Healthcare Ltd
Application Number:	LUC60353160
Drilling Contractor:	TBC
Site Address/Location:	223 Kohimarama Road,
Map Reference:	1763960 mE, 5918658mN
Legal Description:	Lot 2 DP 320618
Plan(s):	Auckland Unitary Plan – (Operative in Part) E7.4.1(A41)

2.0 PROPOSAL

Purpose	Construct a bore to enable water take for use in irrigation.
Bore Depth (m)	400
Bore Diameter (mm)	200
Casing Depth (m) & material	100 Steel
Grouting length (m)	100
Aquifer	Auckland Isthmus Waitemata

3.0 TECHNICAL ASSESSMENT

The location, depth and design of the bore and the design of the head works

In the council's database, there are no bores, contaminated sites, storage of contaminants or septic tanks in the near vicinity of the bore site. This was confirmed by the applicant according to the information submitted in the application.

To ensure the bore is not a vector for contaminants reaching ground water, the recommended conditions require grouting/sealing of the casing and the construction of a concrete pad around the head of the bore to prevent contaminants entering the aquifer. The location, depth and design of the bore, including the design of the head works is appropriate and will not lead to adverse effects on other groundwater users. Given the purpose of the bore and the distance to the closest neighbouring bores/takes, the use of this bore will not have any adverse effects on other groundwater users. In regards to maintenance of the bore, the consent holder/bore owner/operator will need to periodically check that the headworks are not compromised overtime, so to ensure the bore doesn't become a vector for groundwater contamination. The bore must be constructed to avoid a hydraulic connection between penetrated aquifers with different pressures, water quality or temperature. The above will be met by the bore being constructed and maintained and records kept in accordance with the application submitted, consent conditions and NZS 4411:2001, Environmental Standard for Drilling of Soil and Rock.

The provision for bore identification

For resource management and administrative purposes, the bore should be labelled with a Bore Identification Number etched into the outer casing for bores cased in Steel / PVC (Condition 4).

Monitoring and reporting requirements

The monitoring requirements provision of a copy of the Drillers Log as specified in NZS 4411:2001 Environmental Standard for Drilling of Soil and Rock (Condition 5).

Lapsing Date

It takes a short period of time to drill a bore (required to be completed within 30 days). Historically most bore permits have been granted with a 12 month lapsing period, which provides flexibility as to when the activity may occur. In this case, the applicant has requested a 5 year lapsing date to allow for construction on the site to occur alongside the bore construction.

4.0 RECOMMENDED CONDITIONS AND ADVICE NOTES

In addition to the standard general conditions as per the conditions manual, I recommend the following as conditions of consent.

Condition 1: Bore location and construction

The bore is to be generally (within 50 m of the specified location) located and constructed as detailed below:

Name	Bore ID	NZTM Easting (mE)	NZTM Northing (mN)	Depth (m)
Ryman Healthcare Ltd	30779	1763960	5918658	400
Bore diameter (mm)	Aquifer	Casing depth (m)	Casing material	Grouting
200	Auckland Isthmus Waitemata	100	Steel	100

Condition 2: Bore completion date

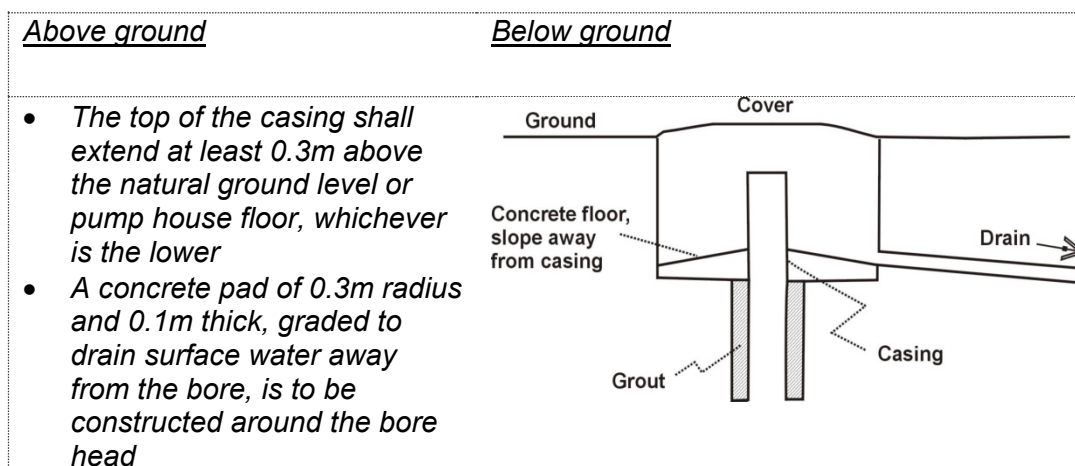
The bore shall be completed within 30 days of commencement of the construction of it.

Condition 3: Bore design, construction, maintenance, and record keeping

The bore shall be constructed, maintained (periodically check the integrity of the headworks), tested, and records kept (drilling log), in accordance with the application submitted and NZS 4411:2001, Environmental Standard for Drilling of Soil and Rock. Adequate provisions for groundwater water level measurement and water sampling shall be provided at the bore head.

Advice note 1:

Bore headworks constructed in accordance with the diagram and explanation provided below will be considered to meet the NZS 4411:2001 Section 2.5.5.3-5.



Advice note 2: Water level measurement and water quality sampling

NZS 4411:2001 Section 2.5.5.7 (water level measurement) can be met by strapping a 20mm diameter (minimum) tube (polypipe) to the main riser, power and support stay for the pump, the provision of a hole in the headworks of a minimum of 20mm diameter and a removable, screw-type cap. Provision at the top of the bore for water quality sampling can be achieved by fitting a tap or hand valve as close to the pump outlet as possible and before the water enters any storage tank or filter. It should have at least 0.3 metre clearance above ground level or other obstruction to allow a sample bottle to be filled.

Condition 4: Bore identification

Bore identification number 30779 shall be permanently affixed, in a clearly visible location and in a form that will remain legible, to the bore head structure.

Condition 5: Information to be supplied to the council

The following information shall be supplied to the Team Leader, Compliance Monitoring, Central Resource Consents, within 20 working days of completion of the bore:

- a. the drilling log.
- b. a digital photograph(s) legibly showing:
 - the bore number affixed to the bore head structure;
 - the length of the casing protruding above the concrete pad; and,
 - the concrete pad around the bottom of the bore head.
- c. an annotated map, or aerial photograph, that accurately and clearly shows the physical location and coordinates for the bore.
- d. the following as built details for each bore –

Name	Bore ID	NZTM Easting (mE)	NZTM Northing (mN)	Depth (m)
	30779			
Bore diameter (mm)	Aquifer	Casing depth (m)	Casing material	Grouting

Advice note:

An aerial map can be downloaded from Auckland Council's web site if an aerial photograph is required.

5.0 ADVICE NOTES

Advice note 1: Email contact details

All information required by the council in this consent can be sent to bores@aucklandcouncil.govt.nz

Advice Note 2: Drinking water standards

The consent holder is advised that groundwater supplied for human consumption should meet the requirements of the Drinking Water Standards for New Zealand (2005), the Health Act 1956, as amended by the Health (Drinking Water) Amendment Act 2007 (HDWAA) and any other Ministry of Health requirements, such as those contained in the Health (Drinking Water) Amendment Act 2007.

Advice note 3: Compliance with regional rules

There are regional rules that cover the ongoing use, maintenance, restoration, alteration, replacement or decommissioning of the bore which must be complied with. The rules are in the Auckland Unitary Plan (Operative in part).

Advice note 4: Avoiding contamination of Aquifer

The consent holder is advised to install a non-return valve of acceptable NZ Standards on the proposed bore to prevent the backflow of water into the bore.

Advice note 5: Use of water

The consent holder is advised that as specified by Sec 14 (3) (b) and (e) if water taken from the bore is used for any purpose other than:

- an individual's reasonable domestic needs; or
- the reasonable needs of a person's animals for drinking water, and the taking or use does not, or is not likely to, have an adverse effect on the environment; or for
- emergency or training purposes;

then resource consent may be required.

Report by:

Nicola Jones




**Consents Specialist
Specialist Input, Resource Consents**

Date:

2 April 2020

Signed under Delegated Authority

Andrew Benson



**Team Leader,
Coastal and Water Allocation
Specialist Input, Resource Consents**

Date:

1 April 2020

Memo

To: Contamination, Air & Noise Team, Auckland Council

From: Marcus Herrmann, Principal - Contaminated Land, RILEY Consultants

Date: 23 March 2020

Subject: DRAFT contamination assessment: 223 Kohimarama Road & 7 John Rymer Place

Background

A comprehensive care retirement village for elderly residents is intended to be developed on site by Ryman Healthcare Ltd (Ryman). The retirement village will include up to seven buildings comprising 123 apartments, 75 assisted living suites, rest home and higher-level care options, and 192 car parks.

A cut-to-fill ratio of approximately 52,874 m³ to 5,750 m³ is anticipated over the entire site, excepting the north-western vegetated area. Excess cut of approximately 47,124 m³ is anticipated. Construction methods will seek to re-use as much of the cut material as possible.

Documentation

The following documents have been reviewed:

1. Ryman Healthcare Limited, February 2020: Proposed Comprehensive Care Retirement Village – Assessment of Environmental Effects (**Ryman AEE**).
2. Beca, February 2020: Kohimarama Retirement Village – Resource Consent Site Plans and Drawings (**Beca RC Site Plans**).
3. Tonkin & Taylor, November 2019: Ground Contamination Assessment of Environmental Effects, Ryman Village, Kohimarama Road, Auckland (**T&T DSI**).
4. AECOM New Zealand Ltd, 14 September 2015: 223 Kohimarama Road Residential Development and Subdivision – Site Investigation (Contamination) (**AECOM SI**).

1.

Site area and location

The full site has a total area of 3.12 ha and is located in Kohimarama, Auckland.



Figure 1: Site location, 223 Kohimarama Road



Figure 2: Site location, 7 John Rymer Place

Site development proposal

Ryman proposes to construct a comprehensive care retirement village for elderly residents at the site to include 123 apartments, 75 assisted living suites, rest home and higher-level care options, and 192 car parks.

The Landscape Master Plan (see below) identifies that the village is intended to include significant green space, including a large bowling green near the centre of the site.



Figure 2: Landscape Master Plan

Reports reviewed – key aspects

Summary of Ryman AEE (2020)

The AEE notes that the construction methodology for the proposed village has not been finalised. The construction period is expected to be approximately 36-42 months and may be undertaken in four stages.

Approximately 52,874 m³ of cut and ~ 5,750 m³ of fill is anticipated over the entire site, excepting the north-western vegetated area. Excess cut of ~ 47,124 m³ is anticipated. Construction methods will seek to re-use as much of the cut material as possible, noting that backfill requirements for structures and roads will focus on imported hardfill. Re-use opportunities for excavated material in landscaped and open areas may exist.

Summary of AECOM SI (2015)

The site investigation carried out by AECOM was done on behalf of Rainbow Holdings Ltd who were considering subdivision and residential development of the site.

AECOM's historic aerial photograph review indicated that the site has always been vacant, but that earthworks activities have occurred widely across the site, potentially including the use of uncertified fill, which potentially could have contained contaminants including heavy metals, hydrocarbons, PAH and pesticides (OCP / ONOP).

The intrusive site investigation implemented targeted these contaminants of concern (note: asbestos was not included in AECOM's testing regime). Three sampling locations were along the north-western site boundary with the remaining two locations towards the east and south of the site. 26 samples from five hand-augered sampling locations were tested.

Locations for the sampling regime undertaken by AECOM are shown below:

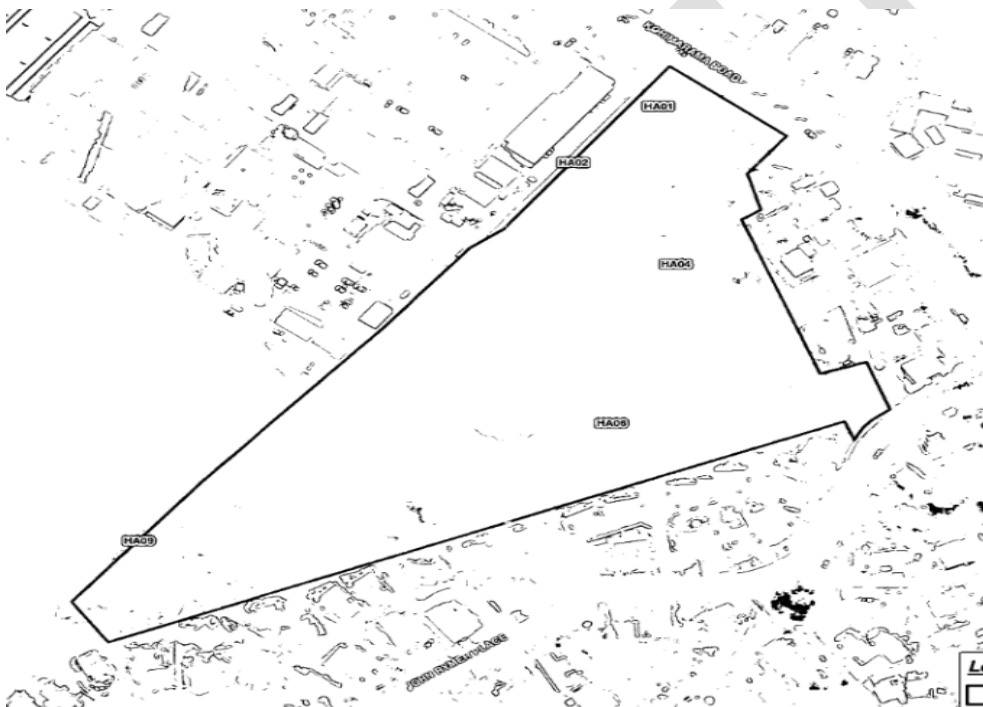


Figure 3: AECOM 2015 soil sampling plan

Limited soil sampling results identified heavy metals within published regional background criteria and SVOCs below laboratory detection limits. Silt and silty clay non-engineered fill materials were found in depths ranging from 0.5 metres (m) to 3.5 m below ground level (bgl).

On the basis of these sampling results, AECOM assessed that no contaminated land consents were required for residential development of the site.

Comment:

As noted by Tonkin & Taylor in their DSI (see below), asbestos was not tested for in the AECOM investigation. The limited number of soil sampling locations (5) for a 3.12 ha site is considered to be insufficient to meet the requirements for a DSI. As such, the consenting assessment made is not considered appropriate for the development proposal under review.

Summary of T&T DSI (2019)

NES-CS activity status

Section 7.2 of the T&T DSI classifies the proposed development works as a controlled activity under the NES-CS, due to the presence of low-level asbestos in three locations at the site and the intended disturbance of soils exceeding permitted activity thresholds. A Site Management Plan (SMP) will be developed to manage health risks associated with disturbance of these soils to outdoor workers (i.e. construction workers during development and future maintenance workers) and to primary site end-users (future residents and staff in the retirement village).

AUP-OP activity status

Section 7.3 of the T&T DSI assesses the proposed development works as a permitted activity under the AUP-OP, chapter E30.6 as all chemical contamination in soil has been confirmed to meet permitted activity soil acceptance criteria.

The following site map identifies T&T's soil sampling plan on site.

Figure 3: Soil Sampling Plan, Oct 2018 (T&T 2019 Ground Contamination Assessment)



T&T's 2018 testing results are summarised as follows:

- Asbestos fibres in soil were identified in three separate areas of the site: in surface soil within fly tipped soil near the caretaker's residence (GRAB1 next to HA13 - chrysotile and amosite forms), at 0.4 m bgl within the sports field (HA09 - chrysotile form), and at 0.5 m bgl within re-worked clayey silts near the northern site boundary (HA15 - chrysotile form).
- Semi-quantitative testing of these three samples showed combined asbestos fines / fibrous asbestos concentrations at 0.001% i.e. equivalent to / meeting the New Zealand health protection criterion.
- No heavy metals / metalloids in soils exceeded relevant health (NES-CS) or environmental protection (AUP-OP) criteria.

- A number of surface soil samples contained heavy metals which exceed published regional non-volcanic background concentrations.
- A number of surface soil samples and two samples at depth contained low-level PAH.
- No pesticides or TPH were detected.

Regarding asbestos contaminated soils on site, T&T recommends that these impacted soils either be disposed off-site or potentially encapsulated on site. Either methodology would require controls to be developed and followed under the SMP, including decontamination facilities, signage and segregation, and appropriate PPE in conjunction with standard earthworks controls.

Comment:

I concur with T&T's assessment of consenting status under the NES-CS (controlled activity) and the AUP-OP, chapter E30.6 (permitted activity). The principal contaminant of concern identified is asbestos in soils, which involves regulatory requirements for health protection as opposed to environmental protection.

While no exceedances of NES-CS soil contaminant standards were identified across the site, the hand augered sample taken from the area of fly tipping (HA13) showed a heavy metal contamination signature distinct from the remainder of the site (elevated arsenic, chromium, copper and lead), with the arsenic concentration (43 mg/kg) approaching the NES-CS high density residential health protection standard (45 mg/kg). The grab sample taken next to this area also identified the only surficial concentration of asbestos in soils. As such, it is recommended that this localised area of soils should be removed to a suitable disposal facility, with residual soils validated at the base and sides of the excavation.

I agree with T&T's conclusion that the presence of asbestos in soils in three areas of the site presents a potential health risk from disturbance of these soils. The fact that asbestos concentrations results meet BRANZ health protection criteria does not imply that all asbestos present will meet these criteria. As such, a precautionary approach is recommended.

In terms of how these areas of contamination will be addressed, delineation of the areas of concern followed by excavation and validation sampling (base and sides) is recommended, confirming residual soils are clear of asbestos.

If excavated asbestos-contaminated soils are intended to be managed on site, further semi-quantitative testing of these soils will be needed to confirm that all concentrations meet BRANZ health protection guidelines. A methodology would then need to be developed and approved by Council re: creation of a disposal area on site, encapsulation parameters and long-term management and monitoring to ensure this area of asbestos-contaminated soil is not compromised in the future.

Recommended consent conditions and advice notes

Pre-commencement conditions

1. The Team Leader, Central Monitoring, Licensing & Regulatory Compliance (the Team Leader), shall be informed, in writing, at least ten working days prior to the start date of the works authorised by this consent.
2. A Site Management Plan (SMP) in support of the development shall be prepared and submitted to the Team Leader for approval. The SMP shall be prepared in accordance with the Ministry for the Environment's Contaminated Land Management Guidelines #1: Reporting on Contaminated Sites in New Zealand (revised 2011).

