Resource Management Act 1991

Christchurch City Council

Report / decision to determine notification of a resource consent application

(Sections 95A / 95B)

Application number:	**RMA/2023/3351**
Applicant:	Bowenvale Park Estates Limited
Site address:	169 Bowenvale Avenue
Legal description:	Lot 3 DP 78608
Zone:	
District Plan:	Residential Hills
Proposed Plan Change 14:	Residential Hills
Overlays and map notations:	
District Plan:	Rockfall Management Area 2 Hazard Overlay, Christchurch International Airport Protection Surfaces, Network Waterway, Hill Waterway, Liquefaction Management Area, Remainder of Port Hills and Banks Peninsula Slope Instability Management Area
Proposed Plan Change 14:	Low public transport accessibility, Slope Hazard
Road classification:	Local Road (Bowenvale Avenue)
Activity Status – Subdivision:	Restricted discretionary
Activity Status – Land Use:	Restricted discretionary
Description of application:	13 lot fee simple subdivision, associated earthworks

Proposed activity

The key details of the application are summarised below:

- The application is proposing to subdivide one title into 12 residential allotments and 1 access lot.
- The access lot (Lot 13) will be shared access only and not vested to council.
- The application includes earthworks required for the creation of the shared access, infrastructure, and stormwater drainage. The earthworks include waterways intrusions to construct an access over the hill waterways which are proposed to be piped. The network waterway has been filled in over the years and it is not proposed to restore this.
- A rockfall fence is proposed to be constructed to mitigate any rockfall hazards. The applicant will address future maintenance requirements with conditions. The rockfall fence design will also be confirmed later through the subdivision process.
- The applicant has proposed a lizard management plan to address lizards present on the site.
- There are two hill waterways present on site which are proposed to be piped.

The purpose of this report is to determine whether the application is processed on a non-notified, limited notified, or publicly notified basis, pursuant to Sections 95A and 95B of the Resource Management Act.

Throughout the application I have received letters and emails of interest from the public. Within these letters and emails, questions and concerns have been raised on;

- Ecology
- Servicing
- Flooding
- Transport
- Bowenvale Reserve
- Geotechnical/rockfall mitigation
- Residential amenity (including bins)

I have addressed these questions and concerns throughout my report below.

Description of site and existing environment

The application site and surrounding environment are described in section 1 of the AEE submitted with the application. I adopt the applicant's description.

Activity status

Christchurch District Plan

The site is zoned Residential Hills. Policy 14.2.1.1 provides a summary description of the zone:

"Covers all the living environments that are located on the slopes of the Port Hills from Westmorland in the west to Scarborough in the east. It provides principally for low density residential development that recognises the landscape values of the Port Hills, including opportunities for planting and landscaping, and control of reflectivity of roof finishes in order to blend buildings into the landscape. Provision is made for a range of housing options that will enable a typical family home to be retained, but also provide greater housing stock for dependent relatives, rental accommodation, and homes more suitable for smaller households (including older persons). Provision is also made for a range of appropriate non-residential activities".

Land use rules

The proposal requires resource consent for a restricted discretionary activity under the following rules:

Activity status rule	Standard not met	Reason	Matters of control or discretion	Notification clause
5.6.1.1 RD4	N/A	Earthworks within the Rockfall Management Area 2 is a restricted discretionary activity	5.6.1.6	Shall not publicly or limited notified
5.6.1.1 RD7	N/A	Hazard Mitigation Works within Rockfall Management Area 2.	5.6.1.6	Shall not publicly or limited notified
5.6.1.1 RD26	N/A	Development of new infrastructure and associated earthworks within Rockfall Management Area 2	5.6.1.6	Shall not publicly or limited notified
6.6.4.3 RD1	-	The proposal involves earthworks within 5m of the bank of a network waterway & 10m of the centreline of a hill waterway.	6.6.7.1 Natural hazards 6.6.7.2 Natural values 6.6.7.5 Maintenance access 6.6.7.4 Cultural values	No clause
6.6.5.3 RD2	-	Multiple structures are to be located within 5m of the bank of a network waterway and 10m of the centreline of a hill waterway.	6.6.7.1 Natural hazards 6.6.7.2 Natural values 6.6.7.5 Maintenance access 6.6.7.4 Cultural values	No clause
6.6.5.3 RD2	6.6.5.1 P6 Fences	The rockfall fence is to be built over the hill waterways and cannot maintain the 3m or a 1/3 setback from the waterways.	6.6.7.1 Natural hazards 6.6.7.2 Natural values 6.6.7.5 Maintenance access 6.6.7.4 Cultural values	No clause
7.4.2.3 RD1	7.4.3.7 Access design	A passing bay is not provided every 50m – No formal passing bays are provided and the low profile pedestrian path will provide passing	7.4.4.9 - Vehicle access design.	Must not be limited or publicly notified

Activity status rule	Standard not met	Reason	Matters of control or discretion	Notification clause
		opportunities and right of ways.		
7.4.2.1 RD1	7.4.3.7 Access design	A 6m queue space is not provided – a 0m queue space is proposed.	7.4.4.10 – Queuing spaces	Must not be limited or publicly notified
8.9.2.3 RD1	8.9.2.1 P1 a. Earthworks volume and depth b. Depth of earthworks c. Earthworks gradient	The proposed earthworks will exceed the 20m^3 maximum volume in Table 9) - 800m^3 (approximately) is proposed. The proposed earthworks will be carried out on land with a gradient steeper than 1 in 6.	8.9.4 Matters for discretion: 8.9.4.1 - Nuisance 8.9.4.3 - Land stability 8.9.4.6 - Amenity 8.9.4.7 - Indigenous biodiversity, natural character and landscape features	8.9.1 a. - Must not be publicly notified

For completeness I note:

Waterway: It is brought to the attention of the decision maker that the notification recommendation relies on whether there are hill waterways on the site. It is my opinion that there are two gullys on the site that meet the District Plan definition of hill waterway and it's the applicant's opinion that these gullys are not hill waterways, this is discussed in more detail below in my report. I draw the decision makers to this point, which has implications in the consideration of effects and affected parties (given the matters to which discretion is directed for hill waterways). If it is decided that there are no hill waterways on this site, I will not be considering the Rūnanga to be affected.

Indigenous vegetation: The site contains indigenous vegetation (Cabbage tree, Lemonwood, Lancewood and Poroporo (New Zealand Nightshade)) and the site also contains non-native mature vegetation, some of which has been cleared or may need to be cleared as part of the subdivision works. The site had approximately 5560m^2 of contiguous vegetation (from aerial photos taken in 2023 – see snippet below (figure 1)) prior tree clearing. The Ecology report prepared by Aquatic Ecology Ltd states that the native plant species are only found in the garden surrounding the house or by the southern property boundary which is an area well less than 0.5ha. Poroporo (NZ Nightshade) is abundant over the site however is not a listed species in appendix 9.1.6.6. I consider that vegetation clearance species found in appendix 9.1.6.6 do not meet the minimum occupying area of 5000m^2 and clearance is therefore a permitted activity under 9.1.4.1.1. P4.

Figure 1: Approximate area of contiguous vegetation shown with blue outline equates to approximately 5560m^2

Rockfall fence: Full details over the rockfall fence design has not been provided and whether the fence design will breach further District Plan rules such as recession planes, height or internal boundary setbacks is not known. If this is the case the applicant is advised that separate resource consents will be required, and an advice note to this effect has been added.

Subdivision rules

The proposal requires subdivision consent for a restricted discretionary activity under the following rule(s):

Activity status rule	Standard not met	Reason	Matters of control or discretion	Notification clause
5.5.2 C1	-	Any subdivision which creates a vacant allotment within the Liquefaction Management Area is classified as a controlled activity under Chapter 5	Location, size and design of allotments, structures, roads, access, services or foundations as they relate to the liquefaction hazard; Timing, location, scale and nature of earthworks as they relate to the liquefaction hazard; and Liquefaction hazard remediation methods. Criteria in 5.5.2 C1 b.	Shall not be limited or publicly notified.
5.6.1.1 RD1	-	Subdivision within Rockfall Management Area 2 is classified as a restricted discretionary activity	5.6.1.6 - Slope Instability Management Areas	Must not be limited or publicly notified
5.6.1.1 RD3	-	Any subdivision within the "Remainder of the Port Hills and Banks Peninsula" Slope Instability Management Area is classified as a restricted discretionary activity.	5.6.1.6 - Slope Instability Management Areas	Must not be limited or publicly notified
8.5.1.3 RD2	8.6.3 Access	The access does not comply with the required passing bay every 50m proposed will be 77m and does not meet the required 6m queue space length, 0m queue space is proposed.	8.7.4 - General matters 8.8.2 - Property access	8.4.1.1

Proposed Plan Change 14 Housing and Business Choice

Proposed Plan Change 14 (PC14) was notified on 17 March 2023, and submissions and further submissions have closed. It proposes amendments to the objectives, policies and rules associated with residential development across 'relevant residential zones' in accordance with the Medium Density Residential Standards (MDRS) in Schedule 3A of the RMA (as modified by the sunlight access qualifying matter).

PC14 also includes other residential intensification provisions directed by the National Policy Statement on Urban Development 2020 and seeks to amend the objectives, policies and rules associated with commercial development within and around the central city, suburban commercial centres and planned high frequency and capacity public transport. Additionally, it contains a number of new heritage protection provisions with immediate legal effect.

Planning Matters

The application is proposing to change the application site from semi-rural environment to a fully developed residential area. For direct neighbouring properties and users of the locality, this will create a change in outlook and activity in the area. Notwithstanding the application site is zoned for residential use therefore it is generally anticipated that residential activities will be established in this area subject to address other provisions of the District Plan. I note that residential activity could be established prior to any subdivision application taking place. Residential amenity will be discussed further in the assessment below.

National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES)
The NES controls soil disturbance on land where an activity on the Hazardous Activities and Industries List (HAIL) is being carried out, has been carried out, or is more likely than not to have been carried out.

The NES is not applicable as the proposed soil disturbance and removal does not exceed background levels.

Overall activity status
Overall, the application must be assessed as a restricted discretionary activity.

Written approvals [Sections 95D, 95E(3)(a)]

No written approvals have been provided with the application.

PUBLIC NOTIFICATION TESTS [Section 95A]

Section 95A sets out the steps that must be followed to determine whether public notification is required:

Step 1: Mandatory notification – section 95A(3)	
Has the applicant requested that the application be publicly notified?	**No**
Is public notification required under s95C (following a request for further information or commissioning of report)?	**No**
Is the application made jointly with an application to exchange reserve land?	**No**

Public notification is not mandatory under this section.

