

To: Sue Simons – Ashbourne Expert Panel Chair

From: Steph Wilson and Fraser McNutt – Barker & Associates Limited

Date: 28 October 2025

Re: Ashbourne [FTAA-2507-1087 – Response to Item [2] as part of Minute 2

1.0 Introduction

This memorandum has been prepared in response to a request received from the Ashbourne Expert Panel detailed in Minute 2, dated 13 October 2025. The Panel has requested further information on several items which are addressed below.

The following attachments should be read in conjunction with this response:

- Attachment 1 – Legal Memorandum (HPL)
- Attachment 2 – Landscape Drawings
- Attachment 3 – WWTP Details
- Attachment 4 – Ecological Memo
- Attachment 5 – Hydrogeology Memo
- Attachment 6 – Esplanade Reserve Plan
- Attachment 7 – Traffic Memo

For ease of reference, **Table 1** provides a summary of the requested information and response location.

Table 1: Requests for Further Information & Response Locations

#	Item	Response
2(a)	Legal advice addressing the implications of the requirements of the National Policy Statement on Highly Productive Land 2024 (NPS-HPL) to avoid subdivision and development on LUC 1, 2 and 3 land within the proposed Ashbourne project area.	• Section 2.1 • Attachment 1
2(b)	Confirmation that the proposed commercial area within the Ashbourne residential zone (described in the Application as 'Option 1' will proceed and forms part of the application (and that 'Option 2' [alternative residential development] is deleted).	• Section 2.1 • Attachment 1
2(c)	Confirmation of changes in terms of pedestrian access/connectivity to adjacent residential areas.	• Section 2.1 • Attachment 1
2(d)	Technical advice on the long-term viability of stormwater disposal of up to the 10-year ARI rainfall event via soakage to ground. This is to include an overall water balance and modelling exercise to assess mounding and winter high groundwater levels resulting from disposal of stormwater and wastewater by ground soakage, including consideration of predictions of any likely changes to	• Section 2.2

	rainfall in the future arising from climate change. Please also check that there will be adequate vertical clearance above groundwater levels to the base of proposed stormwater disposal soakage systems. The assessment shall also include the effect of any proposed filling in of existing drains in the retirement village and residential areas and the need for provision of subsoil drains at the location of these existing drains.	
2(e)	Reconciliation of the differences between the nature and character of the Greenway and stormwater ponds 1 and 2 (retirement village) as between the landscape plans (including surrounding pathways) and the engineering drawings.	• Section 2.3 • Attachment 2
2(f)	Clarification of details of the emergency spillways from the stormwater ponds (including cross-sections).	• Section 2.4
2(g)	Elevation details of the wastewater treatment facility within the retirement village (and the way in which potential odour effects for adjacent villas is able to be avoided).	• Section 2.5 • Attachment 3
2(h)	Confirmation of planting details for the wastewater soakage field and inclusion of the same into the area depicted as 'Balance Land for Future Development' shown on the site masterplan.	• Section 2.6 • Attachment 2A
2(i)	The effects on the Oxbow lakes of the existing drain being diverted away from these lakes and discharging into the Waitoa River.	• Section 2.7 • Attachments 4 & 5
2(j)	The details and description of any proposed landscape treatment in and around the Oxbow lakes including integration with the esplanade reserve and pedestrian connectivity with the Greenway (including across the discharge channel armouring) and outline if there are any consent implications of any works proposed within this area.	• Section 2.8 • Attachments 4 & 2C
2(k)	Identifying any trees within the proposed Residential Zone that could be retained as part of the proposed subdivision/development in a similar manner to that proposed for the retirement village.	• Section 2.9
2(l)	Clarification of basis for the curved alignment of the northern end of the carriageway of the proposed Residential area adjoining Station Road in respect to offsets to nearby driveways and any safety (visibility) implications for vehicles entering and exiting the subdivision.	• Section 2.10
2(m)	The manner by which cumulative construction effects can be identified and conditioned across all staged activities on the site.	• Section 2.11 • Attachment 7
2(n)	Clarification of the following matters in Table 5, page 15 of the Stormwater Management Plan May 2025: (i) Why is the 0.5 RITS factor not applied to all soakage test areas? (ii) The column "soakage rate adopted for design purposes" is either higher than or the same as the "soakage rate factored by 0.5" column; this does not appear to be correct. (iii) The design soakage rates for the southern and northern residential catchment areas appear to be based on only one soakage test in each area. Have other soakage test been done	• Section 2.12

	in those areas? If not, is it appropriate to base design on the results of one soakage test?	
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2.0 Response to Items

2.1 Items 2(a) to 2(c) – NPS-HPL and confirmation of design changes

2(a) Legal advice addressing the implications of the requirements of the National Policy Statement on Highly Productive Land 2024 (NPS-HPL) to avoid subdivision and development on LUC 1, 2 and 3 land within the proposed Ashbourne project area.

2(b) Confirmation that the proposed commercial area within the Ashbourne residential zone (described in the Application as 'Option 1' will proceed and forms part of the application (and that 'Option 2' [alternative residential development] is deleted).

2(c) Confirmation of changes in terms of pedestrian access/connectivity to adjacent residential areas.

A legal memorandum is attached as **Attachment 1** setting out the applicant's response to Items 2(a) to 2(c). In relation to Items 2(b) and 2(c), it is acknowledged that submitted plans and reports will require updates to reflect these changes. We confirm that we will make these updates at the time of response to comments from invited parties under Section 53(2) of the FTAA.