In addition to all standard requirements, the SMP should include:

- Areal extent of identified asbestos contamination (if these were delineated prior to development of the SMP), including the area of fly tipping, or:

- A proposed asbestos delineation and validation testing regime, to be carried out prior to excavation of asbestos-contaminated soils in three areas of the site (including the area of fly tipping). Validation testing for arsenic should also be included for the area of fly tipping.

If onsite management of asbestos-contaminated soils exceeding BRANZ health protection guidelines is proposed, details will need to be provided including, but not limited to: safe works methodology; depth and location; intended on-site encapsulation methodology; and a Long Term Monitoring and Management Plan (LTMMMP).

Conditions (during and post site works)

3. The consent holder shall carry out the earthworks in accordance with the approved SMP (refer Condition 2). Any substantive changes to the SMP shall be approved in writing by the Team Leader prior to commencement of the earthworks.
4. Excess soil or waste materials removed from the subject site shall be deposited at a disposal site which is authorised by Council to accept the relevant level of contamination. Where it can be demonstrated that the soil or waste materials have been fully characterised in accordance with the Ministry for the Environment's "A guide to the management of cleanfills" (2002) and meets the definition of 'cleanfill', the removal to an authorised disposal site is not required. Copies of the disposal dockets for the material removed from the site shall be retained and provided to Auckland Council upon request.
5. The consent holder shall ensure that the contamination level of any imported soil complies with the definition of 'Cleanfill material', as per the Auckland Unitary Plan - Operative in Part (AUP-OP). Any imported material shall be solid material of an inert nature and must not contain hazardous substances or contaminants above natural background levels of the receiving site. Imported soils shall be tested at a rate of 1 per 500m³ of material imported to site.
6. The consent holder's activities shall not result in any airborne and deposited dust beyond the property boundary of the site that is determined to be noxious, objectionable or offensive. During earthworks, all necessary action shall be taken to prevent dust generation and sufficient water shall be available to dampen exposed soil, and/or other dust suppressing measures shall be available to avoid dust formation. The consent holder shall ensure that at all time control dust generation in accordance with the *Good Practice Guide for Assessing and Managing Dust, Ministry for the Environment (2016)*.
7. The consent holder shall engage a suitably qualified environmental specialist, familiar with the requirements of the SMP, to oversee the implementation of required earthworks and to carry out asbestos monitoring and soil sampling in accordance with the approved SMP. Any substantive changes shall be approved in writing by the Team Leader prior to commencement of the works.
8. Within three months following the completion of earthworks, the consent holder shall provide to the satisfaction of the Team Leader Central Monitoring, Auckland Council, a Site Validation Report (SVR) reviewed and signed off by a suitably qualified and experienced practitioner in contaminated land (SQEP) to confirm the outcomes of the earthworks and to identify any residual contamination at the site.

The Site Validation Report shall include, but not be limited to:

- a) a summary of earthworks undertaken, including a statement confirming whether earthworks at the site have been completed in accordance with the approved plans and consent conditions, and details of any variations;
- b) the location and dimensions of the excavations carried out, and the volume of soil excavated, re-used onsite and disposed offsite, including a relevant site plan;
- c) details and results of any testing and/or monitoring undertaken including validation testing and/or monitoring and interpretation of the results in the context of the NES-CS Regulations

2011, the contaminated land rules of the AUP-OP and the New Zealand Guidelines for Assessing and Managing Asbestos in Soils (BRANZ guidelines, 2017);

- d) copies of the disposal docket for all materials removed from the site;
- e) records of any unexpected contamination encountered during the works and actions undertaken;
- f) any complaints and/or breaches of the procedures set out in the approved plans and other consent conditions;
- g) conditions of the final site ground surface;
- h) scaled plans (plan and elevation views) showing the locations and containment details (if any) of any contaminated materials remaining on site;
- i) if any contamination is contained on-site, an ongoing monitoring and management plan detailing procedures and requirements for any future works on the site that may penetrate the containment system, or otherwise create a potential for human exposure to potential contaminated soils.

Recommended advice notes:

1. This consent provides approval in accordance with the requirements of the NES-CS Regulations 2011 to conduct soil disturbance works on a contaminated site, based upon the specific planning, investigation, site management, design and other relevant information associated with this application and provided to Auckland Council for review. Obtaining compliance with all other applicable legislative requirements (including, but not necessarily limited to the Health & Safety at Work Act 2015, the Building Act 2004 and the Heritage New Zealand Pouhere Taonga Act 2014) is the responsibility of the consent applicant and/or landowner to assess and address, if required.
2. The consent holder shall at all times comply with the provisions of the Health and Safety at Work (Asbestos) Regulations 2016 and the Management and Removal of Asbestos - Approved Code of Practice (WorkSafe, Amended December 2016) for works involving asbestos. Depending on the outcome of delineation and validation testing (refer Condition 2), these provisions may have relevance to disturbance and removal of asbestos-impacted soils.

Should you have any questions regarding this memo, please feel free to contact me.

Yours sincerely

Marcus Herrmann
Principal - Contaminated Land
RILEY Consultants
027 205 0978

Technical Memo – Ecology

To:	Sandy Hsiao, Senior Planner
From:	Carol Bergquist, Senior Ecologist
Date:	9 July 2020
Applicant's name:	Rymans Healthcare Limited
Application Number:	BUN60353138
Application Type:	Land use consent for a restricted discretionary activity for vegetation clearance in proximity to the intermittent watercourse
Site Address:	223 Kohimarama Road

1. Summary of Proposal

The proposal is for the construction, operation, and maintenance of a comprehensive care retirement village at 223 Kohimarama Road and 7 John Rymer Place. The proposal requires reclamation and diversion of existing streams with removal of riparian vegetation. This memo considers the effects of riparian vegetation removal.

2. Site Description

A full description of the site can be found in

Proposed Comprehensive Care Retirement Village by Ryman Healthcare Limited, dated February 2020. Final Assessment of Environmental Effects (AEE).

The following application documents have been considered in the preparation of this memo:

Stream Ecological Assessment by Freshwater Solutions, dated February 2020

Arboricultural Report by Tree Management Solutions, dated 27 January 2020

17-04-2020 s92 responses Appendix C Assessment Drawings and Calculations SK113-Riparian Planting-RV1.

3. Reasons for Consent

Vegetation alteration or removal within 10m of urban streams requires Restricted Activity Resource Consent under E15.4.1 (A19).

4. Other statutory considerations

Wildlife Act 1953:

All native birds and lizards are totally protected under the Wildlife Act 1953, under which it is an offence to disturb, harm, or remove them without a permit from the Minister of Conservation. This includes the deliberate disturbance of potential habitat even if presence of native species has not been specifically surveyed.

5. Adequacy of information

A description of the riparian vegetation to be removed has not been provided except for a brief reference to 'dense vegetation' in the Stream Ecological Assessment. An assessment of effects of the riparian vegetation removal and proposals for mitigation would have been requested under s92 if the opportunity had been available.

As a consequence, it is not possible to review the potential adverse effects as there is insufficient information provided. However, the vegetation would be providing ecological values by shading the stream, providing organic input, and enhancing water quality by retaining and absorbing stormwater flows, sediment absorbing nutrients. The benefit of this riparian function of the vegetation is evidenced by the presence of banded kokopu in Stream A.

It is expected that the vegetation may be used by at least the more common native birds, and possibly provide refuge for native herpetofauna. A previous survey of the site recorded five common native bird species and copper skink.

6. Main Issues and Discussion

Whereas the riparian vegetation may not have high ecological value it nonetheless provides potential habitat for native fauna. Assessment criteria for restricted discretionary activities include effects on ecological values and effects on sediment, water quality and hydrology. Assessment criteria also anticipate that the loss of ecological values and hydrological function from clearance of riparian vegetation would be mitigated.

A riparian planting plan has been provided in Appendix C Assessment Drawings and Calculations SK113-Riparian Planting-RV1. However, this appears to be very limited with planting of two single rows of low ground cover to provide stabilisation for the new stream channel only and does not provide full riparian function nor terrestrial habitat.

As the AEE states in relation to the stream diversion: *"The proposed narrow width of the base flow channel and steep V-sided gully will mean the new channel will become shaded by riparian vegetation that will include native sedges, shrubs and trees that will be less than 10 m wide in places. Narrower riparian widths in places will partially be mitigated by wider than 10 m riparian widths in other places along the watercourse."*

And further: *"A detailed planting plan has not been finalised but species may include native sedges and rushes with flax (Phormium tenax), toetoe (Austroderia fulvida) and small shrubs such as hebe (Veronica stricta). Slope sections (mainly on the true-left bank) may be planted with a greater variety of small trees and shrubs and may include species such as mānuka (Leptospermum scoparium), karamū (Coprosma robusta), karo and kōhūhū (Pittosporum spp.) and cabbage tree (Cordyline australis)."*

7. Recommendation

The assessment in this memo does not identify any reasons to withhold consent for removal of riparian vegetation subject to recommended conditions, for the following reasons:

Subject to the imposition of consent conditions, it is considered that the potential ecological effects of removal of riparian vegetation will be adequately managed. The loss of riparian

vegetation can be mitigated with appropriate native fauna management and appropriate riparian planting along the banks of the newly diverted stream.

8. Conditions

- X.1 A Riparian Planting Plan (RPP) for the new stream diversion channel is to be submitted to the Team Leader Compliance Monitoring Central for approval prior to the stream diversion works being undertaken. The RPP shall be consistent with Appendix 16 of the Auckland Unitary Plan (operative in part) with particular regard to the suitability of native plant species selected to be eco-sourced from the Tamaki Ecological District and with a five-year maintenance schedule. The purpose of the riparian planting along the full length of the diversion channel is to provide buffering and water quality and habitat enhancement. The riparian planting shall have an average width of 10m on each side of the channel. The approved RPP to be implemented in the first planting season (April-September) following the completion of the stream works.
- X.2 Vegetation clearance is to take place outside the peak breeding season for native birds (September to February inclusive) and/or a bird breeding survey undertaken before vegetation removal to ensure no breeding birds or active nests are present.
- X.3 A lizard management plan is to be prepared and implemented to relocate native lizards from the site immediately prior to and during vegetation clearance.

Memo prepared by:



Carol Bergquist | Senior Ecologist

Ecological Advice | Infrastructure and Environmental Services

Technical Memo – Specialist Unit

To: Sandy Hsiao - Senior Planner - Central Resource Consenting

From: Pat Shorten, Principal – Geotechnical Engineering, Fraser Thomas Ltd

Date: 4 June 2020

1.0 APPLICATION DESCRIPTION

Application and property details

Applicant's Name: Ryman Healthcare Ltd

Service Centre Application Number/ Water Allocation Consent Number: BUN60353138 & WAT60353162

Activity type: Ground Dewatering and Groundwater Diversion

Site address: 223 Kohimarama Road & 7 John Rymer Place, Kohimarama

1.1 Application Documents

Key application documents are as follows:

- Reference 1: Architects drawings titled “Kohimarama Retirement Village 223 Kohimarama Road & 7 John Rymer Place – Resource Consent”, prepared by Beca dated 3 April 2020.
- Reference 2: A report titled “Geotechnical Assessment of Environmental Effects – 223 Kohimarama Road and 7 John Rymer Place, Auckland” prepared by Tonkin & Taylor dated October 2019, Job No.30314
- Reference 3: A report titled “Proposed Comprehensive Care Retirement Village 223 Kohimarama Road and 7 John Rymer Place, Kohimarama, Auckland – Resource Consent Applications and Assessment of Environmental Effects” prepared by Mitchell Daysh Ltd, dated 14 February 2020.
- Reference 4: A letter report titled “223 Kohimarama Road and 7 John Rymer Place, Kohimarama Geotechnical and Groundwater Response to s92 Queries” prepared by Tonkin & Taylor dated 7 April 2020, Job No.30314.

The application was technically peer reviewed on behalf of Auckland Council by Fraser Thomas Limited, (FTL), who also prepared this Technical Memo.

2.0 PROPOSAL, SITE AND LOCALITY DESCRIPTION

2.1 Proposal relevant to this permit/consent only

The Applicant is seeking consent to take groundwater for dewatering purposes and to divert groundwater in the long-term after construction for the development of a site at 223 Kohimarama Road and 7 John Rymer Place, Kohimarama. The proposed development is a residential retirement village and will consist of a six-storey main-facilities building (B01) with a single-level basement car park, three five-storey apartment buildings (B02, B04 & B06) and two three-storey apartment buildings (B03 and B05) with a double to single level common basement. A large stormwater storage tank is proposed beneath the southern end of the basement of Building B01 to approximate RL 26.70m.

In order to create the building platforms for the retirement village, retaining walls will be constructed as follows:

- Northern Retaining Wall (RW1 behind B01 and RW1 behind B02-B06),
- B01 Basement Retaining Wall,
- B02-B04 Basement Retaining Wall,
- Eastern Retaining Wall (RW3).

The Site Plan (Figure 1) indicates that the site is approximately triangular with the Selwyn College Campus to the northwest, the residential dwellings at 245, 247A and 249A Kohimarama Road and 3A and 5 John Rymer Place to the east, and thirteen residential properties (9, 17, 17A, 19, 19A, 27, 27A, 29, 35, 35A, 2/37,45A & 47) along John Rymer Place to the south.

The site has a moderately steep slope from the northwest (approx. RL 45m) to the south east (approx. RL 28m) and a relatively flat area in the central portion of the site at approximate RL32. Auckland Council GIS GEOMAPS indicates that there are no public services along the access road on the College campus to the north of the site, and a 150mm diameter earthenware sewer at a distance of approximately 12m from the eastern boundary of the site.

In brief:

- Geotechnical investigations on the site were undertaken in 2016 by Aecom and consisted of nine hand auger boreholes, seven machine-excavated test pits, six machine boreholes, seventeen cone penetration tests and five dilatometer tests. Standpipe piezometers were installed in each borehole.

- Geotechnical investigations on the site by Tonkin & Taylor (T&T) in 2019 consisted of twenty hand auger boreholes, six machine boreholes, sixteen cone penetration tests and a total of eleven rising and falling head permeability tests in standpipe piezometers installed in each borehole.
- Using the data from the geotechnical investigations, T&T developed a geological / geotechnical ground model and a groundwater model for the site and prepared three geological cross-sections orientated north-west to south-east through the site and one geological cross-section orientated east to west through the site.
- The ground conditions encountered consisted of non-engineered fill varying in thickness between 0.2m and 10m (back-filled gully), overlying a thin layer of alluvium (1.2m to 1.5m thick in two boreholes only) overlying residual soils of the East Coast Bays Formation (ECBF) which transitions to ECBF rock at depths of between 7.5m bgl to 13m bgl.
- Groundwater levels were measured between 15 October 2018 and 15 May 2019 using a dipmeter. T&T state *“On the lower part of the Site, measured groundwater levels typically range from 1.5 to 10.0 metres below ground level (mbgl), and are generally within 4 m of the ground surface. On the slope along the northern boundary close to the ridgeline, piezometers indicate groundwater levels ranging from 4.0 to 9.9 mbgl. The groundwater regime appears to be generally hydrostatic at the Site.”*

2.2 Background and site history relevant to this permit/consent only

No groundwater diversion and take consents have been held for the site prior to this application.

Figure 1: Site Plan – 223 Kohimarama Road & 7 John Rymer Place, Kohimarama



3.0 REASON FOR CONSENT – GROUND DEWATERING AND DIVERSION

3.1 Reasons for consent

Auckland Unitary Plan (AUP)

Chapter E, Standard E7.6.1.10 and Standard E7.6.1.6 provide the permitted activity criteria under the Auckland Unitary Plan (AUP) for the diversion of groundwater associated with any excavation, including a trench or tunnel and dewatering or

groundwater level control associated with a groundwater diversion permitted under Standard E7.6.1.10.

The proposal has been assessed under these criteria and does not comply for the following reasons: -

- The works involving dewatering will take longer than 30 days and will continue beyond the construction period (E7.6.1.6 (2 &3));
- The natural groundwater level will be reduced by more than 2m on the site boundaries (E7.6.1.10 (3));

Accordingly, consent is required under AUP Chapter E Rule 7.4.1 (A28) for the diversion of groundwater as a restricted discretionary activity.

In addition, pursuant to AUP Chapter E Rule 7.4.1 (A20) consent is required as a restricted discretionary activity for the dewatering associated with excavation because the water take will be for a period of more than thirty days and will continue beyond the construction period

Overall, the activity is therefore assessed to be a **Restricted Discretionary Activity**.

The AEE indicates that Land-Use Consent is also required for the associated land disturbance activity (restricted discretionary activity), in accordance with Chapter E12, Table E12.4.1, Rules A6 and A10.

The effects of the land disturbance activity, except for mechanical settlement as a result of lateral deflection of retaining walls, will be covered by the land use consent and are not further addressed in this technical memo.

4.0 TECHNICAL ASSESSMENT OF EFFECTS

4.1 Assessment of Effects on the Environment

The Applicant's Engineer, T&T, identifies and assesses the effects of the proposed activity on the environment that are likely to arise and any mitigating factors in the report titled "Geotechnical Assessment of Environmental Effects – 223 Kohimarama Road and 7 John Rymer Place, Auckland" dated October 2019, Job No.30314.

The Applicant and their consultant consider that the proposal is likely to have potential settlement effects due to a combination of two mechanisms, namely:

- Increased soil compression due to dewatering of the surrounding area
- Deflection of the retaining walls.

4.1.1 Groundwater Drawdown and Associated Settlement

The Applicant is proposing drained basements for Buildings B01 to B06, with strip drains behind retaining walls connected to subsoil drains under the basement floor

slabs which in turn connect to sumps. Water collected in the sumps is pumped to the reticulated stormwater network.

T&T has prepared a plan which shows contours of the lowest recorded groundwater levels on the site from which they have identified that the majority of the excavation for the basements will not extend below the summer-low groundwater level. However, they have identified that the north-eastern corner of basement level 0 and basement level 2 for building B01, will be up to 2m below the summer-low groundwater level.

Hence, based on a maximum groundwater drawdown of 2m and using the empirical methodology given in CIRIA Publication Report 113 together with the results of the site-specific permeability tests, T&T has calculated that the radius of groundwater drawdown resulting from the proposed drained basement is approximately 4m. At this location T&T indicate that the excavation is at least 10m from the site boundary and hence there will be no effects on neighbouring buildings/structures or public services as a result of consolidation settlement associated with groundwater drawdown.

4.1.2 Retaining Wall Deformation and Associated Settlement

Lateral ground movement behind the proposed basement retaining walls will likely result in some vertical ground movement behind the walls. These “mechanical” settlements will quickly diminish with distance from the walls.