Step 2: If not required by Step 1, notification is precluded if any of the following apply – section 95A(5)	
A rule or NES precludes public notification for all aspects of the application	**No**
The application is a controlled activity	**No**
The application is a boundary activity	**No**

Public notification is not precluded under this section as it is a restricted discretionary activity

Step 3: Notification required in certain circumstances if not precluded by Step 2 – section 95A(8)	
Does a rule or NES require public notification?	**No**
Will the activity have, or is it likely to have, adverse effects on the environment that are more than minor? (discussed below)	**No**

Assessment of effects on the environment

When assessing whether the adverse effects on the environment will be, or are likely to be, more than minor, any effects on the owners and occupiers of the application site and adjacent properties must be disregarded pursuant to section 95D(a). Accordingly, this part of my assessment focuses on the wider environment beyond the application site and adjacent properties.

As a restricted discretionary activity, the Council's assessment of this proposal is restricted to the matters of discretion listed in the above tables. Guidance as to the effects that require consideration is contained in the relevant objectives and policies, and any associated matters of discretion or control.

In the context of this planning framework, I consider that the potential adverse effects of the activity relate to Subdivision Design, Natural Hazards, Earthworks, Cultural Values and Ecology.

Subdivision Design
The suitability of subdivision is dependent on the design of the subdivision including but not limited to;

- Roading and accesses to proposed allotments and how they correlate with the adjoining transport networks
- Servicing and infrastructure proposed and whether they are appropriate
- Open spaces and reserves proposed and whether any natural and cultural values are established/existing on site;
- Whether natural hazards can be mitigated;

- Whether the subdivision design overall is appropriate.

In terms of allotment design, I note the following:

- The allotment sizes are of a sufficient area and dimension for the Residential Hills Zoning. There is a mixture of allotment sizes in the locality ranging from 700 to over 765m^2. I therefor consider the allotments to be keeping with the locality.
- Building platforms have not been shown on the lots, however a mock up subdivision plan showing approximate building locations has been provided.
- The allotments have not been shaped around the natural topography rather engineering techniques such as rockfall fences and specific foundation design will be used where building/gaining vehicle access over natural gullies on the site. Water from the catchment above will be piped. The majority of the design will result in a change in topography due to the infrastructure proposed.
- Easements for the right to drain stormwater have been proposed to manage water from the catchment above.
- The allotments do not adjoin the public road however due to the topography of the site, most of the allotments will overlook the public open space of Bowenvale Reserve Track.
- Natural hazards are discussed further below
- Land contamination has been assessed and concluded that Council don't hold any information that suggests HAIL activities have occurred on site. The historic aerial imagery shows the land has been in scrub or pasture until a dwelling was built at the end of 1990's. Based on this the land is not HAIL therefore the NESCS does not apply.
- Servicing and transport matters are addressed below.
- Cultural matters are further addressed below.

Transport

The applicant has provided updated plans to the access design received 03/04/2024 which increased the pedestrian access to 1.5m in width and the vehicle formed width to 4m, complying with the minimum formed width requirements of the District Plan. The additional information confirmed that the pedestrian path will be low profile or cut-down kerb to allow for temporary vehicle movement over this space. The intention of this is to provide additional width for vehicle passing and turning manoeuvres. This dual purpose design allows enough space for vehicles to both enter and egress the site at the vehicle crossing if this situation arising. If additional space is required for passing vehicles, the three right of ways can also be used a temporary passing bay, this has been formalised with a condition. I note that if a pedestrian, both an entering vehicle and egressing car were to arrive at the vehicle crossing at the same time, there could be a queuing conflict, placing a vehicle within the road corridor for a moment while the vehicle egressing from the site would move into the road corridor and allow traffic movement to flow again. I do consider this scenario unlikely given it is 12 Lots being proposed and if there is conflict within the road corridor, this would only be for a few moments. I acknowledge that there are carparks along the west of Bowenvale Avenue which can be busy, however given the residential nature and the low speed vehicles would be travelling, safety effects on the road corridor are considered less than minor and no issues were raised by Councils Transport Network Planner Peter Rodgers.

The application has been reviewed by Council's Transport Network Planner Peter Rodgers. Mr Rodgers does not have any concern over the proposal. Conditions are required regarding the access detail design.

Overall, the roading and access infrastructure (in terms of design and location) proposed on the site is considered appropriate subject to approval at detailed design stage.

Concerns have been raised by members of the public that Bowenvale Avenue is currently not of a sufficient size for the proposed increase of residential allotments on the road. This includes speed control, delays and queuing and the existing design of the intersection of Centaurus Road and Bowenvale Avenue and climate change effects. Members of the public has recommended upgrades to Bowenvale Avenue including speed slowing, intersection upgrades at Centaurus Road, inclusion of a cycleway and a public transport route. I consider the matters raised by the members of the public to be sufficiently addressed due to the following reasons:

- As a restricted discretionary activity, I am restricted in my discretion and these concerns do fall outside of scope of this consent due to the site being zoned for residential development and the proposed lots meeting the anticipated density requirements.
- These matters within the transport corridor lie outside the scope of the subject application. Any traffic calming, speed reductions (etc) would be a council matter to address outside the resource consent process. This application cannot consider further upgrade of Bowenvale Avenue as the lots meet the density anticipated for in the District Plan.
- While there isn't a separated cycle way along Bowenvale Avenue, the width of the existing formation provides sufficient space for shared use of the road.
- While the proposal does not include a road, the proposal does provide for access for vehicles, pedestrians and cyclists to the sites via private shared access. While it may not ideal to increase the opportunity for private vehicles to occur at the end of Bowenvale Avenue, this decision lies with the consumer and cannot not be fully presumed. The

application has achieved the intention of the District Plan and s106 to provide legal and physical access to new residential allotments.

- Concerns over the parking pressure at the end of Bowenvale Avenue has been raised from the Public, particularly around where future occupants or visitors to the future dwellings will park, given the demand for parking in this location. Bowenvale Avenue is a public space and the space within the road corridor is on a first come first serve basis. The District Plan does not require car parking and if future occupants require off street parking, this decision will lie with future occupiers.
- The Bowenvale Reserve access adjoining by the proposed shared access is for reserve access only, this has not been mapped as a paper road. It is not anticipated that Bowenvale Avenue road corridor will be extended into the reserve.
- As a restricted discretionary activity that creates lots the meet the anticipated density of the District Plan. The District Plan allows this density to all use a shared access and to vest this shared access as road, the District Plan would require the access to be a minimum of 16m in road width which the site could not achieve.

I consider there less than minor effects in terms of safety and transport and there no wider effects created by the proposal.

Servicing

The suitability of subdivision is determined as to whether servicing can be achieved on the site. It is noted that no non-compliances in terms of servicing is triggered in this application.

The servicing proposed in this application has been assessed by Council's specialists. In regard to water and sewer the proposal has been accepted by Council's Planning Engineer Alison Tang. Most of the details of servicing are to be confirmed via conditions and the engineering design.

The stormwater servicing has been assessed by Council's Planning Engineer Brian Norton. Mr Norton has provided some commentary in terms of stormwater servicing:

- A condition has been placed to ensure that the stormwater generated from upstream catchments will be appropriately managed. This includes the use of stormwater detention tanks.
- A condition has been agreed which requires the applicant to control discharges from the site into the receiving environment to pre-developed run off rates for all storms up to the critical storm event. Stormwater detention tanks on individual properties are proposed to assist with achieving the required stormwater quantity mitigation. By providing the mitigation required by conditions, Mr. Norton considers that effects of increased run off from within the development and resultant flooding as a result.
- Further conditions have been agreed regarding shared stormwater services and infrastructure that may be required, this includes conditions around the maintenance and operation.
- A condition on earthworks and the potential stormwater effects from this has been proposed.

Both Mr Norton and Ms Tang have recommended conditions which will be further addressed in the s104 assessment. I note the applicant has accepted these as part of the application. I am satisfied that the servicing of the subdivision will not create capacity effects for adjacent properties or wider environment. I consider any servicing effects to be less than minor.

In terms of the concerns raised by members of the public regarding servicing down Bowenvale Avenue and to the sites, I rely on the comments provided by the Three waters team on the current condition of the wastewater network in the locality for Bowenvale Avenue and the stormwater engineering advice:

- In reference to our AAIF programme, the assets in Bowenvale Avenue are not due to be renewed until 2032/33. Unfortunately, Council cannot move the renewal sooner as there are other assets requiring more attention at this stage and the funding is quite limited.
- The Council has very rarely experience mains blockage down in this area and it is considered there are no major issues. A lot of the laterals were replaced in one of Council's Capex projects about 4 years ago (any that had EQ damage etc).
- In regard to concerns over climate change and the likelihood of rainfall '2%' events being more frequent, I consider that the conditions recommended by Mr Norton will address potential concerns, in particular the stormwater design and flood modelling report that will be provided as part of the final engineering design report.
- The community concerns of stormwater runoff from other hard surfaces within each proposed lots and how this is managed, I consider that conditions by Mr Norton will address these concerns. I additionally add that the proposed subdivision density is in accordance with the underlying zone, stormwater run off from hard surfaces will be no greater than what is provided for in the District Plan.

Function of Reserves and effect on users

Concerns have been raised by the public in terms of loss of greenspaces/recreation areas, restriction to Bowenvale valley during construction and after the lots have been built on. The application site is in private ownership and has never had public

access. During construction there will not be limitations to the car parking on Bowenvale Avenue as the entrance of the site is separate to the Bowenvale Reserve Entrance to not impede or block entry for recreational users.

The proposed lot sizes meet the District Plan underlying zoning and the proposed density is anticipated in the District Plan.

Overall I consider effects on the function of the reserve and effect on recreational users are to be less than minor.

Natural Hazards
The site is located within Rockfall Management 2 Hazard Overlay, Liquefaction Management Area and Remainder of Port Hills and Banks Peninsula Slope Instability Management Area. The applicant has submitted the following documentation from Subterra Geotechnical Investigation:

- Rockfall Risk Assessment
- Geotechnical Investigation

The above documentation has been reviewed by Council's Subdivision Engineer Peter Megarry and Senior Geotechnical Engineer (contractor) Zarnaz Mehryar. The summarised comments from the review of the above reports are below

<u>Geotechnical</u>

- Subterra noted that this report is not suitable to accompany a Building Consent application, which will require further investigation and reporting once the nature and layout of the future developments are known.
- Moderate to steep slopes to the east half (19m to 40m) west to east;
- Two large gullies (Gully A and Gully B) transect the upper site; A drain has been dug by the customer which extends part-way towards the base of Gully B.
- the ground had been turned over and as such, it is possible that there could be signs of instability which have been obscured.
- Up to 0.55m topsoil over Soft to Hard silt (loess) to > 4.2m.
- There is no indication of the presence of non-engineered fill or subsurface erosion features.
- The major gullies which bisect the upper site are historical features that might pose a geotechnical constraint to the construction of dwellings in the upper slope of the site.
- No info from GNS, the closest mapped area is 950m away. it is considered likely that the depth to groundwater at the site will be in excess of 5m bgl. GW not encountered to 4.2m
- Sufficiently tested to SLS, no liquefied ejecta was evident on or near the site.
- Liquefaction Vulnerability Map shows the site as being partially within an area where liquefaction damage is unlikely (the upper, east part of the site) and partially within an area where liquefaction damage is possible (the lower, west part of the site).
- Likely to be TC1 and Deep drilling and quantitative liquefaction analysis is not warranted for the scope of this project.