The concept design for the retaining walls is as follows:

- The Northern Retaining Wall RW1 behind building B01 will be up to 6.2m high but typically less than 3m and will be constructed using 900mm diameter reinforced concrete piles at 1m centre to centre spacing, where retained heights are between 4m and 6.2m, and 450mm diameter reinforced concrete piles at 1m centre to centre spacing, where retained heights are less than 4m.
- The Northern Retaining Wall RW1 behind buildings B02-B06 (Chainage 0 to 125) will be up to 4m high but typically less than 3m and will be constructed using 750mm diameter reinforced concrete piles at 1.5m centre to centre spacing. At approximate Chainage 175, opposite the storage garage on the Selwyn College Campus, two rows of 750mm diameter concrete secant piles will be installed approximately 3m apart connecting the upper and lower retaining walls.
- The B01 Basement Retaining Wall will be between 3m and 5.5m high and will be constructed at least 10m from the Northern Retaining Wall using 900mm diameter reinforced concrete piles at 1m centre to centre spacing.
- The B02-B06 Basement Retaining Wall will be up to 6m high and will be constructed at least 6m from the Northern Retaining Wall using 900mm diameter reinforced concrete piles at 1m centre to centre spacing.

- The Eastern Retaining Wall (RW3) will be up to 2.5m high and will be constructed between 1m to 2m for the site boundary adjacent to 247A & 249A Kohimarama Road and 3A John Rymer Place, using 450mm diameter timber piles at 1.2m centre to centre spacing.

A total of four cross-sections of the Northern Retaining Wall, the Basement Retaining Wall behind B01 and the Eastern Retaining Wall were modelled using WALLAP software “Wallap Sections 1 to 4”. In addition, given that there will be wall interactions between the Northern Retaining Wall and the Building B02-B06 Basement Retaining Wall, T&T has undertaken a Plaxis analysis of the two- tiered retaining wall along two critical sections “Plaxis Section 1 & 2”). A range of surcharge scenarios above the retaining walls were analysed and an over-excavation of 1m was allowed for the basement walls and 0.5m for the Northern Retaining Wall.

The estimated maximum settlement at the boundaries of the site due to wall deflections are summarised in Table 1 below:

Table 1 - Estimated maximum settlement at site boundaries

Section	Description	Estimated maximum settlement at site boundary
Wallap Section 1	Northern boundary wall at higher retained height (<6m)	40mm
Wallap Section 2	Building B01-B06 basement northern retaining wall	30mm
Wallap Section 3	Northern boundary wall at lower retained height (<3.5m)	25mm
Wallap Section 4	Eastern boundary (<2.5m)	8mm
Plaxis Section 1	Two-tiered northern wall above B02 and B04 (General)	40mm
Plaxis Section 1	Two-tiered northern wall with ground improvements above B02 and B04 (at Garage)	15mm

FTL consider that the geotechnical parameters and the construction stages selected by T&T in their retaining wall analyses are appropriate.

4.1.3 Effects on Adjacent Buildings, Infrastructure and Services – College Site

T&T note that the majority of buildings at Selwyn College are at least 10m from the site boundary with the exception of the lightweight garage at approximate chainage

172 to 178. T&T state: *“Settlements at the Selwyn buildings are expected to be less than 5-10 mm, with differential settlements of less than 1 in 1000. This magnitude of movement is typically within the tolerance of buildings of similar construction and within the range of seasonal shrink/swell magnitudes. On this basis, we assess the risk of consequential effects to the buildings to be very low.”*

In relation to the lightweight garage (Ch 172 to 178), T&T note that the retained height near the garage is about 3.4 m high and the retaining wall is about 4 m from the boundary. T&T state: *“Our assessment indicates that any deformation that occurs is likely to be significantly less than deformation associated with seasonal shrink/swell effects (i.e. less than 5 – 10 mm of movements). Given the nature of the structure (being a lightweight storage garage with metal cladding), we assess the risk of consequential effects to the building to be very low.”*

In addition, T&T state: *“The accessway could experience total and differential settlements of up to 30 mm and 1 in 400 respectively. There is therefore a risk of some lateral and vertical deformation of the driveway surface. This could lead to new cracks or degradation from the existing condition. If they manifest, the cracks are likely to be observed running parallel to the boundary and could reduce the service life of the driveway. Any cracks that occur during construction of the retaining wall can be resealed. We are not aware of any services in the driveway that could be affected. We assess less than 40 mm of settlement at the boundary, grass verges and fields at Selwyn College. The grass verge is located at the boundary while the fields are at 7m away from the boundary. The wire fence on the boundary may deform sideways, and potentially tilt during construction of the northern wall. Ryman and Selwyn should agree if any fence repair or replacement is required following the construction.”*

FTL concurs with the assessment undertaken by T & T in relation to the effects on adjacent buildings, infrastructure and services on the College Site.

4.1.4 Effects on Adjacent Buildings, Infrastructure and Services.

T&T has identified that the only properties that may be affected as a result of the proposed excavation are as follows:

- 247A Kohimarama Road
- 249A Kohimarama Road
- 3A John Rymer Place

FTL concurs with T & T that the three properties identified above are the only private properties that may be affected as a result of the proposed dewatering and groundwater diversion.

In relation to the effects on these properties T&T state the following:

- “247A Kohimarama Road: *The property boundary fence consists of timber fencing and decking poles supporting an elevated deck and adjacent pool structure. The deck structure lies directly on the property boundary, while the pool is offset about 2 m away from the boundary. The proposed eastern wall is set back at least 3 m inside the Ryman site boundary and is up to 1.7 m high. The potential settlement at the boundary is assessed to be less than 10 mm, reducing to less than 5 mm at the pool. We consider these settlements are typically minor and are unlikely to affect the structures within this property.*”
- “249A Kohimarama Road: *The property boundary fence consists of a 2000 [sic] – 3000 [sic] mm high timber fence. The structure is set back from the property boundary by 8m, with a timber pole retaining wall on their property approximately 3m from the property boundary. The proposed eastern wall is typically between 2 to 6m inside the Ryman site boundary and is less than 1.4m high. We assess the mechanical settlement due to the deflection of the wall as likely to be negligible, with no credible risk of affecting the dwelling.*”
- “3A John Rymer Place: *The property boundary fence consists of plastic garden netting. The dwelling is set back from the property boundary by 5 m, with garden landscaping between. The proposed eastern wall is located at or about 4 m away from the boundary and is up to 2.5m high. We assess the wall as likely to induce less than 20 mm deformation, with no credible risk of affecting the dwelling.*”

In summary, in relation to the three dwellings T&T state: “*All dwellings are located at least 8 m away from the proposed retaining wall which is shown to be no more than 2.5 m high. Given the setback distance of the dwellings to the retaining wall, we do not assess that mechanical deflection of the wall can credibly result in any consequential effects to the dwellings. Therefore, in terms of the Burland Classification of Damage, we classify the effect as negligible damage.*”

FTL concurs with the assessment of effects undertaken by T&T for the three dwellings listed above. FTL has examined the Auckland Council GIS GEOMAPS and conclude that there are no public services which could be affected by settlement associated with the construction of the Eastern Retaining Wall for the proposed retirement village.

4.1.5 Monitoring, External Visual Inspections and Consent Conditions

T&T prepared a draft Groundwater Settlement Monitoring and Contingency Plan (GSMCP) which was included in the Resource Consent application, however in the response by T&T to s92 queries raised by FTL, they state, “*An affected parties agreement on the effects of the proposed Village has been reached between Selwyn College and Ryman. In light of that agreement, we propose to withdraw the monitoring requirements from the Resource Consent application.*”

FTL has sighted the “Written approval of affected persons” form signed by the Ministry of Education (Auckland) as owners of Selwyn College land and buildings, which includes reference to “..the architectural drawing set by Beca, February 2020” and agree that could can disregard any effects on the school ..

In addition, FTL note that at 247A Kohimarama Road there is an elevated deck on the site boundary with a swimming pool located approximately 2m from the site boundary. FTL consider that weekly visual inspections of the deck structure and swimming pool are required during excavation and construction of the eastern retaining wall adjacent to 247A Kohimarama Road and this recommendation is also included in Condition 5.

The recommended conditions of consent pertain to the proposed ground dewatering and groundwater diversion activity and the land disturbance (mechanical settlement as a result of lateral deflection of retaining walls) activity, as the effects of both activities can/will result in ground settlement.

The ability to review consent conditions under s128 of the RMA has been included in the proposed consent conditions.

Though the risk of greater than negligible damage to neighbouring buildings, infrastructure and public services is low, external visual inspections as required in Condition 5 are recommended, due to the proximity of the boundary fence, the access driveway and the light-weight garage structure on the College site, the elevated deck and swimming pool at 247A Kohimarama Road and a level of residual uncertainty.

4.1.6 AC Peer Reviewer Conclusions:

The predicted ground dewatering and groundwater diversion effects both during the excavation and in the long-term, associated with the preliminary (concept) design of the proposed retaining walls have been peer reviewed by Fraser Thomas Ltd with respect to the potential for ground settlement.

The scope of geotechnical investigations is satisfactory for the proposed development and the risk of encountering unforeseen ground conditions is low. Sufficient geotechnical investigation data is available for groundwater and geotechnical modelling purposes in order to determine the likely ground movement adjacent to the proposed development.

FTL concur with the T&T assessment of effects on neighbouring, buildings, infrastructure and public services.

Undertaking the proposed activities in accordance with the application, adherence to good practice and the recommended resource consent conditions, including the performance standards in Ground Dewatering and Groundwater Diversion Condition 4, should ensure any actual adverse effects remain within the consented envelope and the risk to the neighbouring buildings, infrastructure and services is less than

minor, i.e. the activity should have less than minor adverse effects on the environment.

There can, however, be some unforeseen settlement risk (outside the envelope presented in the application documentation) due to the uncertainty of geology and related groundwater flows, and actual retaining wall performance. This settlement risk, while unlikely, cannot be ruled out and this is addressed by Dewatering and Groundwater Diversion Condition Dewatering Conditions 4 and 8, that require actions should any damage be caused by the exercise of this consent. This effects assessment and associated performance standards (conditions) should be reviewed at the final design and building consent stage.

Provided the take and diversion of groundwater are undertaken in the manner described in the application material and summarised above, and subject to the proposed conditions, the potential adverse effects of the activity on the environment and on neighbouring properties are considered to be less than minor.

5.0 STATUTORY CONSIDERATIONS

5.1 Objectives and policies of the Auckland Unitary Plan (AUP)

The Auckland Unitary Plan objectives and policies are provided in Chapter B section 7.3 and Chapter E sections 1 and 2.

5.2 Other relevant matters

There are no other matters considered relevant and reasonably necessary to consider with respect to the proposed groundwater take and diversion.

5.3 Duration of consent: Section 123

It is considered appropriate to set a term of thirty-five years for the Restricted Discretionary Activity groundwater take and diversion consent because the dewatering and groundwater diversion will continue in the long-term, and any adverse effects on the environment will be less than minor.

6.0 RECOMMENDATION AND CONDITIONS

6.1 Recommendation

The assessment in this memo does not identify any reasons to withhold consent, and the aspect of the proposal considered by this memo could be granted consent subject to recommended conditions.

Ground Dewatering and Groundwater Diversion Consent Conditions

Definitions

Words in the ground dewatering (take) and groundwater diversion consent conditions have specific meanings as outlined in the table below.

Bulk Excavation	Includes all excavation that affects groundwater excluding minor enabling works and piling less than 1.5m in diameter.
Commencement of Dewatering	Means commencement of Bulk Excavation and/or the commencement of the taking or diversion of groundwater, other than for initial state monitoring purposes.
Completion of Dewatering	Means, in the case of a drained building or structure, the stage the structures external and internal support mechanisms, including basement floors have been completed, the permanent drainage system(s) are in place and no further groundwater is being taken for the construction of the basement
Commencement of Excavation	Means commencement of Bulk Excavation or excavation to create perimeter walls.
Completion of Construction	Means when the Code Compliance Certificate (CCC) is issued by Auckland Council
Completion of Excavation	Means the stage when all Bulk Excavation has been completed and all foundation/footing excavations within 10 meters of the perimeter retaining wall have been completed.
Condition Survey	Means an external visual inspection or a detailed condition survey (as defined in the relevant conditions).
Damage	Includes Aesthetic, Serviceability, Stability, but does not include Negligible Damage. Damage as described in the table below.
External visual inspection	A condition survey undertaken for the purpose of detecting any new external Damage or deterioration of existing external Damage. Includes as a minimum a visual inspection of the exterior and a dated photographic record of all observable exterior Damage.

RL	Means Reduced Level.
Services	Include fibre optic cables, sanitary drainage, stormwater drainage, gas and water mains, power and telephone installations and infrastructure, road infrastructure assets such as footpaths, kerbs, catch-pits, pavements and street furniture.
SQEP	Means Suitably Qualified Engineering Professional

Category of Damage	Normal Degree of Severity	Description of Typical Damage <i>(Building Damage Classification after Burland (1995), and Mair et al (1996))</i>	General Category <i>(after Burland – 1995)</i>
0	Negligible	Hairline cracks.	Aesthetic Damage
1	Very Slight	Fine cracks easily treated during normal redecoration. Perhaps isolated slight fracture in building. Cracks in exterior visible upon close inspection. Typical crack widths up to 1mm.	
2	Slight	Cracks easily filled. Redecoration probably required. Several slight fractures inside building. Exterior cracks visible, some repainting may be required for weather-tightness. Doors and windows may stick slightly. Typically crack widths up to 5mm.	
3	Moderate	Cracks may require cutting out and patching. Recurrent cracks can be masked by suitable linings. Brick pointing and possible replacement of a small amount of exterior brickwork may be required. Doors and windows sticking. Utility services may be interrupted. Weather tightness often impaired. Typical crack widths are 5mm to 15mm or several greater than 3mm.	Serviceability Damage
4	Severe	Extensive repair involving removal and replacement of walls especially over door and windows required. Window and door frames distorted. Floor slopes noticeably. Walls lean or bulge noticeably. Some loss of bearing in beams. Utility services disrupted. Typical crack widths are 15mm to 25mm but also depend on the number of cracks.	Stability Damage
5	Very Severe	Major repair required involving partial or complete reconstruction. Beams lose bearing, walls lean badly and require shoring. Windows broken by distortion. Danger of instability. Typical crack widths are greater than 25mm but depend on the number of cracks.	

Table 1: Building Damage Classification

(a) Note: In the table above the column headed “Description of Typical Damage” applies to masonry buildings only and the column headed “General Category” applies to all buildings.

Standard Conditions

Activity in accordance with plans

Condition 1: The take (dewatering) and diversion of groundwater associated with a two-tiered excavation to create an upper platform and a lower platform for a single-level basement for an apartment building (B01) and a single-level common basement for five apartment buildings (B02 to B06) shall be carried out in accordance with the plans and all information submitted with the application, detailed below, and all referenced by the Council as consent number WAT60353162 including:

- A report titled “Geotechnical Assessment of Environmental Effects – 223 Kohimarama Road and 7 John Rymer Place, Auckland” prepared by Tonkin & Taylor dated October 2019, Job No.30314.
- A letter report titled “223 Kohimarama Road and 7 John Rymer Place, Kohimarama Geotechnical and Groundwater Response to s92 Queries” prepared by Tonkin & Taylor dated 7 April 2020, Job No.30314.
- Architects drawings titled “Kohimarama Retirement Village - Address 223 Kohimarama Road and 7 John Rymer Place - Resource Consent” prepared by Beca dated April 2020.

Duration of the consent

Condition 2: The take (dewatering) and groundwater diversion consent WAT60353162 expires on [DD MM YYYY] unless it has lapsed, been surrendered or been cancelled at an earlier date pursuant to the RMA (35 years from the date of commencement of this consent).

Provide for a review under section 128

Condition 3: Under section 128 of the RMA the conditions of this consent WAT60353162 may be reviewed by the Manager Resource Consents at the consent holder’s cost:

Within six (6) months after Completion of Dewatering and subsequently at intervals of not less than five years thereafter in order:

- To deal with any adverse effects on the environment which may arise or potentially arise from the exercise of this consent and which it is appropriate to deal with at a later stage
- To vary the monitoring and reporting requirements, and performance standards, in order to take account of information, including the results of previous monitoring and

changed environmental knowledge on:

- 1) ground conditions
- 2) aquifer parameters
- 3) groundwater levels; and
- 4) ground surface movement

Ground Dewatering (Take) and Groundwater Diversion Conditions

Notice of Commencement of Dewatering

Condition 1: The Team Leader Compliance Monitoring Central shall be advised in writing at least ten (10) working days prior to the date of the Commencement of Dewatering.

Design of Basement walls and Retaining

Condition 2: The design and construction of the retaining walls and basement walls shall be undertaken in accordance with the specifications contained in Appendix G to the report titled:

- “Geotechnical Assessment of Environmental Effects – 223 Kohimarama Road and 7 John Rymer Place, Auckland” prepared by Tonkin & Taylor dated October 2019, Job No.30314.

Excavation Limit

Condition 3: The Bulk Excavation shall not extend below the following levels:

- Bulk Excavation shall not extend more than 1 m below the Final Finish Levels shown on the architectural drawings Site Plans Drawings 044-RCT-S01-A0-010 to 044-RCT-S01-A0-100 Revision B; and
- Bulk Excavation for the establishment of the stormwater detention tanks proposed below the Basement floor slab in Building B01 shall not extend below, 26.73 m RL.

Performance Standards

Damage Avoidance

Condition 4: All excavation, dewatering systems, retaining structures, basements and works associated with the diversion or taking of groundwater, shall be designed, constructed and maintained so as to avoid Damage to buildings, structures and Services on the site or adjacent

properties, outside that considered as part of the application process unless otherwise agreed in writing with the asset owner.

External Visual Inspections During Dewatering & Reporting

Condition 5: External visual inspections of the surrounding ground and neighbouring buildings and structures shall be undertaken for the purpose of detecting any new external Damage or deterioration of existing external Damage. In particular:

- Weekly visual inspections shall be undertaken of the deck structure and swimming pool during excavation and construction of the eastern retaining wall adjacent to 247A Kohimarama Road.
- Weekly visual inspections shall be undertaken from Commencement to Completion of Dewatering along the access road to the College adjacent to the northwest boundary of the site; the fence along the site boundary, the adjacent ground surface and the exterior of the College buildings including the lightweight garage structure.

A photographic record is to be kept, including time and date, of each inspection and all observations made during the inspection, and should be of a quality that is fit for purpose.

The photographs taken during the external visual inspections and an assessment of the findings of the inspections are to be reviewed by a SQEP and included in a bi-monthly report which shall be submitted to the Team Leader Compliance Monitoring Central.