<u>Rockfall Mitigation</u>

- The report identified five zones along the upslope (east) boundary of the site where an unacceptable Annual Individual Fatality Risk (AIFR) from rockfall was present. In these areas, suitable rockfall risk mitigation measures will be required prior to development of the site.
- GNS mapped rockfall risk is between AIFR 10-3 and 10-5. A cliff is identified as potential rockfall source to the east of the site.
- The CCC map 'Location of fallen and in-situ boulders and bluffs' shows several fallen boulders and in-situ boulders on the slope east of the site, and several bluff envelopes.
- A walkover of the slope above the site was undertaken and outcrops of rock mapped for modelling purposes. A heavily vegetated area was inaccessible and was conservatively given a similar rock distribution for modelling purposes.
- The report concludes that the calculated AIFR is unacceptable for part of the site in its current form, and recommends mitigation prior to development of the site. Fences or bunds are considered the most appropriate measures, and while the modelling indicates a rockfall energy of up to 1000kJ might be expected during a rockfall event a 2000kJ fence is recommended to provide a higher level of protection. It is also recommended this fence is 4m in height and designed in accordance with the ETAG027 standard. It is considered installation of the fence will reduce AIFR to an acceptable level.
- Removal of source rocks is not considered a practical option due to the thick vegetation.

The applicant has confirmed that a fence will be the most suitable option and further details regarding the rockfall fence design will be provided prior to section 224 certification. The Subterra report concludes that once a rock fence has been installed to

specific requirements, the rockfall risk to the sites will be at an acceptable AIFR level and the sites will be suitable for development, a copy of this conclusion is below.

> ### 7.4 CONCLUSION
> Once a rockfall fence has been installed to the above requirements, we consider that rockfall risk to the site will be at an acceptable AIFR level and that the site will be suitable for development as a residential subdivision. Subterra has produced an additional report[12] including an RMA Section 106 assessment and statement of professional opinion on the suitability of the land for subdivision.

In summary, the assessments provided have not addressed all geotechnical matters therefore at the engineering stage, these matters will need to be addressed in detail. The applicant has adopted Mr Megarry's and Ms Mehryar recommendations as part of the application. While I hold some discomfort that the information is not provided upfront, I note the conditions will be utilised as certification conditions which act as a safe guard should insufficient information be provided which will prevent works or titles being issued. In addition structures such as the rockfall fence are going to require maintenance over time to ensure the allotments are suitable for use in perpetuity and any natural hazard risk will not be increased over time. Conditions are recommended around securing maintenance access via an easement and consent notice's be added to each lot ensuring sufficient maintenance schedule is followed. This will ensure that all owners of the residential allotments are responsible for the maintenance and future costs. This provides further certainty that the rockfall fence will be maintained in perpetuity.

Overall, I consider the geotechnical effects to be less than minor and no wider effects, in reaching this view, I am relying upon conditions of consent being adhered to, which have been agreed by the applicant and form part of the application.

In response to the public's concerns over the soil dispersive characteristics and how the application addresses this. The geotechnical report has identified loess material underlying the site, common across the port hills with a well known erosion risk. The slope stability was assessed and recommendations made on how to manage the risk to slope stability and erosion, with consent conditions reflecting these recommendations including minimising the exposure of this material to water and long term management of stormwater at the site. Geotechnical engineering input will also be required during development of the future lots, this has been secured by consent notices and conditions to the consent.

Flooding

While the site is not located within a flood management area, concerns have been raised by members of the public regarding flow on flooding effects from the subdivision to downstream properties. I rely on the specialist advice received Council's Planning Engineer Brian Norton that subject to the recommended conditions stormwater will be appropriately managed. The development is not considered to create displacement effects in terms of flooding. I adopt Mr Norton's assessment and consider the effects to be less than minor.

Flooding effects of increased runoff from the developed surfaces are addressed by the water quantity mitigation conditions around peak flows and onsite stormwater storage as assessed above by Mr. Norton.

Earthworks

The proposal contains the following earthwork non-compliances:

- Approximately 800m^3 of earthworks are proposed. This consists of excavation of 600m^3 with cuts up to 0.6m and fill of 200m^3 up to 0.6m depth
- The earthworks will be carried out on land steeper than a gradient than 1 in 6
- Works are proposed within the network waterway and hill waterway on the application site[1]
- Earthworks within the Rockfall Management Area 2

I consider the primary effects relate to nuisance which include dust, sedimentation, erosion, change of drainage patterns, effects on groundwater and surface water in which could affect neighbouring properties, roading networks, waterways and the wider environment, land stability, amenity and natural values. The proposed works have the potential to create nuisance effects which include dust, sedimentation, erosion, change of drainage patterns, effects on ground water and surface water in which could affect neighbouring properties, roading networks, waterways and the wider environment. It can also result in land stability issues which can further exacerbate these nuisances. I consider that most nuisance effects can be controlled via conditions. Specialist input has been obtained from Subdivisions Engineer Peter Megarry and Senior Geotechnical Engineer (contractor) Zarnaz Mehryar who subject to a suite of conditions including engineering approval, earthwork effects can be appropriately mitigated.

[1] *This is further addressed in the ecology section of the assessment of effects.*

In terms of amenity and any overlooking from the earthworks proposed, the earthworks will be limited to cut/fill for the pavement construction and drainage, and minimal re-contouring of the lots. The applicant has not identified a breach with fill exceeding the District Plan volumes however this could be up to the maximum of 0.6m. The earthworks including fill is proposed for the right of ways and Lots 1,3, 5, 8, 9 and 12, which are generally central within the site or adjoin Bowenvale Reserve, the exception being Lot 1 which adjoins 163 and 165 Bowenvale Avenue. The earthworks within Lot 1 are annotated to be topsoil cut/fill however as fill levels have not been confirmed and to ensure that overlooking is not and to ensure that fill does not exceed 0.3m in height above ground level along this I have suggested a condition to this effect, which the applicant has accepted. I therefore consider ground levels will not be altered to such a degree that adverse amenity effects on neighbours will arise greater than what the District Plan provides for.

Mr Megarry has proposed stringent conditions for erosion sediment control which the applicant has adopted as part of their application. I consider there is sufficient controls to ensure nuisance effects are minimised. I adopt the specialist advice and consider the effects to be less than minor.

Lizards

The Lizard Expert New Zealand report by Doctor Mandy Tocher provided in the application has identified lizards to be present on the site. This includes the following species:

- Southern Grass Skink

A lizard survey and further commentary has been provided by the applicant (Refer to Lizard Expert New Zealand report). The survey and report did find that a single southern grass skink was found and concludes that given the encounter rate and cover present, it is estimated a population of ≤5 skinks could be present over the property. The application has been reviewed by Council Herpetologist Christine McClure. The applicant is proposing the following summarised conditions:

- Confirmation that a Wildlife Act permit has been obtained from the Department of Conservation and works to comply with the wildlife act permit.
- A Lizard Management Plan detailing how adverse effects to lizards will be appropriately avoided, minimised, mitigated and/or offset or compensated for.

Ms McClure agrees with the assessment above and recommended conditions. I accept Ms McClure's assessment and consider the potential risk to lizards can be mitigated by conditions and the adherence to the conditions will ensure that the development on the population of lizards and adverse impact is minimised. Overall I consider the effects of the proposal to be minor on the wider environment.

Birds

An ecological report which included an assessment on Avifauna was provided by the applicant. The applicant's ecologist site visit identified the following species:

- Bellbird/korimako (native)
- Californian Quail
- Kereru (native)
- Welcome Swallow (native)
- Sparrow
- Silvereye (native)

The report states that a total of six bird species were identified in or around the survey area. Of these, four were native to New Zealand. All native bird species recorded during the survey had conservation statuses of "Not Threatened". Only one of the four native species, the silvereye, was observed landing within the survey area. All others were either heard or flew over the area during the survey. Dense bush surrounding the survey area provided significantly higher quality habitat for indigenous fauna, and two other indigenous fauna species, kereru and bellbird, were observed or heard in this bush habitat. The improvement of native habitat within the development area may encourage these species to utilise this area as habitat. This was reviewed by Ecologist Greg Burrel who agrees with the assessment. The recommendation of native habitat planting is discussed in more detail below under vegetation.

I consider the earthworks will have less than minor effects on native birds given that the subject site was not identified to be a nesting area for native birds and I consider the effects on birds to be no more than minor on the wider environment or persons.

Flora

The proposal contains indigenous vegetation, the full copy of this is below. The report states that the only native flora species considered abundant in the survey area was poroporo (New Zealand nightshade). It has no wetland indicator status, therefore, by default, is assumed to be upland (Clarkson 2013). This species is native to both New Zealand and Australia, and is common throughout New Zealand, with a conservation status of "Not Threatened" (De Lange et al. 2017). Poroporo is known to populate disturbed shrublands, gullies, and forest margins (New Zealand Plant Conservation Network, 2024).

Table 1. Native plant species identified in the survey area.

Scientific Name	Common Name	NZ Conservation Status	Relative abundance in survey area	Comments
Cordyline australis	Cabbage tree	Not Threatened	Rare	Only found in garden surrounding house
Pittosporum eugenioides	Lemonwood	Not Threatened	Common	Planted hedging along the southern property boundary
Pseudopanax crassifolius	Lancewood	Not Threatened	Rare	Only found in garden surrounding house
Solanum laciniatum	Poroporo, New Zealand Nightshade	Not Threatened	Abundant	

All other native plants identified in the survey area were planted in low densities within the garden area, surrounding the residence (Table 1). A dense hedge on the southern boundary of the survey area consisted of mature Pittosporum sp. individuals, dominated by Pittosporum eugenioides.

The applicant has also done vegetation removal of the site previously, the applicant stated that the vegetation removed were the following non-native species poplar (Populus sp.), Eucalyptus sp., and Douglas fir (Pseudotsuga menziesii). Specialist input has been obtained from Council's Ecologist Nicholas Head and Mr Head does not have any concerns and provides the following comment "Taking the report at face value as I haven't surveyed the site myself, I agree with it, in that there is no terrestrial native vegetation present of any concern. I have no reason to believe that their assessment is inaccurate.".

I consider the effects on indigenous vegetation to be minor on the wider environment.

Additional concerns which have not already been addressed above, public concerns have been raised in terms of:

- Adverse effects on bats; The ecology report provided by the applicant has not identified bat populations. Neither has this has been raised by Council ecologists. It is noted the Wildlife Act 1953 protects all native birds, bats, frogs and reptiles from disturbance or destruction unless a permit is obtained from the Department of Conservation. As no bat habitat or species have been identified on the site, I consider the Wildlife Act 1953 is sufficient protection.
- Increase of domestic cats in the locality and negative impact on the Bowenvale valley lizard and bird life. In terms of domestic cats, it is reasonably anticipated that domestic cats will be brought into an area which is zoned Residential. While it is acknowledged the domestic cats can have the potential impact native species, the housing development is not increasing densities beyond those anticipated in the District Plan.
- Nesting native birds onsite; As discussed above, nesting native birds have not been identified onsite.

Overall ecological habitat will be disrupted and impacted by the development, effects directly related to the waterways are discussed below. Notwithstanding the applicant has volunteered native vegetation planting and lizard management plans to mitigate the impact of the development on ecology. The planting mitigation measures will take some time to establish however once established it is considered will overall mitigate the ecological effects. I consider the ecological effects to be minor on the environment but there are no effects on persons, including the owners and occupiers of the adjacent properties.

<u>Waterways</u>

Natural Hazards and values

Council records identify a network waterway on the site known as Dillions Drain. Network waterways are defined as being man-made open channel within the ground, whether containing a continuous flow of water or not. Upon site visit with Ecologist Greg Burrell it was confirmed that there was no channel where Dillions Drain shown and it is concluded that this has been filled in. The timeframe of when this may of happened is not known. I do not consider this to be a mapping error as there is a historical easement for stormwater drainage in this location and where the network waterway feeds through lots to the north (163 , 157B and 157) there is a clear man-made channel that can be seen. I therefore will be considering the effects of filling in this network waterway (Dillions Drain) in my assessment below, while acknowledging that this is historic in nature and its date of filling is not clear.

The site also looked to contain 3 gullys from mapped contours and a hill waterway being Dillions Drain Branch No.1 which was mapped to feed into Dillons Drain (see Figure 2). From the site visit with Mr Burrell, Dillons Drain Branch No.1 and the gully shown as 4 in the image below were not visible. However lines 2 and 3 below were gullys that were visible. In my opinion the lines mapped 2 and 3 and circled in red below, meet the District Plan definition of hill waterway and in my assessment below I consider these effects. I find that lines mapped as 4 and Dillons Drain Branch No.1 do not meet the hill waterway definition and I will not be considering these as hill waterways in my assessment.

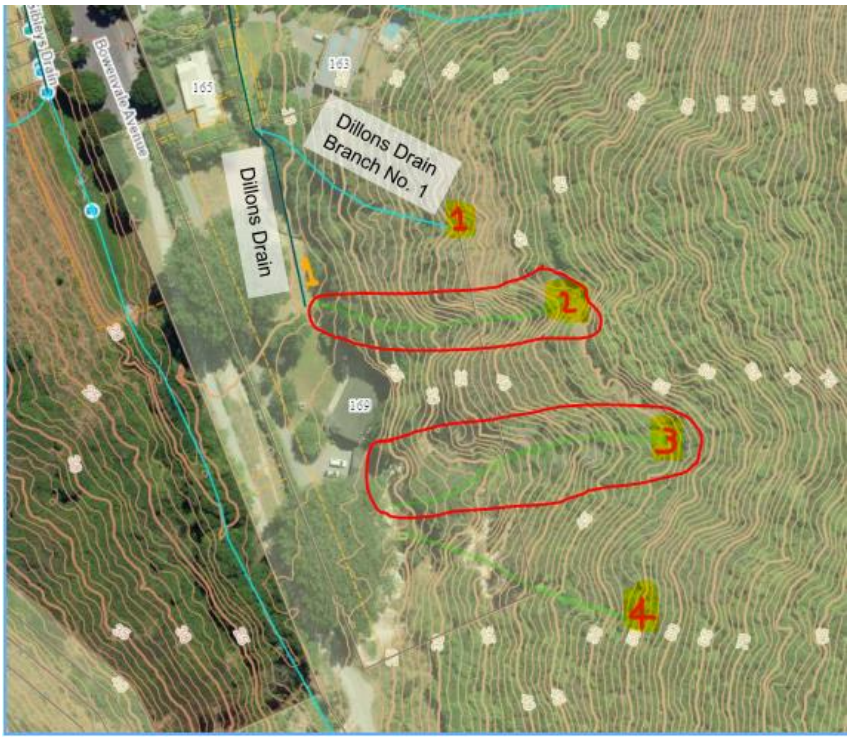

Figure 2: Potential waterways over the site shown with green and blue lines, hill waterways confirmed to be circled in red

For clarity, the applicant disagrees with my interpretation that lines 2 and 3 (circled in red below) are hill waterways and does not consider them to be hill waterways. I draw the decision makers to this point, which has implications in the consideration of effects and affected parties (given the matters to which discretion is directed for hill waterways). The District Plan definition of Hill Waterway is below.

means any waterway, watercourse, gully, swale, open drain, spring or waterfall that:

a. *is not identified or defined in the District Plan under any other water body classification; and*
b. *has an average gradient over a distance of 100 metres of 1 in 50 or steeper, where the gradient is measured from 50 metres upstream and 50 metres downstream from the centre of the waterway where it passes through the site. Where a waterway is less than 100 metres long, the gradient shall be measured over the entire length of the waterway.*

The upstream extremity of a hill waterway is at the point of channelisation of overland sheet flow.

The application is proposing water setback intrusions for earthworks and structures and are proposing to pipe the hill waterways. The network waterway (Dillons Drain) has been filled in as such earthworks and the effects of filling in this drain are being considered. I highlight that the matters of discretion relevant to network waterways does not extend to cultural matters, whereas that for hill waterways does.

The application has been assessed by Council appointed ecologist Greg Burrell. I have summarised his comments (from email correspondence and memorandum dated 30 August 2024):

- Indicators of potential aquatic ecology values include the presence of surface water, unvegetated channels indicative of intermittent water flow, and wetland vegetation. None of these aquatic ecology indicators were present on the site. The gullies may carry rainfall runoff, but any flow would be ephemeral, meaning that the gullies do not flow frequently enough or retain sufficient moisture to support aquatic ecology values. Thus, having visited the site, Mr Burrell agrees with the applicant that there are no aquatic ecology values on the site.
- The ecology report recommends planting a range of native species as part of the development, and Mr Burrell agrees that would be a positive ecological outcome and support this being a condition of consent with erosion and sediment control plan.

The applicant has accepted Mr Burrell recommendations as conditions of consent as part of the application and I accept Mr Burrell's assessment of effects on natural values. In terms of whether the filling of the network waterway causes stormwater displacement and if the hill waterways that are proposed to be piped, may have adverse effects on surface drainage/flood risk. I have discussed with Mr Brian Norton and conditions to manage any potential water displacement will be covered by his recommended conditions, in particular conditions 7.7 and 7.11 (see draft conditions attached as appendix 2). In terms of the piped hill waterways, the applicants submitted ecology report and Ecologist Mr Greg Burrell do not identify any aquatic

ecological values with these waterways. Based on the expert advice, I consider piping the hill waterways will not have adverse effects on natural hazards or ecology values and that the effects are less than minor.

Maintenance access
The hill waterways are internal within the site and are proposed to be piped and protected via easements therefore maintenance will be the responsibility on future site occupiers. The network waterway has historically been filled in and conditions have been volunteered to ensure that stormwater will be appropriately managed.

Cultural Values
The site is not located within a site of cultural significance however due to the intrusion of hill waterway and importance of the port hills to local Rūnanga, the Council have acted on behalf of the application and consulted with the relevant Rūnanga listed below:

• Ngāi Tūāhuriri Rūnanga

The cultural assessment is listed in Appendix 1 of this report. The Kaitiaki are primarily concerned with cumulative effects of urban environments which create incremental losses on cultural values, pollution of waterbodies, the loss of indigenous biodiversity and detrimental impacts on taonga and threatened native species. The Kaitiaki have commented:

"Disregarding waterway setbacks that have been set out to protect the mauri of the wai has led to the significant decline in water quality in the takiwā. This is reflected in the limited activities that mana whenua can conduct in and around waterways, such as mahinga kai. The mauri of the wai must be given priority over development activities to give effect to Te Mana o Te Wai. If protection measures are continually ignored, the mauri of the wai will be lost, which will have a detrimental on all that depend on water and the relationship that mana whenua with water. Subdivision and development can have significant effects on tāngata whenua values. Piping waterways negatively impact tāngata whenua values and the natural character of the landscape and waterways. Therefore, the site plan must be re-designed so that there is no intrusion on the waterway setback and so that the waterways are enhanced and incorporated in the design as features.

Te Ngāi Tūāhuriri Rūnanga are opposed to intrusions and structures within specified waterway setbacks as there may be negative impacts on the mauri (life force) of waterways. The frequent disregard for setbacks undermines this important mechanism for protecting waterways from the adverse effects of development activities.

Te Ngāi Tūāhuriri Rūnanga are therefore opposed to the granting of this resource consent and consider themselves to be an adversely affected party."

As the Kaitiaki are the Mana Whenua of the land, I adopt their assessment. I consider the effects of cultural values to be minor and the Kaitiaki listed above are an affected party. I note that in reaching this position I have placed weight on the fact that the waterways near which works will occur / which will be piped are hill waterways and therefore the matters of discretion require consideration of cultural effects.

Residential Amenity
The application is proposing to change the application site from semi-rural environment to a fully developed residential area. For direct neighbouring properties and users of the locality, this will create a change in outlook and activity in the area. Notwithstanding I consider the residential amenity effects to be less than minor for the following reasons:

- Residential activity is anticipated as it is zoned for residential activities, and it is surrounded by existing residential activity.
- Property values cannot be considered in an assessment of effects.
- School zones, insurance policies and medical centre capacities are not a relevant matter to assess in an assessment of environmental effects.
- While the application site is low transport zone in Plan Change 14, the application has placed no reliance on plan change 14 provisions and is fully reliant on the operative plan.
- Concerns over where the bins will be collected from and if this is via kerb side collection, this may be an issue due to the busy nature at the end of Bowenvale Avenue. If all lots put out two bins each weekly this would put an additional 24 bins for collection from Bowenvale Avenue. This site only adjoins the road via the shared access, so bin placement would likely be on the council grass outside 65 Bowenvale Avenue, and if additional space is required this would likely be on council grass further down. I acknowledge that this would be a clustering of bins however as I am restricted in my discretion, this is not a matter I can consider. The lots are meeting the anticipated lot sizes therefore development of this nature is provided for in the underlying zone and kerbside collection is an entitlement. The application acknowledges that outside the subdivision application there is a Waste Management and Minimisation Bylaw 2023 that the proposal will need to comply with, I have added an advice note to this effect.