This condition does not apply to any land, building or structure where written evidence is provided to the Team Leader Compliance Monitoring Central confirming that the owner of the land, building or structure does not require visual inspections to be carried out.

Additional Surveys

Condition 6: Additional condition surveys of any building, structure, or Service shall be undertaken, if requested following a complaint and there is a reasonable basis to support the request, by the Team Leader Compliance Monitoring Central, for the purpose of investigating any Damage potentially caused by ground movement resulting from dewatering or retaining wall deflection. A written report of the results of the survey shall be prepared and/or reviewed by a SQEP and shall be submitted to the Team Leader Compliance Monitoring Central.

The requirement for any such additional condition survey will cease six (6) months after the Completion of Dewatering unless ground settlement or building deformation monitoring indicates movement is still occurring at a level that may result in Damage to buildings,

structures, or Services. In such circumstances the period where additional condition surveys may be required will be extended until monitoring shows that movement has stabilised and the risk of Damage to buildings, structures and Services as a result of the dewatering is no longer present.

Access to Third Party Property

Condition 7: Where any monitoring, inspection or condition survey in this consent requires access to property/ies owned by a third party, and access is declined or subject to what the Consent Holder considers to be unreasonable terms, the Consent Holder shall provide a report to the Team Leader Compliance Monitoring Central prepared by a SQEP identifying an alternative monitoring programme. The report shall describe how the monitoring will provide sufficient early detection of deformation to enable measures to be implemented to prevent Damage to buildings, structures or Services. Written approval from the Team Leader Compliance Monitoring Central shall be obtained before an alternative monitoring option is implemented.

Contingency Actions

Condition 8: If the Consent Holder becomes aware of any Damage to buildings, structures or Services potentially caused wholly, or in part, by the exercise of this this consent, the Consent Holder shall:

1. Notify the Team Leader Compliance Monitoring Central and the asset owner within two (2) working days of the Consent Holder becoming aware of the Damage.
- (b) Provide a report prepared by a SQEP (engaged by the Consent Holder at their cost) that describes the Damage; identifies the cause of the Damage; identifies methods to remedy and/or mitigate the Damage that has been caused; identifies the potential for further Damage to occur, and describes actions that will be taken to avoid further Damage.

Provide a copy of the report prepared under (b) above, to the Team Leader Compliance Monitoring Central and the asset owner within ten (10) working days of notification under (a) above.

Advice Note: *It is anticipated the Consent Holder will seek the permission of the damaged asset to access the property and asset to enable the inspection/investigation. It is understood that if access is denied the report will be of limited extent.*

Notice of Completion

Condition 9: The Team Leader Compliance Monitoring Central shall be advised in writing within ten (10) working days of when excavation and dewatering has been completed.

Groundwater Maintenance Program

Condition 10: At the Completion of Dewatering, the Team Leader Compliance Monitoring Central shall be provided with a maintenance program for any permanent groundwater drainage system used to manage groundwater levels.

Advice Note: *The Consent Holder is advised that the discharge of pumped groundwater to a stormwater system or waterbody will need to comply with any other regulations, bylaws or discharge rules that may apply.*

7.0 REVIEW

Memo prepared by Richard Simonds and reviewed by:

Pat Shorten
Principal – Geotechnical
Engineering
Fraser Thomas Ltd




Date:

4 June 2020

Memo reviewed and approved for release by:

Alan Moore



Principal Specialist, Specialist Unit
Resource Consents

Date:

4 June 2020

Technical memo – Specialist Unit, Resource Consents

To:	Sandy Hsiao, Senior Planner, Central Resource Consenting
CC:	Rod Dissmeyer, Team Leader– Stormwater Wastewater & Industrial and Trade Activities, Specialist Unit, Resource Consents Department
From:	Arsini Hanna, Senior Specialist – Stormwater Wastewater & Industrial and Trade Activities, Specialist Unit, Resource Consents Department
Date:	11 May 2020

1.0 APPLICATION DESCRIPTION

Application and property details

Applicant's name:	Ryman Healthcare Limited
Application number:	BUN60353138 - DIS60353139
Activity type:	Diversion and Discharge of Stormwater
Purpose description:	To authorise the diversion and discharge of stormwater from a total impervious area of 6,043m ² associated with the establishment of a comprehensive retirement residential development
Site address:	223 Kohimarama Road and 7 John Rymer Place Kohimarama, Auckland

2.0 PROPOSAL, SITE AND LOCALITY DESCRIPTION

2.1 Proposal relevant to this permit/consent only

The applicant has applied for consent to authorise the diversion and discharge of stormwater from a total impervious area of 6,043m² associated with the establishment of a comprehensive retirement residential development at 223 Kohimarama Road and 7 John Rymer Place Kohimarama, Auckland.

A full description of the proposal is provided in the following documents:

- Section 2.0 of the application report titled '*Resource Consent Application and Assessment of Environmental Effects and Statutory Analysis*', dated February 2020 and prepared by Ryman Healthcare Limited, herein referred to as the 'application report'.

- ‘Civil Design Report Kohimarama Report’, dated 14 February 2020 and prepared by Beca Limited, herein referred to as the ‘civil report’.
- ‘Stormwater Management Plan’ prepared by Beca and dated 14 February 2020.

Additional information in response to a request for further information under section 92 of the Resource Management Act (RMA) was received by emails to the Auckland Council on 17 April 2020 and 8 May 2020. This information is hereby referred to as the ‘S92 response’.

In brief, the applicant proposes to:

- Establish seven buildings (B01 to B07) on-site. The layout of the proposed village is illustrated in the ‘Site Master Plan 4 (Volume 3, Appendix A attached to the application report). Further detail on the layout of Buildings B01 to B07 and the podium is provided in Sections 2.3.1, 2.3.2, 2.3.3 and 2.3.4 of the application report.
- All the care, common amenity facilities and operational services will be accommodated in the Building B01 (a multi-story building with basement car park).
- Buildings B02 to B06 will be grouped around a podium via Building B07 and will have access with Building B01 via a tunnel.
- The podium basement will be located under Buildings B02 to B06 with access (internally and externally) to the podium and apartments above.
- Create a total of 192 car parks within the site, including 121 spaces under the podium (basement). Create two car parks at-grade south-east of the main entrance to building 01 for Ryman vans. The remainder of the car parking spaces will be provided under building 01 (basement).
- Access to the proposed development will be provided by a primary access from John Rymer Place and a secondary access from Kohimarama Road.
- Upgrade the access from Kohimarama Road to prevent stormwater runoff flowing towards the site.
- Create an internal accessway which separates Building B01 from Buildings B02 to B07 and provides access to the main entrance of Building B01 and the car parking areas.
- All roads will have a subsoil drainage layer lined with geotextile.
- Construct foot paths within the site and along the access road.

- Retain existing areas of native planting (particularly in the western corner of the site).
- Reclaim and relocate the existing intermittent stream sections and the two existing hollows on site. This stream will be longer than the existing stream, as it will replace part of the existing piped network on-site.
- The reclaimed stream will be located to the east of Building B01 and adjacent to the boundary with those properties along Kohimarama Road.

Existing stormwater management

The applicant's consultant (Beca) estimated that the stormwater runoff from 61% of the site's sheet flows to the existing stream located within the site. Discharges are then piped to the stormwater network system via a 450mm diameter pipe and a 225mm diameter pipe from two hollows located on-site. Runoff from the remainder of the site discharges as sheet flow into the rear of the lots along the south eastern boundary at 17 to 47 John Rymer Place.

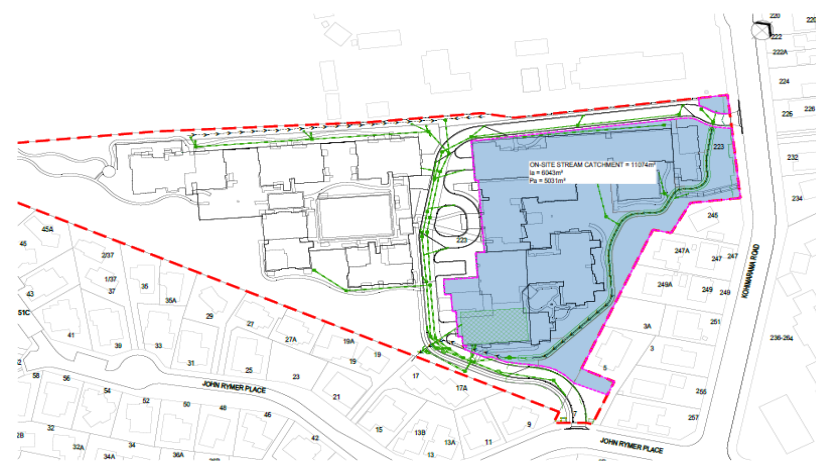
The two hollows on the Ryman site currently provide an informal form of peak flow attenuation, reducing downstream flow rates relative to the incoming upstream flow.

Proposed stormwater management

The applicant is proposing to address stormwater managements across the site as follows:

Watercourse Catchment

- Stormwater runoff from approximate 6,043m² of impervious area will discharge into the stream via four outlets (drops). This catchment is illustrated on drawing 044-RCT_401_C0-SK085C, attached to the S92 response.



- Discharges from the stream will flow into the public stormwater network.

Public Network Catchment

- Stormwater runoff from approximate 5,031m² of impervious area will discharge directly into the public stormwater network system.

To mitigate the potential adverse environmental effects of the proposed development, the applicant is proposing the following stormwater management controls for both catchments:

- Create a new private stormwater network within the site, designed in accordance with requirements set out in Chapter 4 of the Auckland Council Code of Practice.
- Provide stormwater quality treatment for the stormwater runoff from the main road's impervious areas by means of two offline Stormwater 360Stormfilters prior to discharging into the public stormwater network.
- A weir will be placed in the stormwater device (Stormwater 360Stormfilter) manhole immediately upstream of the vault to control the flow entering the filter vaults. Flows exceeding the water quality flow will flow to the public stormwater network.
- Stormwater discharges from the stormwater treatment system will discharge directly into the public stormwater network.
- Stormwater runoff from the proposed roof and podium impervious areas (within the watercourse catchment) will discharge directly to the diverted stream onsite.
- Stormwater runoff from the proposed roof and impervious areas (within the public catchment) will discharge to the public network via a separate reticulation network bypassing the storm filter.
- Install an underground 1350m³ stormwater attenuation storage tank below building B01. This tank is designed to capture flows up to the 1% AEP event, and ultimately discharge flows in a manner that mitigates the downstream risk of flooding for the 10% AEP and 1%AEP stormwater events.
- Provide 100m³ of retention on site for the total site impervious area (16,573m²) by irrigating of the extensive landscaping and amenity areas on-site.
- Install a new stormwater piped network downstream of the watercourse with an outlet connection from the proposed attenuation storage rain tank.
- Permanently block the existing 450mm diameter and 225mm diameter stormwater public piped inlets from the existing watercourse.

- Provide appropriate energy dissipation and erosion control at the outlet (drops) of the stormwater network to the stream. The drops will be steep (ranging between 2.3m and 3.1m) and will be lined with appropriate substrate to prevent scour and erosion (e.g. boulder, cobble).

2.2 Site description

The site is located at 223 Kohimarama Road and 7 John Rymer Place Kohimarama and is shown in the map below.



The applicant has provided a brief description of the site and associated receiving environment in section 2.0 of the application report. In brief:

- The site comprises of two parcels, a principal land of 3.12 ha at 223 Kohimarama Road (Lot 1 Deposited Plan 332284) and a small parcel of 451 m² at 7 John Rymer Place (Lot 51 D P 163242).
- The site has a long northern boundary with Selwyn College, is boarded to the east by Kohimarama Road and houses accessed from Kohimarama Road, to the south by the existing residential development accessed from John Rymer Place and to the west by vacant land.
- There is an existing open drain along the eastern boundary. Freshwater Solutions Environmental Consultants has classed this open drain as an intermittent stream.

- The site is a part of a 19.0 ha south-facing catchment which drains via tributary to the Pourewa Creek and then to Orakei Basin.
- Previously the original open channels draining the 19.0ha sub-catchment have been piped apart from an 80m section from the Pourewa Creek and the section through the eastern side of the Ryman site. The section through the Ryman site has been modified by filling the mid-section for the construction of a playing field, which has effectively blocked the original open channel and created a hollow in the area above the field. The flows from this hollow are conveyed in a 450 mm public stormwater pipe to an existing stormwater manhole adjacent to John Rymer Place.
- The total Pourewa Creek catchment, with its lower extent defined by the tidal interface, is approximately 126ha with the Ryman site approximately 2.5% of the total catchment.
- Approximately 25% of the Selwyn College site is located to the eastern boundary of the site and from a 270m length of Kohimarama Road. Stormwater runoff from both sites are piped into the top of the open channel in the Ryman site.
- Historical filling for the John Rymer Place development extends into the Ryman site, damming the open channel and creating another hollow. This receives runoff from part of the Ryman site, and from residential properties outside the eastern boundary of the site. Flows from this hollow are conveyed in a 225mm public stormwater pipe.

2.3 Background and site history relevant to this permit/consent only

No regional consents have been held for the site prior to this application.

The site is located within Hobson Bay / Waitematā stormwater diversion and discharge consent (NDC) (consent no. 4427). As stated in section 2.1 of this report, stormwater runoff from one portion of the site discharges to the public stormwater network, as such, stormwater runoff from this catchment has been assessed against the provisions of the existing NDC and it is considered that the stormwater diversion and discharge can be authorised by the NDC (as confirmed by Healthy Waters Department (HWD) – Auckland Council written approval email attached to the S92 response).

Stormwater runoff from the remaining portion of the site development (water course catchment) discharges to a stream and not to the public reticulated stormwater network and as such it will not be authorised under this NDC. Therefore, a new consent for the diversion and discharge of stormwater is required for the development to address the stormwater discharge.

3.0 REASON FOR CONSENT – STORMWATER

3.1 Reasons for consent

Auckland Unitary Plan (Operative in Part) (AUP O-P)

Stormwater diversion and discharge (E8)

Consent to divert and discharge stormwater is required as a **discretionary** activity under rule E8.4.1 (A10) as the diversion and discharge of stormwater from 6,043m² of new impervious areas is not authorised by other stormwater diversion and discharge rules.

The diversion and discharge of stormwater from 5,031m² of impervious areas is a **Permitted Activity** under Rule E8.4.1 (A1). The diversion and discharge of stormwater is authorised by the Network Discharge Consent (#4427) (Healthy Waters Department (HWD) – Auckland Council written approval email attached to the S92 response).

4.0 TECHNICAL ASSESSMENT OF EFFECTS

4.1 Assessment of effects on the environment

In section 5.0 of the application report the applicant has identified and presented an assessment of the environmental effects associated with the proposed stormwater management.

Water quality/water quantity

Increased runoff from new impervious areas can have an impact on the morphology and aquatic habitat provision of the downstream environment. Run off from the vehicle movement areas of the site has the potential to contain contaminants.

The applicant is proposing to provide stormwater quality treatment for the main road impervious areas by means of 2 X Stormwater 360Stormfilters to achieve 75% total suspended particulate (TSS) removal on a long-term average basis in accordance with the requirements of the AUP.

The applicant has provided the preliminary design calculations for the Stormwater 360Stormfilters. Proprietary filter devices require peak flow diversion to ensure that the device provides 'offline' stormwater quality treatment to reduce the potential for resuspension. A peak flow diversion manhole has been proposed to ensure high flow bypasses the Stormfilter and that it is 'offline' as required by the Auckland Council Proprietary Device Approval Report (PDEP) for the device. The design sizing calculations can be found in the S92 response.

The preliminary technical information has been reviewed and it is confirmed that the designs are adequate to manage the stormwater quality.

A condition of consent is recommended requiring that finalised design details, including final device sizing calculations, will be submitted at the time of application for Engineering Plan Approval and will require that the filters be installed in an offline configuration and include backflow prevention mechanisms.

Roofs will be constructed of inert materials. By using inert roofs, the potential for contamination is significantly reduces.

The stormwater quality management proposed is considered appropriate in the context of the development and the anticipated level of contaminants such that the effects of stormwater discharging to the receiving environment will be suitably avoided.

Although the site is not within a SMAF area, under standard E8.6.3.1. where stormwater runoff from an impervious area is discharging into a stream receiving environment, it must be managed by stormwater management device(s) and meet hydrology mitigation requirements:

- Provide retention (volume reduction) of at least 5mm runoff depth for the impervious area for which hydrology mitigation is required; and
- Provide detention (temporary storage) and a drain down period of 24 hours for the difference between the predevelopment and post-development runoff volumes from the 95th percentile, 24-hour rainfall event minus the 5 mm retention volume or any greater retention volume that is achieved, over the impervious area for which hydrology mitigation is required.

The Freshwater Solutions report dated 9 December 2019 prepared for the wider catchment and the ecological assessment report prepared by Fresh Water Solutions dated 14 February 2020 attached as Appendix K to the application report demonstrated that the provision of specific hydrology mitigation (including retention and detention) on the Ryman site will not provide benefit to the downstream sections of open waterway.

In addition, the applicant is not proposing retention for the stormwater runoff from the site impervious areas as required by standard E8.6.3.1, because the stormwater is discharging into a tidal area. However, 100m³ of retention will be provided on site (more than the 82.9m³ required for the total site impervious area) for irrigation of the extensive landscaping and amenity areas.

The applicant has proposed to install an underground 1350m³ stormwater attenuation storage tank below building B01. This tank is designed to capture flows up to the 1% AEP event, and ultimately discharge flows in a manner that mitigates the downstream risk of flooding for the 10% AEP and 1%AEP stormwater events.

The applicant has provided preliminary calculations for the stormwater management system which confirm that the peak flows are at pre-development levels. (Calculations are attached to the infrastructure report and the S92 response).

This approach has been discussed with HWD technical specialists who have confirmed this as appropriate. Email correspondence with HWD is included in the S92 response.

Final Details of the proposed tank would be completed at Building Consent Approval stage and should be in accordance with Auckland Council's relevant guideline documents.

It has been assessed that the proposed stormwater management system will be adequate.

Outfall structure

The applicant has proposed to install erosion protection measures to minimise scour and erosion potential for the four proposed outlets.

The ecological assessment report prepared by Fresh Water Solutions and dated 14 February 2020 and the geotechnical report prepared by Tonkin and Taylor and dated October 2019 both recommended that, structures within stream channels are to be avoided, however, to coordinate with the changing building and ground levels, the applicant has proposed that the stream will contain drops which will be steep (ranging between 2.3m and 3.1m) and lined with appropriate substrate to prevent scour and erosion (e.g. boulder, cobble). The details for the stream and drop structure are subject to further design development allowing for low velocities in the open stream channel in addition to the creation of natural stream habitats and suitable provision for fish passage.