- Noise during construction will need to comply with the District Plan requirements. Construction vehicles during construction phase on each lot will need to be located within the sites boundaries or comply with the transport corridor parking requirements. If future development plans within each lot create a non-compliance with the District Plan then effects will be assessed through a resource consent application. Construction works related to this subdivision and possible effects within the road corridor will be assessed through the traffic management plan that is a condition.

Overall, I find the residential amenity to be in keeping with what is anticipated through the District Plan.

Conclusion

Overall, I am satisfied that adverse effects on the environment will be no more than minor.

Step 4: Relevant to all applications that don't already require notification – section 95A(9)	
Do special circumstances exist that warrant the application being publicly notified?	**No**

I do not consider there any special circumstances that warrant the application being publicly notified.

Conclusion on public notification

Having evaluated the application against the provisions of section 95A, my conclusion is that the application **must not be publicly notified**.

LIMITED NOTIFICATION TESTS [Section 95B]

Where an application does not need to be publicly notified, section 95B sets out the steps that must be followed to determine whether limited notification is required.

Step 1: Certain affected groups/persons must be notified – sections 95B(2) and (3)	
Are there any affected protected customary rights groups or customary marine title groups?	**No**
If the activity will be on, adjacent to, or might affect land subject to a statutory acknowledgement, is there an affected person in this regard?	**No**

Section 3 of the Ngāi Tahu Claims Settlement (Resource Management Consent Notification) Regulations 1999 requires that Council must forward to Te Rūnanga o Ngāi Tahu a summary of every resource consent application for activities within, adjacent to, or impacting directly on a statutory area. Pursuant to section 208 of the Ngāi Tahu Claims Settlement Act 1998 Council must have regard to the statutory acknowledgement relating to a statutory area in forming an opinion in accordance with sections 93 to 94C (now sections 95B(3) to 95E) of the RMA as to whether Te Rūnanga o Ngāi Tahu is a person who may be adversely affected by the granting of a resource consent for such activities.

Te Rūnanga o Ngāi Tahu is not considered to be an affected person.

Step 2: Preclusions to limited notification – section 95B(6)	
Does a rule or NES preclude limited notification for all aspects of the application?	**No**
Is the application for a land use consent for a controlled activity under the District Plan?	**No**

There are no preclusions to limited notification under this section.

Step 3: Notification of other persons if not precluded by Step 2 – sections 95B(7) and (8) If the answer to either of the questions in Step 2 is Yes, answer N/A here as it is no longer applicable	
For a boundary activity, are there any affected owners of an allotment with an infringed boundary under s95E?	**N/A**
For other activities, are there any affected persons under s95E, i.e. persons on whom the adverse effects are minor or more than minor, and who have not given written approval?	**Yes**

Assessment of affected persons

The statutory context for assessing the adverse effects of this application on the environment is outlined earlier. It is equally relevant to the assessment of affected persons, which extends to include the owners and occupiers of adjacent properties.

For the reasons discussed above, I consider adverse effects on persons to generally be less than minor. This includes the owners and occupiers of the surrounding properties. The exception to this is in relation to cultural effects associated with the works within, and piping of, hill waterways within the application site. In this respect I consider effects on Ngāi Tūāhuriri Rūnanga will be at least minor for the reasons set out above.

Step 4: Relevant to all applications – section 95B(10)	
Do special circumstances exist that warrant notification to any other persons not already identified above (excluding persons assessed under s95E as not being affected)?	**No**

I do not consider there any special circumstances that warrant the application being limited notified.

Conclusion on limited notification

Having evaluated the application against the provisions of section 95B, my conclusion is that the application **must be limited notified** to the affected persons/groups listed above.

RECOMMENDATION

That, for the reasons outlined above, the application **be processed on a limited notified basis** in accordance with sections 95A and 95B of the Resource Management Act 1991, and that it be served on all affected persons identified under section 95E who have not given written approval to the activity (as listed above).

Reported and recommended by: Kelsey Lough – Planner **Date:** 9th December 2024

Decision

That the above recommendation be accepted for the reasons outlined in the report.

☑ I have viewed the application and plans.

☑ I have read the report and accept the conclusions and recommendation.

Decision maker notes

Commissioner:

Name: P G Rogers

Signature: 

Date: 19/12/24

Commissioner:

Name: Hoani Langsbury

Signature: 

Date: 19/12/2024

Appendix 1
Cultural values

Appendix 2

Draft conditions agreed by the applicant

1. Scheme Plan and Staging

1.1 General Survey Plan

The survey plan, when submitted to Council for certification, is to be substantially in accordance with the stamped approved application plan.

1.2 Amalgamations

The following amalgamation condition has been approved by Land Information New Zealand. The condition is to be included in the digital RMA Title Plan dataset.

That Lot 13 hereon (Legal Access) be held as to 12 undivided one -twelfth shares by the owners of Lots 1 to 12 hereon as tenants in common in the said shares and that individual records of title issue

LINZ request No 1929557

1.3 Right of Way Easements (Private Ways)

The rights of way easements as set out on the application plan must be duly granted or reserved.

1.4 Easements in favour of all lots (1-12) must be registered for the first 4.3m of all three right of ways to allow temporary use of these spaces as passing bays. These easements are to be shown in a memorandum on the land transfer plan.

1.5 Service Easements

The service easements as set out on the application plan or required to protect services crossing other lots must be duly granted or reserved.

Easements over adjoining land or in favour of adjoining land are to be shown in a schedule on the Land Transfer Plan. A solicitor's undertaking will be required to ensure that the easements are created on deposit of the plan.

1.6 Easements in Gross – If required

The legal instruments to create the required easements in gross in favour of the Council must be prepared & registered by the Council's solicitor at the consent holder's cost and will be based on the Council's standard easement instrument templates (as appropriate) as determined by the Council's solicitor. The consent holder's solicitor is to contact the Council's solicitor (Anderson Lloyd Lawyers) requesting the preparation and registration of the required easement instruments. Areas which are to be the subject of easements in gross in favour of the Council must not be the subject of any other easements for the same purpose, unless otherwise agreed by Council.

As built plans for the services covered by the easement(s) are to be provided to the Council at Section 223 certification stage.

1.7 Public Utility Sites

Any public utility site and associated rights of way easements and/or service easements required by a network operator are approved provided that they are not within any reserves to vest in the Council.

1.8 Plans for Geodata

The surveyor is to forward a copy of the title plan and survey plan to the Subdivision Planner (that issued the consent), Resource Consents Unit as soon as the plan has been lodged (or earlier if possible) for checking at Land Information New Zealand for entering into the Council GIS system.

2. Quality Assurance

2.1 Asset Design and Construction

All infrastructure assets to be vested in the Council are to be designed and constructed in accordance with the Christchurch City Council's Infrastructure Design Standard (IDS) and the Construction Standard Specifications (CSS).

2.2 Quality Assurance

The design and construction of all assets is to be subject to a project quality system in accordance with Part 3: Quality Assurance of the IDS.

A. Submit a Design Report, Engineering Plans, Erosion and Sedimentation Plans, Environmental Management Plan and Design Certificate complying with clause 3.3.2 to the Subdivision Engineers (Planning Team 1). The Design Report and engineering plans are to provide sufficient detail to confirm compliance with the requirements of the IDS and this consent.

B. Submit a Contract Quality Plan for review by the Council and an Engineer's Review Certificate complying with clause 3.3.3.

Physical works shall not commence until a Council Engineering Officer confirms that the above documentation has been received and accepted.

C. Submit an Engineer's Report and Completion Certificate complying with clause 3.3.4.

An Engineer's Report is a document specific to a project, which describes how the project was managed and administered in compliance with the IDS, the Construction Standard Specifications, the Contract Quality Plan and the resource consent or project brief. It provides background information to the release of the 224(c) certificate.

Note: Part 3 of the IDS sets out the Council's requirements for Quality Assurance. It provides a quality framework within which all assets must be designed and constructed. It also sets out the process for reporting to Council how the works are to be controlled, tested and inspected in order to prove compliance with the relevant standards. It is a requirement of this part of the IDS that certification is provided for design and construction as a pre-requisite for the release of the 224c certificate. The extent of the documentation required should reflect the complexity and/or size of the project.

Note: Compliance with the CCC waste management bylaw and suitable kerbside collection is required to be demonstrated.

In addition to the above, all infrastructure is to be designed to resist the effects associated with earthquake induced liquefied soils. All liquefaction hazard mitigation shall be designed for a 1 in 25 year return period serviceability limit seismic design event and a 1 in 500 year return period ultimate limit state seismic design event as defined in NZS1170.5.2004.

2.3 Prior to the commencement of physical works on site, the Consent Holder must submit to the Council's Planning Team - Subdivision Engineers a Contract Quality Plan and supporting Engineer's Review Certificate, complying with clause 3.3.3 of the IDS, for review and acceptance by Council under Clause 2.11 of the IDS 2022.

2.4 Prior to the issue of certification pursuant to section 224(c) of the Resource Management Act, the Consent Holder must submit to the Planning Team - Subdivision Engineers an Engineer's Report complying with clause 3.3.3 of the IDS and an Engineer's Completion Certificate complying with clause 3.3.4 of the IDS for review and acceptance under clause 2.12 of the IDS 2022. The Engineer's Report must provide sufficient detail to confirm compliance with the requirements of the IDS, the CSS and this consent, including compliance with consent conditions requiring mitigation measures with respect to rockfall risk.

Advice Note: Part 3 of the IDS sets out the Council's requirements for Quality Assurance. It provides a quality framework within which all assets must be designed and constructed. It also sets out the process for reporting to Council how the works are to be controlled, tested and inspected in order to prove compliance with the relevant standards. It is a requirement of this part of the IDS that certification is provided for design and construction as a pre-requisite for the release of the 224c certificate. The extent of the documentation required should reflect the complexity and/or size of the project.

2.5 Traffic Management

An approved Traffic Management Plan (TMP) must be implemented and no works are to commence until such time as the TMP has been installed. The TMP must be submitted to the Council through the following web portal http://www.myworksites.co.nz.

2.6 Laterals for rear Lots

All private stormwater laterals (serving rear lots) must be installed under a single global Building Consent or Building Act Exemption by a Licensed Certifying Drain Layer and the compliance documents forwarded to Council's Subdivision Team as part of the Section 224c application.

If approved under a building consent, passed 252 (FS and SW drains) mandatory building inspections pursuant to the Building Code and the Code Compliance Certificate is required prior to the issue of the s224 Certificate.

If approved under a Building Act Exemption, a PS3 form and as-builts will be required to be provided and accepted prior to the issue of the s224 Certificate.

2.7 CCTV Inspections

Pipeline CCTV inspections are to be carried out on all gravity pipelines to be vested in compliance with the Council Standard Specifications (CSS): https://www.ccc.govt.nz/consents-and-licences/construction-requirements/construction-standard-specifications/pipeline-cctv-inspections/

2.8 Services As-Built Requirements

As-Built plans and data must be provided for all above and below ground infrastructure and private work in compliance with the Infrastructure Design Standards (IDS): https://www.ccc.govt.nz/consents-and-licences/construction-requirements/infrastructure-design-standards/as-built-survey-and-data-requirements/

Advice Note: this includes RAMM and costing data (GST)

As-Built Plans are to be provided for any easements in gross over pipelines. The plans are to show the position of the pipelines relative to the easements and boundaries.

Advice note: The as-builts must be supplied at the same time as the Engineer's Report, at Practical Completion.

2.9 Earthworks

2.9.1 Earthworks must be carried out in accordance with stamped approved plan page 4.

Erosion and Sediment Control

2.9.2 An Erosion and Sediment Control Plan (ESCP) is to be submitted for review as part of the design report. The ESCP is to include (but is not limited to):

- Site description, i.e., topography, vegetation, soils etc.
- Details of proposed activities.
- A report including the method and time of monitoring to be undertaken.
- A locality map.
- Drawings showing the site, type and location of sediment control measures, onsite catchment boundaries and offsite sources of runoff.
- Drawings and specifications showing the positions of all proposed mitigation areas with supporting calculations if appropriate.

The performance criteria for the ESCP, unless directed by Council through the engineering acceptance process, will be based on Environmental Canterbury's Erosion and Sediment Control Guidelines: http://esccanterbury.co.nz/

The ESCP is to be implemented on site during the subdivision construction phase and no works are to commence until such time as the ESCP has been accepted.

The ESCP is to be designed by a suitably qualified person and a design certificate supplied with the plan. (Use the certificate from Appendix IV of the CCC Infrastructure Design Standard Part 3)

Note: Pursuant to Section 128 of the Resource Management Act 1991 Council reserves the right, during the construction phase, to review this condition to impose further controls in respect to Sedimentation Control and Management

2.9.3 Run-off must be controlled to prevent muddy water flowing, or earth slipping, onto neighbouring properties, legal road (including kerb and channel), or into a river, stream, drain or wetland. Sediment, earth or debris must not fall or collect on land beyond the site or enter the Council's stormwater system. All muddy water must be treated, using at a minimum the erosion and sediment control measures detailed in the site specific Erosion and Sediment Control Plan, prior to discharge to the Council's stormwater system. (Possible sources of contaminants from construction activities include uncontrolled runoff, dewatering, sawcutting and grooving).

Advice note: For the purpose of this condition muddy water is defined as water with a total suspended solid (TSS) content greater than 50mg/L.

2.9.4 The Erosion and Sediment Control Plan must show the positions of all stockpiles on site. Temporary mounds must be grassed or covered to prevent erosion until such time as they are removed. Stockpiles must be placed as far as practicable from internal boundaries adjoining residential properties.

Advice note: Topsoil must not be worked excessively, to protect the integrity of the soil microbes.

2.9.5 All filling and excavation work must be carried out in accordance with an Environmental Management Plan (EMP) which identifies how the environmental risks of the project will be managed. Unless approved as part of a separate Environment Canterbury (ECan) resource consent for stormwater discharge or ECan resource consent for excavation/filling, the EMP will require formal acceptance by Christchurch City Council's Subdivision Engineer (via email to rcmon@ccc.govt.nz) prior to any work starting on site.

2.9.6 The EMP must include an Erosion and Sediment Control Plan (ESCP) covering all earthwork associated with the consented development. The ESCP must be designed by a suitably qualified and experienced professional and a design certificate (Appendix IV in IDS Part 3) supplied with the ESCP for acceptance by the Council under clause 3.8.2 of the IDS at least ten days prior to the works commencing.

2.9.7 The ESCP must follow best practice principles, techniques, inspections and monitoring for erosion and sediment control, and be based on ECan's Erosion and Sediment Control Toolbox for Canterbury http://esccanterbury.co.nz/.

Advice Note: Any changes to the accepted ESCP must be submitted to the Council in writing and the changes accepted by the Subdivision Engineer prior to implementation.

2.9.8 The EMP must include (but is not limited to):

- The identification of environmental risks including erosion, sediment and dust control, spills, wastewater overflows, dewatering, and excavation and disposal of material from contaminated sites;
- A site description, i.e. topography, vegetation, soils, sensitive receptors such as waterways etc;
- Details of proposed activities;
- A locality map;
- Drawings showing the site, type and location of sediment control measures, on-site catchment boundaries and off-site sources of runoff, stockpiles;
- Drawings and specifications showing the positions of all proposed mitigation areas with supporting calculations if appropriate;
- Drawings showing the protection of natural assets and habitats;
- A programme of works including a proposed timeframe and completion date;
- Emergency response and contingency management;
- Procedures for compliance with resource consents and permitted activities;
- Environmental monitoring and auditing, including frequency;
- Corrective action, reporting on solutions and update of the EMP;
- Procedures for training and supervising staff in relation to environmental issues;

- Contact details of key personnel responsible for environmental management and compliance.

Advice note: IDS clause 3.8.2 contains further detail on Environmental Management Plans.

2.9.9 The accepted EMP must be implemented on site over the construction phase. No earthworks may commence on site until:

- The Council has been notified (via email to rcmon@ccc.govt.nz) no less than 3 working days prior to work commencing, of the earthworks start date and the name and details of the site supervisor.
- The contractor has received a copy of all resource consents and relevant permitted activity rules controlling this work
- The works required by the EMP have been installed.
- An Engineering Completion Certificate (IDS – Part 3, Appendix VII), signed by an appropriately qualified and experienced engineer, is completed and presented to Council. This is to certify that the erosion and sediment control measures have been properly installed in accordance with the accepted EMP.

Nuisance

2.9.10 Dust mitigation measures such as water carts, sprinklers or polymers must be used on any exposed areas. The roads to and from the site, and the site entrance and exit, must remain tidy and free of dust and dirt at all times.

2.9.11 All loading and unloading of trucks with excavation or fill material must be carried out within the subject site.

Works within the Legal Road – if required

2.9.12 All work within the legal road, or activities outside the legal road that affect the normal operating conditions of the legal road, cannot start until the consent holder has been issued with the following:

- Approved Works Access Permit (WAP); and
- Approved Traffic Management Plan (TMP).

Advice Note: A Corridor Access Request (CAR) application and TMP can be submitted to the Council through the following web portal http://www.myworksites.co.nz.

Fill

2.9.13 Any change in ground levels must:

- not cause a ponding or drainage nuisance to neighbouring properties through any increase in surface or subsurface drainage volumes or alteration in the location of existing surface drainage path discharge points (with the exception of their complete capture into the piped network).
- not affect the stability of the ground or fences on neighbouring properties.
- maintain existing drainage paths for neighbouring properties.
- the fill above existing ground levels for Lot 1 must not exceed 0.3m in depth for the first 3m of the boundary with 163 and 165 Bowenvale Avenue.

2.9.14 The fill sites must be stripped of vegetation and any topsoil prior to filling. The content of fill must be clean fill (as defined by the Christchurch District Plan – Chapter 2 Definitions).

2.9.15 All filling exceeding 300mm above excavation level must be in accordance with NZS 4431:2022 Engineered fill construction for lightweight structures. At the completion of the work an Engineers Earthfill Report, including a duly completed certificate in the form of Appendix D of NZS 4431, must be submitted to Council at rcmon@ccc.govt.nz for all lots, including utility reserves, within the subdivision that contain filled ground. This report must detail depths, materials, compaction test results and include as-built plans showing the location and depth of fill and a finished level contour plan.

2.9.16 The consent holder shall submit a design report and calculations detailing any filling proposed against existing boundaries and how cross boundary drainage and land stability will be addressed in respect to adjoining properties.

Advice note: This report may be presented as part of the Design Report for the subdivision works under condition 2.2.

2.9.17 Any retaining wall construction must be included and certified as part of the Earthfill Report.

2.9.18 Retaining walls must be located outside of reserve areas. Walls retaining fill must be located within the lot containing that fill.

Final Completion

2.9.19 All disturbed surfaces must be adequately topsoiled and vegetated as soon as possible to limit sediment mobilisation.

2.9.20 Any public road, shared access, footpath, landscaped area or service structure that has been damaged, by the persons involved with the development or vehicles and machinery used in relation to the works under this consent, must be reinstated as specified in the Construction Standard Specifications (CSS) at the expense of the consent holder and to the satisfaction of Council.

2.9.21 Should the Consent Holder cease or abandon work on site for a period longer than 6 weeks, or be required to temporarily halt construction during earthworks, they must first install preventative measures to control sediment discharge / run-off and dust emission, and must thereafter maintain these measures for as long as necessary to prevent sediment discharge or dust emission from the site.

Advice Note: It is the consent holder's responsibility to ensure that the activity, including where carried out by contractors on their behalf, complies with the below district plan standard - failure to do so may result in enforcement action and the need for additional land-use consent:

- *Rule 6.1.6.1.1 P2 - All earthworks related construction activities must meet relevant noise limits in Tables 2 and 3 of NZS 6803:1999 Acoustics - Construction Noise, when measured and assessed in accordance with that standard.*
- *Rule 8.9.2.1 P1 Activity Standard e. - Earthworks involving mechanical or illuminating equipment must not be undertaken outside the hours of 07:00 – 19:00 in a Residential Zone. Between the hours of 07:00 and 19:00, the noise standards in Chapter 6 Rule 6.1.5.2 and the light spill standards at Chapter 6 Rule 6.3.6 both apply.*
- *Earthworks involving soil compaction methods which create vibration must comply with German Standard DIN 4150 1999-02 (Structural Vibration – Effects of Vibration on Structures) and compliance must be certified via a statement of professional opinion provided to the Council (via email to rcmon@ccc.govt.nz) from a suitably qualified and experienced chartered or registered engineer. The statement of professional opinion is to be submitted to Christchurch City Council via rcmon@ccc.govt.nz a minimum of five working days prior to any compacting activities commencing.*

3. **Geotechnical**

3.1 Geotechnical Prior to the request for the section 224 certificate the Consent Holder shall supply a Final Geotechnical Assessment Report on the mitigation measures put in place during the construction phase to reduce natural hazards from rockfall and stormwater. It shall identify/specify any areas to be excluded from development such as setback zones from the rockfall fence. The report shall include a Statement of Professional Opinion on the Suitability of Land for Building Construction, using the template in IDS Part 4 Appendix II

3.2 The detailed design of the rockfall mitigation fence must be reviewed and approved by the applicant's CPEng geotechnical engineer. Design of a Rock fall protection fence must be submitted for approval to the Council prior to section 224 certificate and prior to any application for a building consent can be approved. Any ongoing maintenance for the rockfall mitigation works must be taken into consideration and shall be specifically addressed.