The design and specification of these outfalls will be completed at Engineering Plan Approval stage and should incorporate erosion protection in accordance with Council's relevant guideline documents.

The provision of erosion protection at the outlet has been assessed as ensuring that the effects of outfall and channel erosion are adequate.

The assessment summarised through this report focuses on matters relevant to the regional stormwater consent framework and should be read in conjunction with separate Development Engineering reporting, which addresses other detailed matters including flooding and overland flow paths and pipe capacities specifically.

Operation and maintenance and long –term ownership of proposed devices

The stormwater treatment devices will remain in private ownership. On-going maintenance of the proposed devices (outlets and storage tank) is crucial to ensuring that the effects continue to be mitigated. This will be the responsibility of the consent

holder. Further, as a proprietary device (Stormwater 360Stormfilter) which requires specialised maintenance is proposed, conditions requiring a maintenance contract to be held on an going basis are recommended.

A draft operation and maintenance plan (O & M Plan) has been supplied by the applicant. A consent condition is recommended that a final O & M Plan be developed and implemented upon completion of the proposed stormwater management system.

Conclusion

Overall the proposed stormwater management for the site is considered to be the best practicable option to mitigate the stormwater runoff from the site and is considered appropriate in the context of the development such that any expected effects shall be adequately avoided or suitably mitigated.

This conclusion is based on undertaking the proposed measures to avoid, remedy or mitigate effects in accordance with the application documents.

5.0 STATUTORY CONSIDERATIONS

5.1 Objectives and policies of the Auckland Unitary Plan

The following stormwater related Auckland wide policies and objectives are included for reference as follows.

- Objectives – E1.2 (1) – (3); and
- Policies – E1.3(9), (10), (11), and (13) and (15)
- Policy E10.3(1) – (3)

The proposed stormwater management will achieve the above objectives through the proposed stormwater management system. It is assessed that the proposed stormwater managements represent the Best Practical Option (BPO) for the site.

The following general objectives and policies of the plan may also be relevant to the planner's assessment of the application:

Chapter B Natural Resources; Objectives B.7.3.1, Policies B.7.3.2.(1)-(4).

It is also noted that the objectives and policies from the AUP that relate to natural hazards are relevant to the broader assessment of this development.

5.2 Other statutory documents

The following statutory documents are relevant to the planner's assessment of the application:

- National Policy Statement: Freshwater Management 2014

The above document has been taken into account and it is concluded that the proposal relevant to this application is in accordance with the relevant objectives and policies of this document.

5.3 Other relevant matters

There are no other matters considered relevant and reasonably necessary to consider with respect to the diversion and discharge of stormwater.

5.4 Matters relevant to discharge or coastal permits (Section 105) and restrictions on certain permits (Section 107)

The provisions of Section 105 have been met as it has been determined that there are no significant effects on the receiving environment as concluded in Section 4 of this memo. It has been assessed that the applicant's reasons for the proposed choice of stormwater management are appropriate in the circumstances and regard has been had to alternative methods of discharge applicable in this case.

Section 107(1) of the RMA places restrictions on the granting of certain discharge permits that would contravene Sections 15 or 15A of the RMA. The proposal will not give rise to any of the effects listed in Section 107(1).

5.5 Duration of consent: Section 123

Stormwater diversion and discharge consent

It is appropriate to set a term of **35 years** because the nature of the activity subject to consent is unlikely to alter during this period, and the ongoing maintenance of the stormwater management systems as required by the recommended conditions of consent will ensure that the required standards continue to be met.

6.0 RECOMMENDATION AND CONDITIONS

6.1 Adequacy of information

The above assessment is based on the information submitted as part of the application. The information submitted is sufficiently comprehensive to enable the assessment of the above matters on an informed basis:

- a. The level of information provides a reasonable understanding of the nature and scope of the proposed activity as it relates to the relevant regional plan.

- b. The extent and scale of any adverse effects on the environment are able to be assessed.

6.2 Recommendation

The assessment in this memorandum does not identify any reasons to withhold consent, and the aspect of the proposal assessed in this memorandum could be granted consent, subject to recommended conditions, for the following reasons:

1. Subject to the proposed stormwater management and the imposition of consent conditions, the effects of the diversion and discharge of stormwater on the receiving environment will be less than minor.
2. The sensitivity of the receiving environment to the adverse effects of the discharge will not be compromised given the level of the discharge, the application of suitable control technology and appropriate on-site management techniques.

6.3 Conditions

Stormwater works

The stormwater works proposed in this application to avoid, remedy or mitigate the identified actual or potential adverse effects associated with the diversion and discharge of stormwater from the activity are to be designed in accordance with Auckland Council Guidelines. These stormwater works are set out in the recommended conditions of consent so that the required design objectives for these works are clear.

Minor modifications to any part of the stormwater management system (assessed as part of this application) which do not alter the capacity or performance of the stormwater management system, may be undertaken without requiring a full variation to the consent. A recommended condition of consent provides for minor modifications when information confirming the extent of the changes is also provided at the time of the request. The modification must be verified by the Team Leader - Compliance Monitoring Central.

Construction meetings and plans

It is recommended that conditions requiring pre and post-construction meetings are included in addition to the submission of as-built plans. This will enable verification by Council Compliance and Monitoring staff that the works have been carried out in accordance with the submitted plans and also provides for any changes during the construction phase to be documented.

Operations and maintenance

Ongoing maintenance of any proposed devices is crucial to ensuring that the identified effects associated with this proposal continue to be avoided, remedied or mitigated. A condition of consent is recommended to require that an operations and maintenance plan is submitted to the Team Leader - Compliance Monitoring Central to incorporate any final construction designs or plans.

Long-term ownership

The ownership of the stormwater management system will remain the responsibility of the applicant.

General conditions

The following general conditions are recommended:

- s36 and charges
- works in accordance with the plans
- lapse date

6.4 Specific consent conditions for permit number DIS60353139 stormwater diversion

The following conditions specific to the diversion and discharge of stormwater and stormwater management flow are recommended:

Expiry date

- X.1 Stormwater diversion and discharge permit **DIS60353139** - shall expire on (date to be inserted by lead planner; 35 years from decision date) unless it has lapsed, been surrendered or been cancelled at an earlier date pursuant to the RMA.

Stormwater management works

- X.2 The following stormwater management works shall be constructed for the following catchment areas and design requirements, and shall be completed **prior** to discharges from the associated new impervious areas commencing from the site:

Works to be undertaken	Catchment area	Design requirement(s)
<i>Inert roofing materials</i>	All roof areas	No exposed unpainted metal surfaces.
<i>Stormwater 360Stormfilter X 2 (SF1 and SF2)</i>	SF1 = 4551.0m ² SF2 = 440.0m ²	75% TSS removal, on long term average basis (GD01). Installed as per manufacturers' specifications

		<p>Offline configuration, peak flow diversion manhole</p> <p>SF1 = 9 cartridges</p> <p>SF2 = 2 cartridges</p> <p>To be approved at Engineering Plan Approval stage</p>
<i>Underground re-use attenuation (storage) tank (1350m³)</i>	All impervious areas	As per Guidelines specifications
<i>Outfall X4</i>	6,043m ² of impervious area and 5,031m ² of pervious	<p>Erosion protection to minimise bed scour and erosion</p> <p>Steep drops (ranging between 2.3m and 3.1m) and lined with appropriate substrate to prevent scour and erosion (e.g. boulder, cobble).</p>

Detailed designs for stormwater mitigation for the site impervious areas including any relevant drawings, plans and calculations shall be submitted for Engineering Plan Approval and/or Building Consents.

Modifications approval

X.3 In the event that any modifications to the stormwater management system are required, that will not result in an application pursuant to Section 127 of the RMA, the following information shall be provided:

- Plans and drawings outlining the details of the modifications; and
- Supporting information that details how the proposal does not affect the capacity or performance of the stormwater management system.

All information shall be submitted to and approved by the Team Leader - Compliance Monitoring Central, **prior to implementation.**

Advice Note:

All proposed changes must be discussed with the Team Leader - Compliance Monitoring Central, prior to implementation. Any changes to the proposal which will affect the capacity or performance of the stormwater management system will require an application to Council pursuant to Section 127 of the RMA.

Pre-construction meeting

- X.4 A pre-construction meeting shall be held by the consent holder, prior to commencement of the construction of any stormwater work onsite, that:
- a) is arranged **five working days** prior to initiation of any stormwater work on the site;
 - b) is located on the subject area;
 - c) includes representation from the Team Leader - Compliance Monitoring Central; and
 - d) includes representation from the site stormwater engineer or contractors who will undertake the works and any other relevant parties

Advice Note:

To arrange the pre-construction meeting required by this consent, please contact the Team Leader - Compliance Monitoring Central.

Information required for Pre-construction meeting

- X.5 The following information shall be made available prior to, or at the pre-construction meeting
- a) timeframes for key stages of the works authorised under this consent;
 - b) contact details of the site contractor and site stormwater engineer; and
 - c) construction plans approved (signed/stamped) by an Auckland Council Development Engineer.

Post-construction meeting

- X.6 A post-construction meeting shall be held by the consent holder, within **20 working days** of completion of the stormwater management works, that:
- a) is located on the subject area;
 - b) includes representation from the Team Leader - Compliance Monitoring Central; and
 - c) includes representation from the site stormwater engineer or contractors who have undertaken the works and any other relevant parties

Advice Note:

To arrange the post-construction meeting required by this consent, please contact the Team Leader - Compliance Monitoring Central.

Certification of stormwater management works (As-Built Plans)

- X.7 As-Built certification and plans of the stormwater management works, which are certified (signed) by a suitably qualified registered surveyor as a true record of the stormwater management system, shall be provided to the Team Leader - Compliance Monitoring Central for approval.

Contents of As-Built Plans

- X.8 As-Built Plans shall be provided to the Team Leader - Compliance Monitoring Central **5 working days** prior to the post-construction meeting required by this consent.
- X.9 The As-Built plans shall display the entirety of the stormwater management system, and shall include:
- a) location and dimensions of stormwater manholes and the outlet structure;
 - b) location, dimensions and levels of any overland flowpaths including cross sections and long sections;
 - c) documentation of any discrepancies between the design plans and the As-Built plans approved by the Modifications Approval condition.

Operation and maintenance plan

- X.10 Final Operation and Maintenance Plan shall be submitted to the Team Leader - Compliance Monitoring Central for approval **5 working days** prior to the post-construction meeting required by this consent.
- X.11 The Operation and Maintenance Plan shall set out how the stormwater management system is to be operated and maintained to ensure adverse environmental effects are minimised. The plan shall include:
- a) details of who will hold responsibility for long-term maintenance of the stormwater management system and the organisational structure which will support this process;
 - b) a programme for regular maintenance and inspection of the stormwater management system;
 - c) a programme for the collection and disposal of debris and sediment collected by the stormwater management devices or practices;
 - d) a programme for post storm inspection and maintenance;
 - e) a programme for inspection and maintenance of the outfalls;
 - f) general inspection checklists for all aspects of the stormwater management system, including visual checks; and

Operation and maintenance plan implementation

- X.12 The stormwater management and treatment system shall be managed in accordance with the Operation and Maintenance Plan.

Amendments to the operation and maintenance plan

- X.13 Any amendments or alterations to the Operation and Maintenance Plan shall be submitted to, and approved by the Team Leader - Compliance Monitoring Central, in writing **prior** to implementation.
- X.14 The Operation and Maintenance Plan shall be updated and submitted to the Team Leader - Compliance Monitoring Central for approval, upon request.

Specialist Maintenance contract

- X.15 A written maintenance contract for the on-going maintenance of the proprietary device(s) shall be entered into with an appropriate stormwater management system operator, **prior to** the operation of the proprietary stormwater management device(s). A written maintenance contract shall be in place and maintained for **the duration of the consent**.
- X.16 A signed copy of the maintenance contract for the first three years of operation shall be forwarded to the Team Leader Compliance Monitoring North West **5 days** prior to the post-construction meeting required by this consent.
- X.17 A copy of the current maintenance contract shall be provided to the Auckland Council upon request throughout **the duration** of the consent.

Maintenance Report

- X.18 Details of all inspections and maintenance for the stormwater management system, for the preceding three years, shall be retained.
- X.19 A maintenance report shall be provided to the Team Leader - Compliance Monitoring Central on request.
- X.20 The maintenance report shall include the following information:
- a) details of who is responsible for maintenance of the stormwater management system and the organisational structure supporting this process;
 - b) details of any maintenance undertaken; and
 - c) details of any inspections completed.

7.0 REVIEW

Arsini Hanna



Senior Specialist – Stormwater Wastewater & Industrial and Trade Activities -Specialist Unit, Resource Consents Department

Date:

12 May 2020

Memo and technical review reviewed and approved for release by:

Rod Dissmeyer,



Team Leader– Team Leader– Stormwater Wastewater & Industrial and Trade
Activities Specialist Unit, Resource Consents Department

Date:

11th May 2020

8.0 DEFINITIONS

RMA	Resource Management Act 1991
GD01	Auckland Council Stormwater Management Devices: Design Guidelines
AUP - OP	Auckland Unitary Plan Operative in Part

Technical Memo – Specialist Input

To: Sandy Hsaio, Planner - Auckland Council

From: Christina Bloom, Specialist, Earth, Streams and Trees Team, Specialist Unit, Resource Consents.

Date: 04 June 2020

Streamworks Application: 223 Kohimarama Road

Applicant: Ryman Healthcare

Application numbers: LUS & LUC (BUN)

Reference Documents

- Application *'Ryman Healthcare Limited: Proposed Comprehensive Care Retirement Village – 223 Kohimarama Road and 7 John Rymer Place, Kohimarama, Auckland: Volume One – Resource Consent Applications and Assessment of Environmental Effects'* report prepared by Ryman Healthcare, dated February 2020 (hence with referred to as AEE)
- Further Information: *'Response to Items 70, 71 and 72 of the Section 92 Request for Further Information for the Kohimarama Village Resource Consent Application'*, prepared by FreshWater Solutions, dated 20 May 2020.

Proposal

The applicant is seeking resource consent to divert the streams within the site at 223 Kohimarama Rd, Kohimarama, to enable the development of the site for the construction of a retirement village.

The three watercourses (A, B and C) within the Site are highly modified with limited ecological values. Watercourse A has the highest ecological values of these streams including supporting moderate populations of banded kōkopu.

The Pourewa Creek is the ultimate receiving environment for the wider catchment and is a large permanent slow flowing watercourse that is swampy in nature which drains a Significant Ecological Area ('SEA') and the coastal forest of Kepa Reserve before discharging to Hobson Bay and ultimately, the Hauraki Gulf.

Reasons for Consent

Earthworks consent is sought for _____

Streamworks consent is sought for a Discretionally activity under rule E3.4.1(A19) of the Auckland Unitary Plan: Operative in Part (AUP:OP) as the proposal seeks to divert the streams running through the site.

Overall, the assessment of this activity is considered a **Discretionary Activity** and has been assessed accordingly

Assessment of Effects:

Earthworks

Erosion and Sediment Control

In order to manage the potential effects related to sediment discharges associated with the earthworks, the

Consent:

Address: 223 Kohimarama Rd, Kohimarama

applicant has proposed to undertake the earthworks in accordance with GD05. The applicant has provided an erosion and sediment control plan based on the guidance of GD05. This plan proposes a variety of controls to be established across the site to minimise the potential for erosion to occur and for sediment to be discharged during the earthworks operation. The earthworks are proposed be undertaken in two stages, the first stage being cut and fill for preloading and the second stage to complete the remainder of earthworks on the site.

A stabilised construction entrance will be constructed off Hudson Road and utilised during the works to ensure the entrance and roads within the site will not become a source of sediment, reducing the risk of construction vehicles tracking sediment out onto the public roads. Clean water diversion bunds are proposed to be constructed uphill of the earthworks area to ensure surface water is directed around the earthworks area to prevent clean water entering the site and contributing to the amount of water that needs to be treated on the site.

Two sediment retention ponds (SRPs 1-2) are proposed as the main method of sediment control for bulk earthworks. Catchment sizes for the SRPs are proposed to be less than 5.0ha (being 2.44ha and 0.83ha) and will also have a 2% storage capacity. One decanting earth bund (DEB) will also be utilised for a small area where runoff cannot be directed to the SRPs. This area is 1,800m². Dirty water diversion bunds are proposed to be constructed to convey sediment laden water to the SRPs and DEB for treatment prior to discharge.

Chemical Treatment

The applicant has not confirmed that the SRPs or DEB will be chemically treated. Rainfall activated chemical treatment is recommended for both SRPs and DEB as it is considered to be industry best practice and it will significantly improve the sediment removal efficiency of the SRPs and DEB, thereby reducing potential sediment discharges to the immediate receiving environment. As such, it is recommended that a chemical treatment management plan for the treatment of the SRPs be provided prior to the commencement of earthworks and that this plan be implemented throughout the earthworks phase of the project. This is to ensure that the chemicals proposed, and the method of dosing are appropriate for the site and are used effectively and sparingly.

Seasonal Restriction

It is considered that earthworks of this nature impose a higher risk if undertaken outside of the Auckland Council earthworks season (1 October – 30 April of any year) and as such, a seasonal restriction has been recommended to ensure that the potential effects associated with the proposal are managed appropriately should winter works be proposed.

Streamworks

Streamworks are proposed to reclaim a sections of intermittent streams A & C comprising a total length of 67 m and stream bed area of 42.9 m². The applicant has proposed to mitigate the proposed stream loss by reconstructing a new stream channel on the subject site which will divert the stream flow to a new course. The applicant has provided an indicative streamworks methodology and an ecological assessment including a stream ecological valuation (SEV) and environmental compensation ratio (ECR) for the proposed streamworks. These items are discussed in detail below and are considered against the relevant objectives and policies of the AUP:OP in determining the appropriateness of the reclamation mitigation proposal.

Avoidance

Prior to assessing the mitigation proposal, the appropriateness of the reclamation activity was considered against objective E3.2(6) and policy E3.3(13) which state:

- *Reclamation and drainage of the bed of a lake, river, stream and wetland is avoided, unless there is no practicable alternative; and*
- *Avoid the reclamation and drainage of the bed of lakes, rivers, streams and wetlands, including any extension to existing reclamations or drained areas unless all of the following apply:*
 - (a) there is no practicable alternative method for undertaking the activity outside the lake, river, stream or wetland;*

Consent:

Address: 223 Kohimarama Rd, Kohimarama

(b) for lakes, permanent rivers and streams, and wetlands the activity is required for any of the following:

- (i) as part of an activity designed to restore or enhance the natural values of any lake, river, stream or wetland, any adjacent area of indigenous vegetation or habitats of indigenous fauna;
 - (ii) for the operation, use, maintenance, repair, development or upgrade of infrastructure; or
 - (iii) to undertake mineral extraction activities; and
- (c) the activity avoids significant adverse effects and avoids, remedies or mitigates other adverse effects on Mana Whenua values associated with freshwater resources, including wāhi tapu, wāhi taonga and mahinga kai.

Based on Council’s advice, the applicant revised their proposal in order to minimise impact on the stream, through diversion and daylighting, rather than reclamation of the streams on site. As such, I consider that the proposal is generally consistent with objective E3.2(6) and policy E3.3(13) to the extent possible in order to develop the site as the AUP:OP envisages.

Stream Ecological Valuation and Environmental Compensation Ratio

The applicant’s Ecologist (Freshwater Solutions) undertook stream ecological valuations (SEVs) at the site using the SEV methodology stated in Auckland Council’s Technical Report Stream Ecological Valuation (SEV): a method for assessing the ecological functions of Auckland Streams (TR2011/009), to determine the current and potential ecological value of the streams to be lost and calculate the subsequent environmental compensation ratios (ECRs) to be used in determining the quantum of mitigation required to address the proposed stream loss. A summary of the SEV scores and ECR calculated by Freshwater Solutions on behalf of the applicant are summarised in tables 1 & 2 below:

Table 1: Predicted SEV scores & calculated ECR values

Impact	Impact Scores			Restore	Restoration Scores		
	SEVi-C	SEVi-P	SEVi-I		SEVm-C	SEVm-P	ECR Value
Stream A & C	0.532	0.646	0.000	New stream - upper	0.000	0.465	2.09
Stream A & C	0.532	0.646	0.000	New stream - lower	0.000	0.545	1.78

Consent:

Address: 223 Kohimarama Rd, Kohimarama

Table 2: Stream offset calculations

Impact reach			ECR		Restoration / realigned reach				Length to restore (m)	Outstanding area not mitigated (m ²)		
Stream	Length (m)	Width (m)	(a) Area (m ²)	ECR	ECR x Area	Stream	Length (m)	Width (m)			Area (m ²)	length required to be restored (m)
A and C	67	0.64	42.9	1.78	76.3	New stream - lower	99.0	0.640	63.4	119.1	99.0	7.3
A and C	-	-	7.3	2.09	15.1	New stream - upper	72.0	0.640	46.1	23.6	23.6	-
											122.6	

Notes: (a) = Streambed area impacted based on channel widths at 10 SEV cross sections;
 (b) = Length of channel to restore and create and calculated by ('ECR x Area' / 'Stream Width'). The length to create defaults to 1:1 length if shorter than that impacted.
 (d) = Amount of streambed area that has not been mitigated for and is transferred to 'Impact reach Area' on the next row if applicable for additional compensation calculation using next available restoration reach. The outstanding amount is determined by ('Restoration reach Area available' - 'ECR x Area') / ECR value. The values in the orange square are outstanding amounts that are transferred to the next row in the 'Impact reach Area' column (a).

As the applicant is proposing a new stream channel at which is 171m long and 0.64 m wide, a total of 109.44 m² of stream channel will be created and the required area would be achieved. The new channel has been split into an upper and lower reach, due to site constraints requiring a difference in channel construction and the inclusion of 3 weirs in the upper reach, resultant in a lower potential SEV score for this reach.

Based on the applicant's section 92 responses, it is considered that the mitigation proposal offered by the applicant is appropriate to address the loss of streams at the development site and will result in a net gain of an addition 48.4 metres in stream length/30.98 m² of stream being created in addition to what is required to achieve no net loss.

Mitigation (Diversion) Proposal

As noted above, the applicant has proposed to mitigate the proposal's stream loss in the form of a newly constructed stream channel. The appropriateness of the proposed mitigation package is considered regarding Policy E.3.3 (4) of the AUP:OP where it's stated that restoration and enhancement actions for a specific activity should:

- a) be located as close as possible to the subject site
- b) be 'like-for-like' in terms of the type of freshwater system affected
- c) preferably achieve no net loss or a net ecological gain in the natural values including ecological values
- d) consider the use of biodiversity offsetting as outlined in Appendix 8 Biodiversity Offsetting

It is considered that the mitigation proposal is consistent with these policies and is discussed in further detail below.

Proximity

The proposed mitigation proposed is to be undertaken on the subject site, within a similar alignment and on the same stream reach as that being impacted. The concept of proximity is therefore met.

Like for like

The mitigation (diversion) proposal is to be undertaken on a watercourse of the same class (i.e., intermittent) as the intermittent streams are being lost and an intermittent stream is being created. The new stream will be located on the subject site, effectively divert upstream flow to a new course and will be constructed to a similar

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width to that being lost. Overall, it is considered that the mitigation proposal meets the like for like criteria, being like for like in terms of aquatic habitat.

No net loss

Generally speaking, the amount of stream required to be enhanced is relative to the amount of stream to be reclaimed. As discussed above, the SEV and ECR values are considered appropriate and it is anticipated that the mitigation (diversion) works will result in an outcome that achieves no net loss and a net gain.

While the quantum of mitigation is considered appropriate, the application contains little in the way of detail regarding a native plant schedule, planting densities, planting methodology, details of stock proof fencing, pest control and plant and maintenance. As such, it is recommended that the applicant provide a final Stream Restoration and Enhancement Plan that includes this detail and is in accordance with Auckland Council's Technical Publication 148: *Riparian Zone Management Strategy for the Auckland Region*, for Council approval.

Stream design

The ecology report and assumptions in the SEV calculator for the proposed stream channel do provide detail of the constructed stream. This includes:

- Reconstructing the stream with meanders and variation in hydrology.
- Creation of cascades, run, riffle and pool sequences.
- Addition of some hard substrate.
- Woody debris in the stream to increase fish habitat and refuge space.
- Addition of 3 weirs including a low flow channel with mussel spat ropes to provide fish passage for climbing species of native freshwater fish (including ongoing maintenance of mussel spat ropes for the life of the structures).
- Stabilised banks and channel to avoid adverse sedimentation and erosion effects on water quality.

It is recommended that a final stream design be submitted to Council for approval prior to construction of the new stream channel so that the detail above can be shown on design drawings. This is to ensure that the assumptions modelled by the predicted SEV values are constructed and to confirm final detail such as frequency of input for hard substrate such as rocks.

The applicant has proposed the addition of mussel spat ropes to the low flow channels of the weirs, as per Image 1 to provide on-going fish passage for climbing species. Mussel spat ropes require on-going maintenance and a recommendation to include spat rope maintenance in the Stormwater Management Plan has been included below.

Due to a level of uncertainty when creating freshwater bodies, it is recommended that an SEV be undertaken five years following permanent diversion to ensure that the new stream achieves its predicted value to address the proposed stream loss. If it does not meet the predicted values of 0.465 for the upper section and 0.545 for the lower reach, it is recommended that a further mitigation and offset plan be provided to Council for approval so that further works can be undertaken in order to ensure that the SEV of the new channel meets the predicted value of 0.465 for the upper section and 0.545 for the lower reach.

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Image 1: Conceptual drawing showing mussel spat rope in the weir low flow channel to provide fish passage for climbing species.

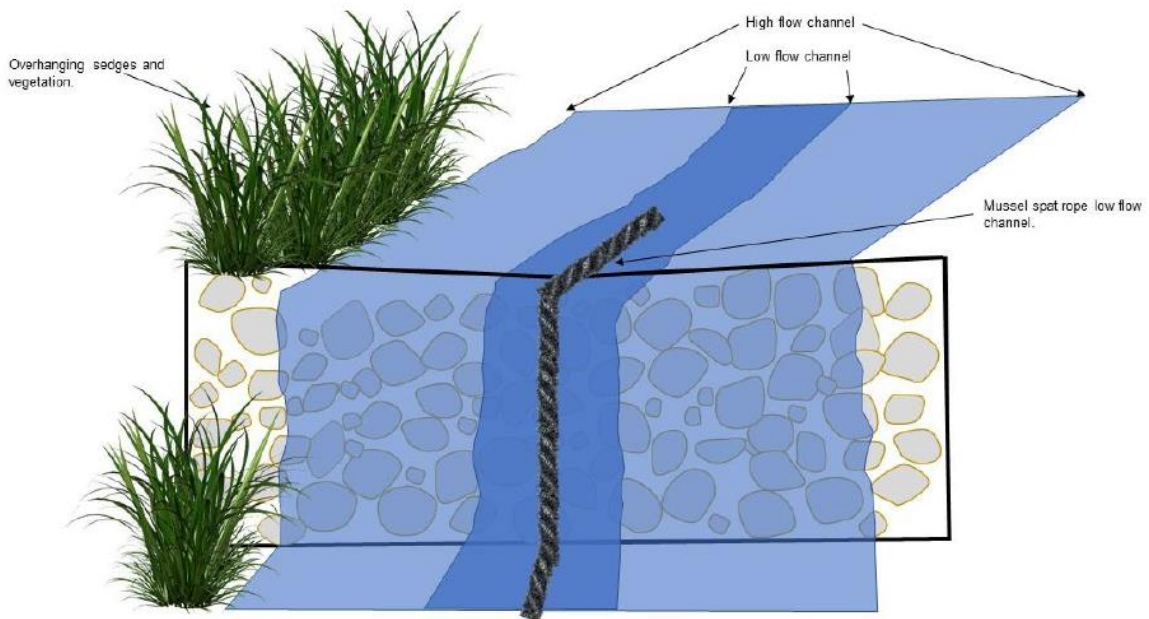


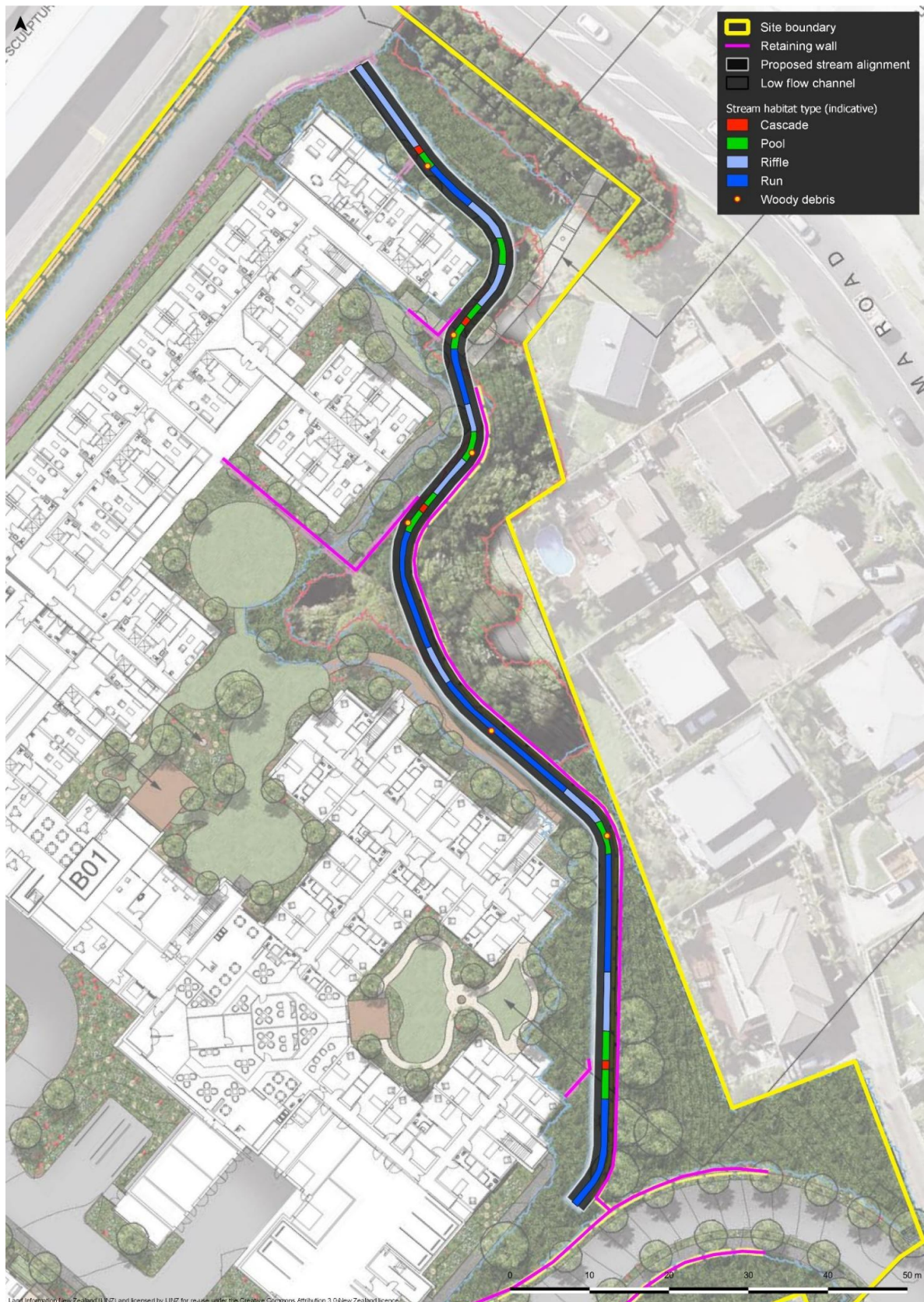
Image 2: Cross section showing indicative riparian planting along new stream (note: example of retaining wall on left bank).



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Image 3: Indicative habitat creation in new channel



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Streamworks methodology

The applicant has provided an indicative streamworks methodology as part of their section 92 response but has stated that the erosion and sediment control methodology will be confirmed by the contractor prior to commencement of works. In summary, the stream will be reclaimed initially as part of bulk earthworks, requiring stream flow to be diverted around the earthworks area. Following completion of the bulk earthworks, the new stream channel will be constructed. The proposed methodology includes:

1. Clear vegetation adjacent to the watercourses that is to be removed as part of the proposed works, as identified on the landscaping plans.
2. Install super silt fences around the open watercourses prior to earthworks being undertaken within the catchment of the watercourses.
3. Install erosion and sediment control prior to commencing earthworks on-site in accordance with GD05.
4. Install either the proposed attenuation storage tank or a temporary attenuation storage basin.
5. Install the proposed piped stormwater network downstream of the proposed watercourse with an outlet connection from the proposed attenuation storage.
6. Relocate any fish or eels found in the watercourses and install a downstream fish barrier in accordance with the fish capture and relocation plan.
7. Divert existing on-site piped stormwater discharges, from off-site sources to the attenuation storage feature installed, which may include a combination of open channels or pipes, through the site.
8. Dewater the watercourses in accordance with section G1.0 of GD05.
9. The existing 450mm and 225mm piped inlets from the existing watercourse are to be permanently blocked.
10. The super silt fence around the existing open watercourse is to be removed,
11. Install the proposed inlet structures from the stream and connection to the proposed piped network with a temporary sediment retention pond upstream of the inlet.
12. Backfill and excavate the stream to the proposed design levels and install the retaining wall along the left bank of the stream.
13. Install the proposed drop structure / weirs.
14. Form the proposed profile of the stream and banks.
15. Apply ecological treatments to the watercourse and stabilise.
16. Infill the temporary sediment retention pond upstream of the inlet.
17. Install proposed outlets and associated energy dissipation treatments for the proposed stormwater discharges to the watercourse.
18. A final inspection of the stream works is to be undertaken by the ecologist and civil engineer.
19. Permanently divert the stormwater from off-site sources to the watercourse and the stormwater and subsoil drainage from the proposed adjacent building, once constructed.
20. Remove the temporary downstream fish barrier to allow for the migration of fish and eels to the watercourse.

Details of the temporary attenuation storage to be developed with the civil engineer and contractor as part of a detailed construction management plan.

Any pumps used for de watering shall contain a screen to prevent fish from entering the pump.

No machinery shall enter the wetted cross section of the watercourse bed. Fuelling of machinery to be carried out away from the water body.

Native fish capture and relocation is recommended, and that a Native Fish Capture and Relocation Plan be provided to Council for approval prior to reclamation commencing to ensure that native fish are salvaged, and biodiversity of native aquatic fauna are protected.

It is my opinion that the streamworks can be undertaken in accordance with GD05 using a best practice dam and divert methodology to manage potential sediment discharges during the bulk earthworks stage and following that, the new stream channel will be constructed offline. Although the applicant has provided indicative information regarding this, more detail is required to ensure the potential for sediment discharges are

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managed throughout the works. As such, I recommend that a final streamworks methodology, drafted under the guidance of GD05, be submitted for Council approval prior to reclamation commencing.

Review Condition

In addition to post construction monitoring, I believe a review condition is warranted. The implementation of a review condition would allow Council discretion to change or amend conditions and request additional mitigation or remediation with particular regard to the where the monitoring results for fish passage effectiveness and the success of the new stream channel are not to the standard proposed by the applicant within the application. As such, a review condition is included below.

Conclusion

For the earthworks, provided the erosion and sediment controls are installed, constructed and maintained in accordance with the Application Report, supporting documentation, the recommendations above and any additional requirements as deemed necessary by the guidance outlined in GD05, I consider the resulting effects on the environment from sediment discharges during the earthworks will be appropriately managed.

For the streamworks, provided the works are undertaken in accordance with the Application Report, Ecological Assessment, Technical Publication 148, New Zealand Fish Passage Guidelines (2018), the recommendations above, and provided the works are adequately monitored and maintained, I considered that the ecological effects associated with the loss of freshwater habitat and sediment disturbance associated with in-stream works, can be appropriately managed and there will be no net loss in terms of aquatic habitat. Recommendations to ensure this is the case have been included below.

Statutory Considerations

- **Objectives and Policies of the Auckland Unitary Plan: Operative in Part (AUP:OP);**

The objective and policies within Chapter E3 and Regional Policy Statement Chapter B7, Natural Resources, listed below are relevant to the planner's assessment of this application.

It is considered that the proposed diversion & reclamation is not consistent with some of the objectives and policies identified above, specifically those that seek to avoid effects, the maintenance or enhancement of degraded freshwater systems and the directive regarding offset proposals.