Advice note: Any District Plan non-compliance in regards to rockfall fence design such as recession planes, height and internal boundary setbacks will require separate resource consent.

3.3 Prior to section 224 certificate, the lots with rockfall fences will have a maintenance track physically established, and easement/s are to be shown in a memorandum on the land transfer plan.

3.3.1 Any rockfall barrier will need to be offset from the east site boundary an adequate distance to allow access for maintenance. The minimum access width must be specified by the barrier designer based on what is required for the maintenance work.

3.3.2 Due to the shared nature of the rockfall barriers between the lots, this accessway should form an easement along the east boundary with an appropriate access point.

3.4 A finalised Maintenance and Monitoring Manual for the rockfall protection must be created in accordance in the recommendations of the final geotechnical report supplied in accordance with condition 3.1. The final maintenance and monitoring manual must be provided to Council for acceptance prior to s224 certification.

3.5 The property owner/s must ensure the rockfall fence within their property are maintained in good working order and in accordance with the final maintenance and monitoring manual. A copy of the maintenance and monitoring manual for this development can be requested from Christchurch City Council and any updates to the manual shall be available to Council on request.

This will be an ongoing condition of this consent, secured by consent notice.

3.6 The foundation, retaining wall system and rockfall protection structures shall be subject to specific engineering design, observation and certification by a suitably experienced chartered structural engineer or by an appropriately qualified geotechnical engineer.

3.7 Prior to the commencement of physical works on site, the Consent Holder shall submit to the Planning Team Subdivision Engineers Engineering plans for the proposed stormwater infrastructure and a Design Certificate complying with clause 3.3.2 of the IDS, for review and acceptance.

3.8 Construction of the rockfall protection structure must be undertaken under the supervision of a qualified geotechnical engineer.

3.9 Upon completion of construction of the proposed mitigation work (rockfall protection structures), a confirmation letter must be provided by the applicant's CPEng geotechnical engineer / PEngGeol engineering geologist. The geotechnical engineer must confirm that the undertaken works have been able to attain the protection needed and upon completion of the proposed mitigation/excavation works, the residual risk of the rockfall is within the acceptable limits and lower than 10E-4.

3.10 Backfilling above existing ground level should not be undertaken without specific assessment from a professional geotechnical engineer.

3.11 The earthworks and construction of foundations and retaining walls must be conducted under supervision of a suitably qualified geotechnical engineer.

3.12 For Lots XX, there is a Xm no building setback from the rockfall fence or other features identified in the Final Geotechnical Report. This setback will apply to future structures and earthworks.

Advice note: this consent notice wording will be amended subject to the Geotechnical Completion Report provided prior to s224.

This will be an ongoing condition of this consent, secured by consent notice.

3.13 Any new structure requiring a Building Consent, in terms of Building Act provisions, shall have foundations designed in accordance with the New Zealand Building Code and with reference to the site specific geotechnical reports for this site. Detailed design of the foundations and retaining walls will be reviewed during the process of Building Consent Application.

This will be an ongoing condition of consent, secured by consent notice.

3.14 Any Building Consent Application for the new residential dwellings at this site and as part of the detailed design and, a site specific qualitative and/or quantitative slope stability analysis must be undertaken for each lot within this subdivision. Development of each lot will require site-specific geotechnical investigation, assessment and reporting.

This will be an ongoing condition of this consent, secured by consent notice.

Engineering stormwater

3.15 Stormwater from catchments upstream of the site shall be captured by a system of pipes and secondary flow paths to prevent erosion damage to the lots for all storms up to and including the 2 percent annual exceedance probability storm of 27 hours duration.

3.16 Stormwater run-off shall be captured by cut-off drains on the upslope boundary of lots 2, 4, 6, 7, 10 and 11 and transferred to an approved stormwater outlet. Construction shall be under the supervision of an engineer and as-builts shall be provided prior to 224.

3.17 All concentrated stormwater or collected groundwater shall be discharged in a controlled manner to the Council stormwater network. Engineering plans for these discharges will require formal acceptance by the Subdivision Engineering Section of Council prior to any work starting on site.

4. Servicing Additional Consent Requirements

4.1 The sewer and stormwater work proposed for this subdivision consent must be installed and inspected under a building consent or exemption obtained from the Building Operations Unit. A Code Compliance Certificate to be provided with the 224 request.

https://ccc.govt.nz/consents-and-licences/building-consents/building-consent/apply-for-a-building-consent

4.2 Service Connections (sewer & stormwater) to Council Services in the street are authorised work and must be carried out by a Council authorised drainlayer. This includes all drainage laterals on roads, footpaths and verges that connect the property to public drains.

A list of Council authorised drainlayers is available on request or online at website http://www.ccc.govt.nz/consents-and-licences/construction-requirements/approved-contractors/authorised-drainlayers

5. Water Supply

5.1 The point of water supply for the subdivision shall be the DN100 PVC-u water main in Bowenvale Avenue.

If modeling supported by hydrant flow tests shows there is insufficient pressure from the DN100 PVC-u water main to service this subdivision, the point of supply shall be the DN180 PE100 water main in Bowenvale Avenue, extended as far as required to attain sufficient level of service. Extension of DN180 PE100 shall replace that section of DN100 PVC-u water main.

Advice Note: The length of DN180 PE100 water main extended to service these lots shall replace the parallel existing section of DN100 PVC-u, tying into the remaining section of DN100 PVC-u with an assembly similarly to the existing transition assembly.

5.2 The water supply shall be designed by a suitably qualified person in accordance with the Infrastructure Design Standard and in general accordance with the NZ Fire Service Fire Fighting Water Supplies Code of Practice NZS 4509:2008, subject to Council engineering acceptance. Engineering drawings supported by

hydraulic model outputs shall be sent to the Subdivisions Planning Engineer for Engineering Acceptance by the Water Supply & Wastewater Asset Planning Team prior to the commencement of any physical work.

5.3 The construction of Council vested infrastructure shall be carried out by a Council Approved water supply installer at the expense of the applicant.

5.4 All lots shall be served with a water supply to their boundary. Submains shall be installed to 1m past each lot boundary.

5.5 Any rear lot or lot within a Right of Way shall be serviced by its own DN32 lateral within a shared access. The water supply lateral connections shall be located in an area set aside within the Right of Way and as close as possible to a fire hydrant. Each water supply lateral connection shall be installed with a dummy connection spacer rod in accordance with CSS Part 4, SD 403. An easement for the right to convey water shall be created over the lateral in favor of the lot serviced by the lateral. Laterals shall be installed by a Licensed Certified Plumber and shall not cross the boundary of the net site area of other sites. *Advice Note: This will require a Building Consent or Building Act Exemption.*

5.6 If the water main must be extended into the Jointly Owned Access Lane to comply with the NZ Fire Service Fire Fighting Water Supplies Code of Practice NZS 4509:2008, the water supply lateral connections shall be located in an area set aside within the Right of Way and as close as possible to the terminal fire hydrant. Where water supply mains outside legal roads are vested in Council, a right to convey water in gross easement shall be created over the water connection boxes and new water supply main up to the last hydrant the in favour of the Council.

6. Sewer

6.1 The subdivision shall be serviced by a Gravity Sewer System designed in accordance with Council's Infrastructure Design Standards and Construction Standard Specifications. Engineering drawings supported by hydraulic calculations shall be sent to the Subdivisions Engineer for Engineering Acceptance by the Water Supply & Wastewater Planning Team prior to the commencement of any physical work.

6.2 The approved sanitary sewer outfall for the proposed 12 residential allotments shall be the existing DN150 EW network in Bowenvale Avenue.

6.3 Sanitary sewer laterals shall be laid to at least 600mm inside the net site area of all residential lots at the subdivision stage. The laterals shall be installed at sufficient depth to ensure that adequate fall is available to serve the furthermost part of the lots.

6.4 Where the number of lots exceeds the Building Act drainage discharge requirements for a 100mm private common sewer pipe, a 150mm private common sewer pipe shall be installed.

6.5 Council-owned gravity network sewers in legal road shall be a minimum of 150 mm diameter. Network sewers and connections to network sewers shall be installed by a Council Authorised Drainlayer at the expense of the applicant. Refer to: https://ccc.govt.nz/assets/Documents/Consents-and-Licences/construction-requirements/Authorised-Drainlayer-Register.pdf for a list of authorised drainlayers.

7. Stormwater

7.1 In addition to the below conditions, the stormwater management system to be constructed under this application shall meet the requirements of the Waterways, Wetlands and Drainage Guide (2003, including updates), the Infrastructure Design Standard (IDS 2022) and the Construction Standard Specifications (CSS 2022).

7.2 The consent holder shall demonstrate that authorisation for the discharge of construction and operational phase stormwater has been obtained from Christchurch City Council, otherwise separate resource consent from Canterbury Regional Council shall be obtained.

7.3 The consent holder shall submit an Engineering Design Report for acceptance by the *3 Waters Asset Planning - Stormwater & Waterways* and *Resource Consents* Units. The Engineering Design Report shall demonstrate how the design will meet all of the applicable standards and shall contain all of the plans, specifications and calculations for the design and construction of all stormwater infrastructure systems.

7.4 Stormwater generated from roofs of all buildings shall discharge to stormwater detention tanks. Stormwater runoff generated from residential building roofs shall be captured and held in a detention tank. The minimum tank volume shall be 30,000 litres. The low-level tank outlet shall be fitted with a self-cleaning (Promax Tankguard™ or similar approved) 5.5mm internal diameter orifice and a 100mm diameter high-level overflow pipe, both discharging via a sealed system into the Council stormwater network.

This is an ongoing condition for which a consent notice will be issued.

7.5 The first flush of stormwater runoff generated from hardstand areas within the site shall be collected via channels, sumps, pipes or swales and discharged into a Gross Pollutant Trap (specific device to be approved by the Council Stormwater Planning Engineer) followed by a Stormwater360™ Stormfilter® proprietary treatment device. Both devices shall be vested to Christchurch City Council and shall be protected by easement in gross, if required.

7.6 Safe and adequate access to all public stormwater management and mitigation facilities for operation and maintenance, including sediment removal, shall be provided and designed in accordance with WWDG Sections 6.8 & 6.9.