- B7.3.1 (1) Degraded freshwater systems are enhanced.
- B7.3.1 (2) Loss of freshwater systems is minimised.
- B7.3.1 (3) The adverse effects of changes in land use on freshwater are avoided, remedied or mitigated.
- B7.3.2 (6) Restore and enhance freshwater systems where practicable when development, change of land use, and subdivision occur.
- E3.2 (2) Auckland's lakes, rivers, streams and wetlands are restored, maintained or enhanced.
- E3.2 (3) Significant residual adverse effects on lakes, rivers, streams or wetlands that cannot be avoided, remedied or mitigated are offset where this will promote the purpose of the Resource Management Act 1991.
- E3.3 (2) Manage the effects of activities in, on, under or over the beds of lakes, rivers, streams or wetlands outside the overlays identified in Policy E3.3 (1) by: (a) avoiding where practicable or otherwise remedying or mitigating any adverse effects on lakes, rivers, streams or wetlands; and (b) where appropriate, restoring and enhancing the lake, river, stream or wetland.
- E3.3 (3) Enable the enhancement, maintenance and restoration of lakes, rivers, streams or wetlands.
- E3.3 (4) Restoration and enhancement actions, which may form part of an offsetting proposal, for a specific activity should:
 - (a) be located as close as possible to the subject site;
 - (b) be 'like-for-like' in terms of the type of freshwater system affected;

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(c) preferably achieve no net loss or a net gain in the natural values including ecological function of lakes, rivers, streams or wetlands; and

(d) consider the use of biodiversity offsetting as outlined in Appendix 8 Biodiversity offsetting.

(c) the activity avoids significant adverse effects and avoids, remedies or mitigates other adverse effects on Mana Whenua values associated with freshwater resources, including wāhi tapu, wāhi taonga and mahinga kai.

- **National Policy Statement: Freshwater Management 2014 (NPS: Freshwater Management)**

As the application relates to works within streams, the NPS Freshwater Management is considered relevant to this application. Objectives of the NPS: Freshwater Management centre on safeguarding the life supporting capacity, ecosystem processes and indigenous species of water bodies in terms of water quality and quantity.

- **New Zealand Coastal Policy Statement 2010 (NZCPS)**

As the ultimate receiving environment is the coastal marine environment, the NZCPS is considered relevant to this application. The NZCPS seeks to protect the coastal environment and its special values and states that adverse effects of development should, as far as practicable, be avoided.

- **Hauraki Gulf Marine Park Act (HGMPA) 2000**

As the ultimate receiving environment includes the Hauraki Gulf, the HGMPA is considered relevant to this application. The HGMPA seeks to recognise the national significance and life-supporting capacity of the Hauraki Gulf along with enhancing its natural, historic and physical resources where appropriate.

Duration of Consent

For the streamworks, a 5-year lapse period is recommended in order to provide for delays in the commencement or completion of the works.

For the

Recommendation

The above assessment is based on the information submitted as part of the application. It is considered that the information submitted is sufficient to enable the consideration of the above matters on an informed basis because:

- a. The sensitivity of the receiving environment to the adverse effects of potential sediment discharge will not be compromised given the expected level of discharge, the application of suitable control technologies and appropriate on-site management techniques.
- b. Subject to the imposition of consent conditions, it is considered that the effects on the receiving environment will be appropriately managed.
- c. The applicant has proposed the best practicable option to mitigate and offset the ecological effects associated with the loss of stream channel.

Conditions

The following conditions are recommended:

- X1. The earthworks & streamworks shall be undertaken in accordance with the following plans and information, unless a higher standard is details in the conditions below, in which case this higher standard shall apply:

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Pre-commencement

X2. Prior to the commencement of any earthworks or streamworks activity on the subject site, the consent holder shall hold a pre-start meeting that:

- is located on the subject site
- is scheduled **not less than five days** before the anticipated commencement of earthworks
- includes Auckland Council officer[s]
- includes representation from the contractors who will undertake the works

The meeting shall discuss the erosion and sediment control measures, the earthworks and streamworks methodologies and shall ensure all relevant parties are aware of and familiar with the necessary conditions of this consent.

The following information shall be made available at the pre-start meeting:

- Timeframes for key stages of the works authorised under this consent,
- Resource consent conditions,
- Erosion and Sediment Control Plans,
- Chemical Treatment Management Plan,
- Streamworks methodology, and
- Native Fish Capture & Relocation Plan.

A pre-start meeting shall be held prior to the commencement of the earthworks or streamworks activity in each period between October 1 and April 30 that this consent is exercised.

Advice Note:

To arrange the pre-start meeting please contact the Team Leader Compliance Monitoring Central to arrange this meeting on monitoring@aucklandcouncilgovt.nz, or 09 301 01 01. The conditions of consent should be discussed at this meeting. All additional information required by the Council should be provided 2 days prior to the meeting.

Earthworks

- X3. Pursuant to section 125 of the RMA, consent LUC_____ shall expire five years after the date it is granted unless the consent is given effect to or the Council extends the lapse period.
- X4. Prior to the commencement of any earthworks at the site, a Chemical Treatment Management Plan (CTMP) shall be submitted for the written approval of the Team Leader Compliance Monitoring Central. The plan shall include as a minimum:
- a) Specific design details of the chemical treatment system based on a rainfall activated methodology

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- for the site's sediment retention ponds and decanting earth bunds;
- b) Monitoring, maintenance (including post storm) and contingency programme (including a record sheet);
 - c) Details of optimum dosage (including assumptions);
 - d) Results of initial chemical treatment trial;
 - e) A spill contingency plan; and
 - f) Details of the person or bodies that will hold responsibility for long term operation and maintenance of the chemical treatment system and the organisational structure which will support this system.
- X5. All sediment retention ponds and decanting earth bunds shall be chemically treated in accordance with the approved Chemical Treatment Management Plan (CTMP). Any amendments to the CTMP shall be submitted in writing to the Team Leader Compliance Monitoring Central, for written approval prior to implementation.
- X6. For the avoidance of doubt, all decanting earth bunds utilised during earthworks shall be designed to ensure that they:
- a) Have at a minimum two percent storage capacity, being at 2m³ of impoundment volume for every 100m² of contributing catchment;
 - b) Have a level invert and layer of geotextile covering and pinned securely to the emergency spillway to prevent erosion; and
 - c) Use floating decant devices that discharge at a rate of 3 litres per second, per hectare of contributing catchment.
- X7. Prior to any earthworks commencing, a certificate signed by an appropriately qualified and experienced person shall be submitted to the Team Leader Compliance Monitoring Central, to certify that the erosion and sediment controls have been constructed in accordance with the approved erosion and sediment control plans and GD05.
- Certified controls shall include but are not limited to the sediment retention ponds, decanting earth bunds, clean and dirty water diversion bunds. The certification for these and any subsequent measures shall be supplied immediately upon completion of construction of those measures. Information supplied, if applicable, shall include:
- a) Contributing catchment area;
 - b) Shape of structure (dimensions of structure);
 - c) Position of inlets/outlets; and
 - d) Stabilisation of the structure.
- X8. The operational effectiveness and efficiency of all erosion and sediment control measures specifically required by the approved Erosion and Sediment Control Plan shall be maintained throughout the duration of earthworks activity, or until the site is permanently stabilised against erosion.
- X9. Erosion and sediment control measures shall be constructed and maintained in general accordance with Auckland Council Guidance Document GD05; Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, and any amendments to this document, except where a higher standard is detailed in the documents referred to in conditions above or below, in which case the higher standard shall apply.
- X10. Earthworks shall be managed to avoid deposition of earth, mud, dirt or other debris on any road or

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footpath resulting from earthworks activity on the subject site. In the event that such deposition does occur, it shall immediately be removed. In no instance shall roads or footpaths be washed down with water without appropriate erosion and sediment control measures in place to prevent contamination of the stormwater drainage system, watercourses or receiving waters.

Advice Note:

In order to prevent sediment laden water entering waterways from the road, the following methods may be adopted to prevent, or address discharges should they occur:

- *provision of a stabilised entry and exit(s) point for vehicles*
- *provision of wheel wash facilities*
- *ceasing of vehicle movement until materials are removed*
- *cleaning of road surfaces using street-sweepers*
- *silt and sediment traps*
- *catchpit protection*

In no circumstances should the washing of deposited materials into drains be advised or otherwise condoned.

It is recommended that you discuss any potential measures with the Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact the Team Leader Compliance Monitoring Central for more details. Alternatively, please refer to Auckland Council Guidance Document GD05, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region.

- X11. The site shall be progressively stabilised against erosion at all stages of the earthwork activity and shall be sequenced to minimise the discharge of sediment to surface water.

Advice Note:

Earthworks shall be progressively stabilised against erosion during all stages of the earthwork activity. Interim stabilisation measures may include:

- *the use of waterproof covers, geotextiles, or mulching*
- *top-soiling and grassing of otherwise bare areas of earth*
- *aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward*

It is recommended that you discuss any potential measures with the Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact the Team Leader Compliance Monitoring Central for more details. Alternatively, please refer to Auckland Council Guidance Document GD05, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region.

- X12. Upon completion or abandonment of earthworks on the subject site all areas of bare earth shall be permanently stabilised against erosion to the satisfaction of the Team Leader Compliance Monitoring Central.

Advice Note:

Should the earthworks be completed or abandoned, bare areas of earth shall be permanently stabilised against erosion. Measures may include:

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- the use of mulching;
- top-soiling, grassing and mulching of otherwise bare areas of earth; and
- aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.

The on-going monitoring of these measures is the responsibility of the consent holder. It is recommended that you discuss any potential measures with the Council's monitoring officer who will guide you on the most appropriate approach to take. Please contact the Team Leader Compliance Monitoring Central for more details. Alternatively, please refer to Auckland Council Guidance Document GD05, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region.

Seasonal Restriction

- X13. No earthworks and / or streamworks on the site shall be undertaken between 30 April and 1 October in any year, without the prior written approval of the Team Leader Compliance Monitoring Central at least two weeks prior to 30 April. Revegetation/stabilisation is to be completed by 30 April in accordance with measures detailed in GD05 and any amendments to this document.

Streamworks

- X14. Pursuant to section 125 of the RMA, consent LUS [redacted] for works in the streams shall lapse five years after the date it is granted unless the consent is given effect to or the Council extends the lapse period.
- X15. Pursuant to section 125 of the RMA, consent LUS [redacted] for structures in the streams shall expire thirty five years after the date it is granted unless the consent is given effect to or the Council extends the lapse period.
- X16. Prior to streamworks commencing, a final streamworks methodology shall be prepared and submitted to the Team Leader Compliance Monitoring Central for written approval. The Streamworks methodology shall be prepared in accordance with GD05 (section G4 Works within a watercourse) and shall detail a specific dam and divert methodology to be implemented for the duration of streamworks.
- X17. Prior to streamworks commencing, the consent holder shall submit a Native Fish Capture and Relocation Plan to the Team Leader Compliance Monitoring Central for written approval. This plan shall detail how native fish will be salvaged prior to reclamation and dewatering of the stream on site and shall include but not be limited to:
- Methodologies to capture fish.
 - Fishing effort and regression model.
 - A qualified ecologist to undertake the capture and relocation.
 - Details of the relocation site including population capacity.
 - Storage and transport measures including prevention of predation and death during capture.
 - Euthanasia methods for diseased or pest species.
- X18. A suitably qualified and experienced ecologist shall conduct the fish capture and relocation as per the approved Native Fish Capture and Relocation Plan and shall be on site during the dewatering process to rescue and relocate any fish still present.
- X19. Stream dewatering shall only be carried out after native fish capture and relocation has been undertaken in accordance with the approved Native Fish Relocation Plan.
- X20. No machinery shall enter the wetted cross section of the bed of any stream. All machinery shall be operated (including maintenance, lubrication and refuelling) in a way, which ensures no hazardous

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substances such as fuel, oil or similar contaminants are discharged. In the event that any discharge occurs, works shall cease immediately, and the discharge shall be mitigated and/or rectified to the satisfaction of the Team Leader Compliance Monitoring Central.

Advice Note:

Refuelling, lubrication and maintenance activities associated with any machinery should be carried out away from any water body with appropriate methods in place so if any spillage does occur that it will be contained and does not enter the water body. If a construction management plan is required under any land use consent, you are advised to include any maintenance / servicing areas as part of that construction management plan.

- X21. Prior to construction of the new stream channel, a final Stream Restoration and Enhancement Plan shall be prepared and submitted to the Team Leader Compliance Monitoring Central. No streamworks activity on the subject site shall commence until confirmation from council is provided that the Stream Restoration and Enhancement Plan is satisfactory. The final Stream Restoration and Enhancement Plan be prepared in accordance with Technical Publication 148, Riparian Zone Management Strategy for the Auckland Region (TP148) and shall include but is not be limited to;
- a. Details of the stream mitigation works that result in:
 - i. At least 171 m and 109.44 m² of constructed stream at the point of impact.
 - ii. Riparian planting along the full length of the newly constructed stream channel to an average width of 10m either side of the channel.
 - b. Site preparation details including timing;
 - c. Pest plant and animal control methodologies;
 - d. Plant species, numbers and densities to be planted;
 - e. Planting methodologies;
 - f. Annual planting maintenance details; and
 - g. Eco-sourcing details.
- X22. Stream restoration and enhancement as outlined within the approved Stream Restoration and Enhancement Plan required under condition **X19** above, shall be implemented and completed by the end of the following planting season (between April and October in the year) following completion of bulk earthworks authorised under this consent and maintained thereafter, in accordance with that plan.
- X23. Following the physical completion of the stream restoration and enhancement works as required by condition **X19**, the consent holder shall have a land covenant prepared under section 108(2)(d) of the RMA covering the legal protection and ongoing maintenance of the new stream channel and planting in perpetuity, for registration on the existing **Certificate of Title at (Sec 4 SO 476652, Hudson Road Warkworth 0984)**.
- A draft copy of the covenant shall be submitted to Auckland Council Team Leader Compliance Monitoring Central for written approval within two months following the completion of the stream restoration and enhancement works, prior to being registered. The covenant shall be registered against the Certificate of Title and a copy of the updated Certificate of Title shall be provided to the Team Leader Compliance Monitoring Central within three months of obtaining Council approval.
- X24. Plant and animal pest management and maintenance measures as required by the Stream Restoration and Enhancement Plan shall be implemented for a period of no less than 5 years or until canopy closure of the riparian planting is achieved. The 5-year period shall commence once all the diversion & riparian planting works have been completed.

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- X25. Written confirmation in the form of a Stream Restoration and Enhancement Completion Report shall be provided to the Team Leader Compliance Monitoring Central, within **30 days** of the stream restoration and enhancement work being implemented and completed.
- X26. Upon 5 years following permanent diversion of stream flow to the new stream channel and completion of the riparian planting, a Stream Ecological Valuation (SEV) shall be undertaken to confirm whether the new stream has reached the predicted stream ecological value of 0.545 for the lower reach and 0.465 for the upper reach. SEV results shall be incorporated into a Stream Ecological Report (SER) and provided to Council within 2 months following the SEV being undertaken. The SER shall include (but not be limited to) confirmation as to whether the streams have met their predicted ecological value.
- X27. Where the monitoring concludes that the SEV value of the constructed stream has not reached the predicted SEV value, a Further Mitigation and Offset Works Plan shall be prepared, to the satisfaction of the Team Leader Compliance Monitoring Central within 2 months following the SEV required by condition **X24** being undertaken. The plan shall propose repair or improvement of mitigation and offset works along the constructed stream reach, provision to update the plan as required following further monitoring at two yearly intervals until such time that the requirements of the Further Mitigation and Offset Works Plan and the predicted SEV scores of 0.545 for the lower reach and 0.465 for the upper reach are achieved.
- X28. The consent holder shall implement any additional works identified by the Further Mitigation and Offset Works Plan within 6 months following the approval by the Team Leader Northern Monitoring or during the next planting season (whichever is appropriate to the measures adopted).
- X29. The consent holder shall ensure that the three upper weirs in the stream bed provide and maintain mussel spat ropes in order to provide for on-going fish passage for climbing species. Fish passage for climbing species shall be maintained throughout the duration of this consent once the works have been completed.

Advice note: *Spat ropes require on-going maintenance which should be provided for in any stormwater maintenance plans to be maintained throughout the life of the structures.*

Advice note: *The Department of Conservation must be notified of the intention to erect or place any structure likely to impede fish passage. This includes, weirs, culverts, fords, dam or diversion structures (Part VI of the Freshwater Fisheries Regulations 1983).*

REVIEW

Consent:

Address: 223 Kohimarama Rd, Kohimarama

Memo prepared by:

Christina Bloom



Specialist - Earth and Stream works, Earth, Streams and Trees Team, Specialist Unit, Resource Consents

Date:

Technical memo reviewed and approved for release by:

Fiona Harte

Senior Specialist - Earth, Streams and Trees Team, Specialist Unit, Resource Consents

Date:

Consent:

Address: 223 Kohimarama Rd, Kohimarama

Technical memo – Specialist Unit

To: Planner Central Resource Consenting

From: Nicola Jones, Specialist- Water Allocation

Date: 1 April 2020

1.0 APPLICATION DESCRIPTION

Application and property details

Applicant's Name: Ryman Healthcare Limited

Activity type: Take and use groundwater

Purpose description: A new application to take and use groundwater from the Auckland Isthmus Waitemata sub-aquifer for irrigation of amenity gardens.

Service centre application number: BUN60353138 and WAT60353162

Site address: 223 Kohimarama Road, Kohimarama

2.0 PROPOSAL, BACKGROUND AND AQUIFER DESCRIPTION

2.1 Proposal

An application to take and use 117 m³/day and 12,090 m³/year for the first five years of consent followed by 90m³/day and 9,300m³/year of groundwater from the Auckland Isthmus Waitemata aquifer for irrigation of amenity gardens.

The site is to hold a proposed comprehensive care retirement village that covers 3.122ha of land with 1.46ha as proposed amenity planting. Proposed buildings on site will consist of a single 6 level main building, three 5 level apartment buildings, two 3 level apartment buildings and a shared basement car park. The land is to be terraced with amenity planting surrounding buildings and also in designated amenity areas. A bore is proposed to supply the groundwater sought in this application. A staged consent is sought as the water requirements are greater to establish amenity planting, which will then be reduced to maintain the planted areas on site.

2.2 Aquifer description and availability

(a) Auckland Isthmus Waitemata aquifer water availability

The regional Waitemata aquifer has been divided into smaller management areas. The location of the proposed site falls above the Auckland Isthmus Waitemata aquifer. The Auckland Isthmus Waitemata aquifer is not a high use water management area.

Waitemata aquifer generally comprises bedded sandstone, silty sandstone, silt and occasional mudstones. Water yields within this aquifer are variable and range from 30 to 200m³/day. The availability of the aquifer has been calculated at 1,302,001m³/year which is available for allocation.