7.7 Treated stormwater, and stormwater in excess of the Stormwater360™ Stormfilter® system capacity shall discharge into the Council Stormwater network in Bowenvale Avenue or Sibleys Drain.

7.8 Stormwater network systems designed to capture stormwater generated from catchments upstream of the site shall bypass the first flush treatment system without interfering with the treatment system's operation.

7.9 Unless otherwise approved by the Council Stormwater Planning Engineer, the overall stormwater mitigation system shall provide sufficient storage to control peak flows to pre-developed flow rates for all storms up to and including the 2 percent annual exceedance probability storm of 27 hours duration.

7.10 Stormwater laterals shall be laid at least 600mm inside the boundary of all allotments. Unless otherwise approved by the Council Engineer, the laterals are to be laid at sufficient depth to ensure protection and adequate fall is available to serve the furthermost part of the lot.

7.11 Earthworks shall not cause adverse flooding effects on other properties. The consent holder shall provide a report summarizing all measures proposed to avoid, remedy or mitigate any adverse effects of the proposed earthworks. This report shall form part of the Engineering Design Report required below.

7.12 The stormwater management system shall be designed to ensure complete capture and conveyance of all stormwater runoff from all contributing catchments for all rainfall events up to and including the critical two percent annual exceedance probability storm. A combination of primary and secondary conveyance systems may be used to ensure this level of service is achieved.

7.13 A stormwater design and flood modelling report shall be provided for the subdivision which addresses the critical 10%, 2% and 0.5% annual exceedance probability rainfall events in the post-development scenario. This report shall form a part of the Engineering Design Report and shall include (but may not be limited to) the following information in PDF and GIS *.shp file format:

a. A plan showing design ground levels (100mm contours or appropriate) and proposed secondary flow paths.
b. A plan showing the predicted extent of flooding (for flood depths in excess of 100mm) for the critical 2 percent and 0.5 percent annual exceedance probability rainfall events.

c. A plan showing predicted floodwater levels for the critical 2 percent and 0.5 percent annual exceedance probability rainfall events marked at every 10m interval along all overland flow paths.
d. All elevations shall be in Reduced Level, Christchurch Drainage Datum.

7.14 The designer of the stormwater management system shall provide a report which identifies all overland flow paths proposed for storm events that exceed the capacity of the reticulated stormwater network.

Shared Stormwater Services

7.15 This property contains above and/or below-ground shared stormwater systems designed to safely convey stormwater generated from roads, roofs or upstream catchments to downstream stormwater systems. The property owner shall ensure the shared stormwater systems within their property are maintained in good working order and in accordance with the Stormwater Maintenance and Operations Manual. A copy of the Maintenance and Operations Manual for this development can be requested from Christchurch City Council.

This is an ongoing condition for which a consent notice will be issued.

7.16 The consent holder shall provide easement in gross over any public infrastructure located outside of Local Purpose (Utility) Reserves or legal road.

7.17 A Maintenance and Operations manual for all stormwater water management systems shall be provided and shall form part of the *3 Waters Asset Planning - Stormwater & Waterways* and *Resource Consents* Unit acceptance. This manual is to include a description of the activity, the design assumptions, maintenance schedule and monitoring requirements, including any specific requirements for maintenance of private shared stormwater services.

7.18 The consent holder shall provide as-built plans of the stormwater management systems and confirm that they have been constructed in accordance with the approved plans and comply with the IDS, particular Part 3: Quality Assurance and Part 12: As-Builts.

7.19 The consent holder shall operate all stormwater infrastructure to vest into Council for at least 12 months following the issue of the Section 224(c) certificate, after such time Council may accept responsibility for operation and maintenance.

8. Access Construction Standards

8.1 The access (Lot 13) and the three right of ways shall be formed and sealed in accordance with the CCC Infrastructure Design Standard.

8.2 Prior to construction the developer is to submit to the Subdivision Engineers (Planning Team 5) following documentation.

a) A Design Certificate from Appendix IV of the Christchurch Infrastructure Design Standard Part 3 signed by a suitably qualified person stating that the access and all services have been designed in accordance with the consent conditions.

b) A design report and plans in sufficient detail for the access construction and confirmation that connections and outfalls for water supply, stormwater and sanitary sewerage are achievable in accordance with consent conditions, the CSS and the CCC Infrastructure Design Standard. Physical works are not to commence until this information has been received and accepted.

8.3 An engineer's completion report is to be submitted to the Subdivision Engineers (Planning Team 5) as part of the 224 application that includes the following.

a) An Engineer's Completion Certificate from Appendix VII of the Christchurch Infrastructure Design Standard Part 3 signed by a suitably qualified person stating that the access and related services have been constructed in accordance with the consent conditions, the CSS and the CCC Infrastructure Design Standard.
b) A set of as-built drawings of the access and associated drainage.
c) Benkelman Beam Test results (where applicable).
d) For concrete pavements, a drawing showing dimensioned cross-sections is to be provided.
e) Nuclear Density Test results over the kerb and channel sub-base, over "V" channel sub-base (if provided as stormwater solution) and/or over compacted sub-base (AP 40) for a concrete formation

or for any pavers-based hardstanding area (if that is part of the access / parking area / common area / access leg / ROW).

A Subdivision Engineering Officer is to be contacted to arrange an on-site inspection of the work. Inspections will not occur until photographic evidence has been received that all works have been completed.

9. Terrestrial Ecology

9.1 Prior to commencement of works, the consent holder must submit a copy of the DOC wildlife permit to Council or a letter from a suitably qualified person setting out that a wildlife permit is not required.

A DOC wildlife permit (Wildlife Act Authority 1953) may be needed for this site as construction will impact a known population of indigenous lizards.

9.2 All works on site must comply with the conditions of the Wildlife Act permit referenced in condition 10.1 (above).

9.3 Prior to any physical construction works occurring over areas found to provide habitat for indigenous skinks, the Consent Holder will provide the CCC with a Lizard Management Plan detailing how adverse effects to lizards will be appropriately avoided, minimised, mitigated and/or offset or compensated for.

10. Plant Ecology

10.1 Before works commerce onsite, the consent holder shall submit to the Council a detailed Planting Plan. The Planting plan shall include but not limited to:

a. The plant species are encouraged to be species of Carex sp., Phormium tenax (harakeke), Cordyline australis (cabbage tree), Pseudopanax arboreus (five-finger) and Austroderia toetoe.
b. Tree and shrub species should be predominantly local sourced and indigenous.

Note: The Surface Water and Land Drainage Planner will consult with Council Ecologist in terms of plant suitability in the locality.

10.2 All required landscaping shall be allowed to grow to their natural form and height.

10.3 All landscaping required for this consent shall be maintained. Any dead, diseased, or damaged landscaping shall be replaced by the consent holder within the following planting season (extending from 1 April to 30 September) with trees/shrubs of similar species to the existing landscaping.

11. Telecommunications and Energy Supply

11.1 All lots must be provided with the ability to connect to a telecommunications and electrical supply network at the boundary of the net area of each lot. For rear lots, evidence must be provided by the surveyor (in the form of as-builts and / or photos) that ducts or cables have been laid to the net area of each lot.

11.2 The consent holder is to provide a copy of the reticulation completion letter from the telecommunications network operator and the s224 clearance letter from the electrical energy network operator.

12. Accidental Discovery

12.1 In the event of the discovery/disturbance of any archaeological material or sites, including taonga (treasured artefacts) and koiwi tangata (human remains), the consent holder must immediately:

a) Cease earthmoving operations in the affected area of the site; and
b) Advise the Council of the disturbance via email to rcmon@ccc.govt.nz
c) Advise appropriate agencies, including Heritage New Zealand Pouhere Taonga and the local Mana Whenua (Ngāi Tūāhuriri Rūnanga) of the disturbance.

Advice Note: Please be aware that an archaeological site may be any place that was associated with human activity pre-1900, and provides or may be able to provide, through investigation by archaeological methods, significant evidence relating to the historical and cultural heritage of New Zealand.

12.2 In the event that soils are found to have visible staining, odours and/or other conditions that indicate soil contamination, then work must cease until a Suitably Qualified and Experienced Practitioner (SQEP) engaged by the consent holder has assessed the matter and advised of the appropriate remediation and/or

disposal options for these soils. The consent holder must immediately notify the Council Attention: Team Leader Environmental Health, by way of email to EnvResourceMonitoring@ccc.govt.nz. Any measures to manage the risk from potential soil contamination must also be communicated to the Council prior to work re-commencing.

13. Consent Notice

13.1 The following consent notice pursuant to Section 221 of the Resource Management Act 1991 will be issued by the Council:

Geotechnical – Lots to be Confirmed

Any new structure requiring a Building Consent, in terms of Building Act provisions, shall have foundations designed in accordance with the New Zealand Building Code and with reference to the site specific geotechnical reports for this site. Detailed design of the foundations and retaining walls will be reviewed during the process of Building Consent Application.

Geotechnical – Lots to be confirmed

For any Building Consent Application for the new residential dwellings at this site and as part of the detailed design and, a site specific qualitative and/or quantitative slope stability analysis must be undertaken for each lot within this subdivision. Development of each lot will require site-specific geotechnical investigation, assessment and reporting.

Geotechnical Rockfall – Lots to be confirmed

For Lots XX, there is a Xm no building setback from the rockfall fence or other features identified in the final Geotechnical Report. This setback will apply to future structures and earthworks.

Advice note: this consent notice wording will be amended subject to the Geotechnical Completion Report provided prior to s224.

Maintenance and Monitoring Manual – Lots to be confirmed

The property owner/s must ensure the rockfall fence within their property are maintained in good working order and in accordance with the final maintenance and monitoring manual. A copy of the maintenance and monitoring manual for this development can be requested from Christchurch City Council and any updates to the manual shall be available to Council on request.

All developable residential allotments – Stormwater

Stormwater concentrations should be appropriately managed and discharged to an approved disposal system and should not be discharged to the ground near the future foundations.

Stormwater Detention Tanks – All Developable Residential Lots

Stormwater generated from roofs of all buildings shall discharge to stormwater detention tanks. Stormwater runoff generated from residential building roofs shall be captured and held in a detention tank. The minimum tank volume shall be 30,000 litres. The low-level tank outlet shall be fitted with a self-cleaning (Promax Tankguard™ or similar approved) 5.5mm internal diameter orifice and a 100mm diameter high-level overflow pipe, both discharging via a sealed system into the Council stormwater network.

Shared Stormwater Services – Lots to be confirmed

This property contains above and/or below-ground shared stormwater systems designed to safely convey stormwater generated from roads, roofs or upstream catchments to downstream stormwater systems. The property owner shall ensure the shared stormwater systems within their property are maintained in good working order and in accordance with the Stormwater Maintenance and Operations Manual. A copy of the Maintenance and Operations Manual for this development can be requested from Christchurch City Council.