(b) Council RIMU model of S14(3)(b) water takes

The unconsented nature of RMA S14(3)(b) water takes means that no primary dataset exists to give extraction volume information for the Auckland region. To generate extraction volumes a computer-based model has been developed that utilizes bore location/type information, land use types, census information, rating information and aquifer geology. This geospatially enabled model allows the input dataset to be filtered, merged and aggregated to build a picture of the unconsented water takes across Auckland. This model generates estimated daily/annual takes for Auckland's aquifers.

The amount of water taken pursuant to S14(3)(b) calculated for the Auckland Isthmus Waitemata aquifer in version 2 of the RIMU's draft Auckland Council's S14(3)(b) Water Takes Model is 6,657m³/year. The model outputs do not provide individual values for animal drinking and domestic use.

(c) Allocation from the Auckland Isthmus Waitemata aquifer

Based on RIMU calculations of section 14 (3)(b), allocation for domestic and stock drinking purposes can be considered 6,657m³/year.

Availability and current consent allocations for the Auckland Isthmus Waitemata aquifer is set out in Table 1 below.

Water Availability Auckland Isthmus Waitemata aquifer is: 1,302,001m³/year	
Total water demand	
Issued take consents:	190,250 m ³ /year
Permitted Activity Takes	70,000 m ³ /year
S14 domestic and animal drinking water	6,657 m ³ /year
Applications	12,090 m ³ /year

Total water demand	278,997 m ³ /year
Remaining availability	1,023,004 m³/year

Table 1 Availability and allocation for the Auckland Isthmus Waitemata aquifers

3 REASON FOR CONSENT – WATER TAKE

3.1 Reasons for consent

Consent is required under the provisions of the AUP(OP) Rule E7.4 (A26).

The taking of ground water is discretionary activity.

3.2 Other activities considered

There are other resource consents required, other than this water permit, as described in the AEE section 4.

4 TECHNICAL ASSESSMENT OF APPLICATION AND EFFECTS

4.1 Assessment of Permitted baseline

The relevant permitted baseline is that provided by AUP(OP) Rule E7.4 (A2): “The taking and use of no more than 5m³/day, when averaged over any consecutive 20 day period is a permitted activity, subject to conditions”.

The 117 m³/day application maximum daily quantity is for more than 15 times the Permitted Activity. Potential interference effects are proportional to rate of take.

In this case the proposal has actual and potential effects of a different scale to an activity that could be undertaken as a permitted activity and hence the permitted baseline does not provide a useful comparison for the purpose of discounting effects.

4.2 Assessment of application quantity

(a) Water Quantities requested by applicant

The proposed buildings will be linked up to municipal supply of water and therefore the groundwater allocation sought will not be encompassed. The proposed take is for irrigation of amenity gardens in the outdoor spaces surrounding the proposed buildings. To establish this planting the applicant has proposed an increased allocation for the first 5 years of establishment which will then be lowered to account for ongoing maintenance irrigation of the established planting.

While the site area is 3.122ha, the total area requiring amenity irrigation is 1.46ha. Based on other water usage by the applicant in previous consents for the same water use purpose, predicted water use rates have been established to surmise how

much water is needed for the site. Establishment of planting requires more water usage which is why a staged consent has been proposed to establish the planting initially. By these calculations 117m³/water/day – 12090m³/water/year is proposed for the first five years as an establishment period of growth followed by 90m³/water/day and 9300m³/water/year thereafter.

The irrigation equipment for the site is aimed at efficient water use. Methods for this include only operating equipment at night, shutting off irrigation in periods during and after rain and using sprinkler heads with low application rates. By taking these measures best practice for water efficiency can be maintained and promoted. The requested water volumes are reasonable for the land use type and method of application.

In the light of the detailed information presented, I consider that the applicant has made a reasonable assessment and the proposed take is consistent with efficient allocation and use (E2.3(4)(a)(ii)).

Based on this information, the proposed bore should be capable of extracting the quantity applied for (E2.3(7)(g)).

4.3 Assessment of effects on the environment

Aquifer-wide issues of recharge to other aquifers, effects on surface water, and saline intrusion were addressed in the setting of the availability in the AUP(OP) discussed in section 2.3(a) above. Potential cumulative effects are addressed in the setting of the groundwater availability.

However, generally there is potential for local adverse effects if a water take is in proximity to the coast, streams or wetlands, and for a take to produce leakage from overlying compressible sediments and have effects on settlement sensitive structures nearby.

These matters are addressed here in the same order as in the AUP(OP) policy E2.3 (7).

Taking is within water availabilities in AUP(OP) Appendix 3, Table 1

As described in section 2.3 above, the proposed take is within the water availability for the aquifer.

Recharge of other aquifers

The provided groundwater report states “There is only one aquifer encountered below the Site, the regional Waitematā aquifer within the ECBF. The ECBF is interpreted to overlie basement greywacke. However, the greywacke is not considered an aquifer given its low permeability and we are not aware of any groundwater takes from the greywacke basement in the Central Auckland area.

Recharge to the ECBF rocks occurs on a regional scale through rainfall, which will not be inhibited by a groundwater take at a depth of 100 m below ground surface. Therefore, recharge to the Waitematā aquifer will be maintained.”

I concur. The location of the site in relation to the underlying geology limits the connectivity between aquifers and the aquifer recharge will be maintained.

Aquifer consolidation,

The provided groundwater report states “The static water level in the Waitematā aquifer is up to 10 m bgl. Given the stiffness of the ECBF rock, the amount of settlement caused at a distance of 50 m from the pumping bore, by pumping for 212 days, is assessed as negligible and will be mitigated by the rebound in groundwater levels expected during the winter. Our evaluation is that the effects of shrinking and cracking of drying residual soils overlying the ECBF rock during a typical summer and rewetting in the following winter may obscure observation of this settlement near the end of the pumping period. We do not expect that ground settlement caused by pumping drawdowns will impact any buildings, structures or services within the vicinity of the bore.”

I concur. The nature of the geology in this location is such that it provides a rigid layering that restricts the effects of drawdown on ground movement and land stability. The depth, low vertical permeability and consolidated nature of the geology does not present a risk of subsidence or aquifer consolidation.

Potential effects on shallow groundwater and surface water

The provided groundwater report states “Groundwater will be taken from a depth of at least 100 m bgl within the Waitematā aquifer. Given the layering within the Waitematā aquifer, which generally comprises interbedded sandstones and finer grained rocks, the pumping of groundwater at depth is not expected to be observed in the shallow groundwater and surface water bodies. Therefore, the effect of pumping from the Waitematā aquifer on shallow groundwater and surface water resources is considered negligible.”

I concur. The depth of the proposed bore limits the effects on shallow groundwater and surface water in the area.

Potential for saltwater intrusion

The provided groundwater report states “Saline intrusion occurs when groundwater in an aquifer near the coast is replaced by seawater from the ocean. The Ghyben-Herzberg relation¹³ predicts that the depth below sea level to the saline interface is approximately 40 times the height of the freshwater table above sea level. This height is based on the assumption that the density of freshwater is 1,000 kg/m³ and 1,025 kg/m³ for seawater.

The proposed bore is located at an approximate elevation of 31 m above mean sea level (amsl) and the deepest measured static groundwater level in the unweathered ECBF (Waitematā aquifer) at the Site is approximately 10 m bgl. The nearest saltwater body, the Orakei Basin, is located approximately 2 km west of the centre of the Site.

By applying the simplified Ghyben-Herzberg approximation: $z = 40h$, where z is the depth to the sea water interface and h is the head of water above mean sea level (21 m in this case), we estimate the sea water interface would be approximately 840 m below mean sea level (bmsl). Based on this assessment, the effect of saline intrusion at the proposed borehole is considered negligible.”

I concur.

4.4 Assessment of effects on other lawful bore water takes

An assessment of interference effects calculates remaining pump submergence in neighbouring bores based on three components: the pump submergence in the neighbouring bore (determined by pump depth and natural static water level in the bore), the in-well drawdown in the neighbouring bore due to its own pumping, and the interference water level drawdown produced in the neighbouring bore from the applicant’s proposed pumping.

There is one permitted activity in the vicinity of the proposed take site at Kohimarama Bowling club approximately 1.2km away. The groundwater report states “The drawdown effect on the neighbouring bore was estimated using the Theis equation¹⁴ and the following assumptions:

- The aquifer parameters are constant across the local area;
- The seasonal water level variation is 2 m;
- The bore will penetrate the same aquifer as the Bowling Club bore;
- The bore will be of similar depth as the Bowling Club bore;
- The drawdown in the Bowling Club bore from its own pumping has been determined from the discharge test reported in the driller’s log form¹⁵ for the Bowling Club bore and
- The maximum proposed take will be approximately 117 m³/day for 212 days per year, for the first five years (approximately 0.66 L/s).

The aquifer transmissivity value used in this assessment of effects is a conservative value from published data for the Waitematā aquifer of 1 m²/day, and we have used a storativity of 0.0001 from the published data, assuming the aquifer is confined.

The maximum projected drawdown from the assumed abstraction in the Ryman irrigation bore, after 212 days of continuous abstraction at a rate of 0.66 L/s, may result in an additional drawdown of 6.2 m in the bowling club bore, as shown in Table 7.1. While this interference drawdown represents a reduction in the available drawdown in the bowling club bore of approximately 3%, we estimate that approximately 112 m of available drawdown remains in the Bowling Club bore after taking into account the assumed cumulative drawdown effects. This means that the

Bowling Club will still be able to obtain its lawfully authorised supply providing it has a suitably constructed bore. After the first five years of irrigation at the Site, the groundwater take will be reduced to approximately 90 m³/day, which will reduce the drawdown effect on the Bowling Club bore.”

I concur that the applicant’s proposed water take will not cause adverse interference effects on neighbouring bores to the extent their owners are prevented from exercising their lawfully established water takes (E2.3(7)(e)). The reduction of the allocated water take after five years will also reduce the effects of drawdown.

4.5 Proposed monitoring of the activity

Proposed monitoring by the applicant includes:

- Provision at the top of the bore for water level measurements to be made so that a probe can be lowered vertically into the bore between the riser tube and casing to measure the static water level in the bore;
- If required by Council notification, make provision at or close to the top of the bore for water quality sampling for laboratory analysis;
 - Water meter installation and verification of meter accuracy;
 - Water meter readings taken at weekly intervals either:
 - Before pumping starts for a day; or
 - At the end of pumping for a day; and
- The date and the water meter reading to be recorded and supplied to the Council in accordance with any reporting conditions.

Recommended conditions require the applicant to maintain a water meter located on the bore pump to allow verification of compliance with both the daily and annual water take quantities, and require periodic verification of meter accuracy, and provision of water meter records to Council.

4.6 Conclusions

The proposed water requirements of 117 m³/day and 12,090 m³/year for the first five years of consent and 90m³/day and 9,300m³/year thereafter are consistent with the intended use. Sufficient water is available from the aquifer for the proposed allocation.

Overall, for the reasons discussed above, the actual and potential adverse effects of the taking of groundwater have been assessed as less than minor. This conclusion is based on the conclusions drawn in the applicant’s assessment of effects and assumes the proposal will be undertaken in accordance with the application documents, best practice and subject to adherence with the recommended conditions of consent.

5.0 STATUTORY CONSIDERATIONS S104

5.1 Objectives and policies of the AUP(OP)

The AUP(OP) contains objectives and policies relating to the taking, use, damming and diversion of water.

The relevant objectives and policies of the AUP(OP) are contained in chapter B7 - Toitū te whenua, toitū te taiao – Natural resources, Policies B7.4.2 Coastal water, freshwater and geothermal water; Chapter E2 - Water quantity, allocation and use, Policies E2.3 1 to 17 (taking water); Chapter D1 - High Use Aquifer Management Areas Overlay, and Chapter M - Appendix 3 Table 1 Aquifer water availabilities. The relevant regional rules are contained in Chapter E7: Taking, using, damming and diversion of water and drilling.

5.2 Other statutory documents

- National Policy Statement: *Freshwater Management 2014*
- Resource Management Act 1991
- The Resource Management (Measurement and Reporting of Water Takes) Regulations 2010

5.3 Duration and review of consent

The applicant has not specified a duration of consent.

I recommend that the consent be granted for a nominal duration of 15 years, to expire on 31 May 2035 with provision to review the conditions in June 2025 and at intervals of no less than five years thereafter. This recommendation is made in accordance with policy E2.3.17 of the AUP(OP) which provides for the setting of concurrent duration and review dates of consents within a catchment or aquifer.

It is recommended that the consent have provision to review the conditions in 2025. The review condition allows the Council to take into account a range of information, including water availability, alternative water sources; actual and potential water use; groundwater levels; and groundwater quality in determining whether or not the conditions of consent should be changed.

6.0 CONDITIONS

I recommend the following conditions:

Specific conditions groundwater take consent WAT60353162

Activity in accordance with plans

1. The take and use of groundwater from the AUP(OP) Auckland Isthmus Waitemata aquifer from a bore at map reference 1763960 mE 5918658 mN on land legally described as Lot 1 DP 332284 at 223 Kohimarama Road, Kohimarama, for irrigation of amenity garden shall be carried out in accordance with the plans and all information submitted with the application referenced by Council as number WAT60353162.

Term of consent / duration

2. The taking of water permit number WAT60353162 shall expire on 31 May 2035 unless it has lapsed, been surrendered or been cancelled at an earlier date pursuant to the RMA.

Authorised Quantities

3. The abstraction shall comply with the following:
 - a. The total daily abstraction shall not exceed 117 cubic metres for the first five years of consent and 90 cubic metres thereafter.
 - b. The total volume of water abstracted in each 12 month period, commencing 1 June of any year and ending 31 May of the following year, shall not exceed 12,090 cubic metres for the first five years of consent and 9300 cubic metres thereafter.

Installation of water meter:

4. Prior to exercise of this consent, a water meter shall be installed and maintained at the outlet of the pump to the satisfaction of the Team Leader Compliance Monitoring Central. The water meter shall:
 - be fit for the purpose and water it is measuring;
 - measure the volume of water taken, with an accuracy of +/- 5% of the actual volume taken;
 - be tamper-proof and sealed;
 - be installed and maintained in accordance to the manufacturer's specifications.

Verification of Water Meter/device accuracy

5. The water meter shall be verified as accurate by a suitably qualified professional at the following times:
 - Prior to the exercise of this consent;
 - Within 5 working days of the water meter being serviced or replaced;
 - By 30 June of the fifth year from the commencement of consent, and thereafter at five yearly intervals.

The water meter, its verification and evidence of its accuracy shall be in accordance with the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 (or any equivalent regulations that may replace them) and a copy of the verification shall be provided to the Team Leader Compliance Monitoring Central within 10 working days of the meter/devices being verified as accurate.

Bore construction for water level measurements

6. If required in writing by the Team Leader Compliance Monitoring Central, within 20 working days of the requirement, provision at the top of the bore for water level measurements shall be made and maintained so that a probe can be lowered vertically into the bore between the riser tube and casing to measure the static water level in the bore.

Advice Note: Access to the wellhead for water level measurement can be achieved by having an access tube of at least 2 centimetres internal diameter extending from the top of the bore to the submersible pump. In order to keep out foreign matter, the tube should be fitted with an easily removed plug.

Bore construction for sampling

7. If required in writing by the Team Leader Compliance Monitoring Central, within 20 working days of the requirement, provision at the top of the bore for water quality sampling shall be made and maintained so that a sample of water can be taken from the bore for water quality analysis. A tap or hand valve shall be fitted as close to the pump outlet as possible and before the water ends any storage tank or filter. The tap or valve should have at least 0.3 metre clearance above ground level or any other obstruction to allow a sample bottle to be filled.

Water meter readings

8. A water meter reading shall be taken at weekly intervals consistently at one of these times:
 - a) before pumping starts for a day;
 - b) at the end of pumping for a day

The date and the water meter reading shall be recorded and supplied to the council in accordance with the reporting condition below.

Advice Note:

If no water is taken during any period the current meter reading must still be recorded.

Water Reporting

9. The following information shall be entered, at the frequency and date specified, to the council's Water Use Data Management System or to any replacement database identified in writing by the Team Leader Compliance Monitoring North West.

Information	Due Dates for reporting
Water use water meter reading and date	Every 15th day of March, June, September and December

Advice Note:

The web address for council's on-line Water Use Data Management System is:

<http://aklc.hydrotel.co.nz/hydrotel/cgi-bin/WudmsWebServer.cgi>

Your WUDMS customer number is P2650016604, and the password is 1234. An on-line manual explaining how to enter and submit your water readings is available at the web address specified above.

Water Use Efficiency Report

10. A water use efficiency report shall be provided to the Team Leader Compliance Monitoring Central by 15 June 2025 and subsequently at intervals of not more than five years thereafter. The report shall assess the water use over the reporting period against best practice in respect of the efficient use of water for the purpose consented. This report shall include, but not be limited to:
- a. annual summary of water usage (month by month and related to irrigation scheduling);
 - b. reasons why annual water use may have varied from previous years aside from climatic variability (e.g. development of buildings, expansion of amenity planting);
 - c. information demonstrating irrigation equipment and decision making (e.g. soil moisture data, irrigation scheduling, meter accuracy checks, computer control of irrigation) and any changes planned for the coming five years;
 - d. water conservation steps taken (e.g. leak detection).

Review Condition

11. Pursuant to Section 128 of the RMA, the conditions of this consent may be reviewed by the Manager Resource Consents Central at the Consent Holder's cost:
- In June 2025 and subsequently at intervals of not less than five years thereafter in order:
- (a) To deal with any adverse effect on the environment which may arise or potentially arise from the exercise of this consent and which it is appropriate to deal with at a later stage or
 - (b) To vary the quantities, monitoring, operating and reporting requirements and

performance standards in order to take account of information, including the results of previous monitoring and changed environmental knowledge, on: water availability, including alternative water sources; actual and potential water use; groundwater levels; efficiency of water use; groundwater quality; and the relationship of Maori with water.

Advice Note:

Under section 128 of the RMA the conditions of this consent may be reviewed by the Manager Resource Consents Central at the consent holder's cost in the following circumstances:

To provide compliance with rules in any regional plan relating to use of water, water or air quality etc. (refer section 128(1) (b) of the RMA) that have been made operative since the commencement of consent.

To provide compliance with any relevant national environmental standard that has been made since the commencement of consent.

At any time, if it is found that the information made available to the council in the application contained inaccuracies which materially influenced the decision and the effects of the exercise of the consent are such that it is necessary to apply more appropriate conditions.

Memo prepared by:

Nicola Jones




**Specialist Water Allocation
Specialist Unit, Resource Consents**

Date:

3 April 2020

Memo and technical review reviewed and approved for release by:

Andrew Benson



**Team Leader, Coastal and Water Allocation
Specialist Unit, Resource Consents**

Date:

3 April 2020