2.2 Item 2(d) – Groundwater and Soakage

Technical advice on the long-term viability of stormwater disposal of up to the 10-year ARI rainfall event via soakage to ground. This is to include an overall water balance and modelling exercise to assess mounding and winter high groundwater levels resulting from disposal of stormwater and wastewater by ground soakage, including consideration of predictions of any likely changes to rainfall in the future arising from climate change. Please also check that there will be adequate vertical clearance above groundwater levels to the base of proposed stormwater disposal soakage systems. The assessment shall also include the effect of any proposed filling in of existing drains in the retirement village and residential areas and the need for provision of subsoil drains at the location of these existing drains.

The following response is provided by Maven Associates:

We have recently received updated groundwater level data via ongoing monitoring bores located throughout the site. WGA is conducting ongoing groundwater level modelling and mounding assessments using the latest information, incorporating the proposed roadside soakage trenches and the infilling of existing drains in their assessment. Updated site groundwater monitoring data collected during the recent winter season indicates elevated levels, representing a 'seasonal high' condition. This has resulted in reduced vertical clearance in some areas. The design, however, includes contingencies to accommodate these conditions, including additional storage capacity across the site and a network of subsoil drainage within the roading system to manage and control groundwater levels. While the data currently reflects a 'seasonal high', it is expected that the required vertical clearances will be achieved once groundwater levels return to typical conditions.

As a result of the updated testing and information, soakage of the 10-year ARI rainfall is proposed within roadside trenches located above and upstream of each of the soakage basins, the proposed greenway, and existing drainage channels. A continuous network of subsoil drains is proposed throughout the development, which daylight into each of the basins, greenway and existing drainage channels which discharge into the Waitoa river, effectively limiting the peak groundwater levels during winter. Regarding climate change considerations, rainfall data used in our calculations adopts an RCP 8.5 scenario.

The updated modelling will be incorporated into the stormwater design to refine the sizing of the proposed soakage trenches and/or soakage basins as needed during detailed design, using the latest soakage rates and ensuring that minimum vertical clearance above peak groundwater levels is maintained. We are confident with the new approach and data obtained through groundwater testing that we'll be able to proceed to detailed design whilst achieving reasonable vertical clearances.

2.3 Item 2(e) – Greenway and Stormwater Basin Amenity

Reconciliation of the differences between the nature and character of the Greenway and stormwater ponds 1 and 2 (retirement village) as between the landscape plans (including surrounding pathways) and the engineering drawings.

Sheets 2170/72 and 2170/73 of the Landscape Drawings (Appendix 4B) have been updated to more clearly illustrate the nature and character of Stormwater Ponds 1 and 2. As illustrated in **Figure 1** below, the proposed path is intended to be dual-use providing both recreational and maintenance access. Planting is proposed alongside the path to aid in amenity, and the stormwater basins are intended to be grassed. Refer to the package of updated Landscape drawings included as **Attachment 2A**.



Figure 1: Typical Section - Stormwater Pond Boundary Treatment. Source: Greenwood Associates Sheet 2170/72

The Greenway is provided with a similar treatment, with the proposed path to provide dual purpose (recreation and maintenance), with substantial planting throughout. A typical section of the greenway is illustrated in **Figure 2** below. A package of drawings was inadvertently left off the submission, and is included as **Attachment 2B**, providing a typical section, along with greenway planting palette and details.



Figure 2: Typical Section - Greenway. Source: Greenwood Associates Attachment 2B Sheet 2149/28

2.4 Item 2(f) – Emergency Spillways

Clarification of details of the emergency spillways from the stormwater ponds (including cross-sections).

The following response is provided by Maven Associates:

Retirement Village

RV stormwater ponds 1 and 2 outlet design ensures discharge is less than 80% of predevelopment flows during a 100yr RCP8.5 event. Spillways are shown on drawings C4600 and C4601 within submitted Appendix 4D and engage in a controlled manner as needed during larger storm events.

Residential

Ponds A, C, and D are designed to provide stormwater storage to manage and drain stormwater events exceeding the 10-year 24-hour event up to the 100 ARI event CC. Spillways are shown on drawings C400-1, 400-3, and 400-5 and engage in a controlled manner as needed during larger storm events.

2.5 Item 2(g) – Wastewater Treatment Facility

Elevation details of the wastewater treatment facility within the retirement village (and the way in which potential odour effects for adjacent villas is able to be avoided).

The following response is provided by Maven Associates:

Refer to attached ASHBOURNE – EPA RFI (RV WWPS) as **Attachment 3** for details including wastewater overall layout plan, WWPS standard details, and WWTP details (Innoflow).

Wastewater flows from the Retirement Village flow by gravity to the pump station at lowest invert of 63.86m. From here flows will be pumped via a sanitary rising main to the wastewater treatment facility location shown on plan C5000A. Approximate finished ground levels of the Wastewater treatment facility is 68mRL. The wastewater treatment plant consists of a series of tanks which are up to 2.7m below ground level (65.3mRL). Flows will then be pumped and discharged to the WW disposal field located east of the RV which is a generally flat area with existing levels between 67.7m and 68.5m.

The WWTP is located in close proximity to dwellings and other public facilities which is common practice. An example of this is the Tamahere Country Club which is also a retirement village with a plant very close to houses, as shown in **Figure 3** and **Figure 4** below. Activated carbon filters with a small fan are proposed for odour control to prevent any effect to adjacent villas as shown on the indicative plans and Advantex vent

technical data sheet from InnoFlow. In addition, all access risers and lids are sealed using gasketed lids. Site specific design including final elevations of the wastewater treatment facility will be confirmed during detailed design.

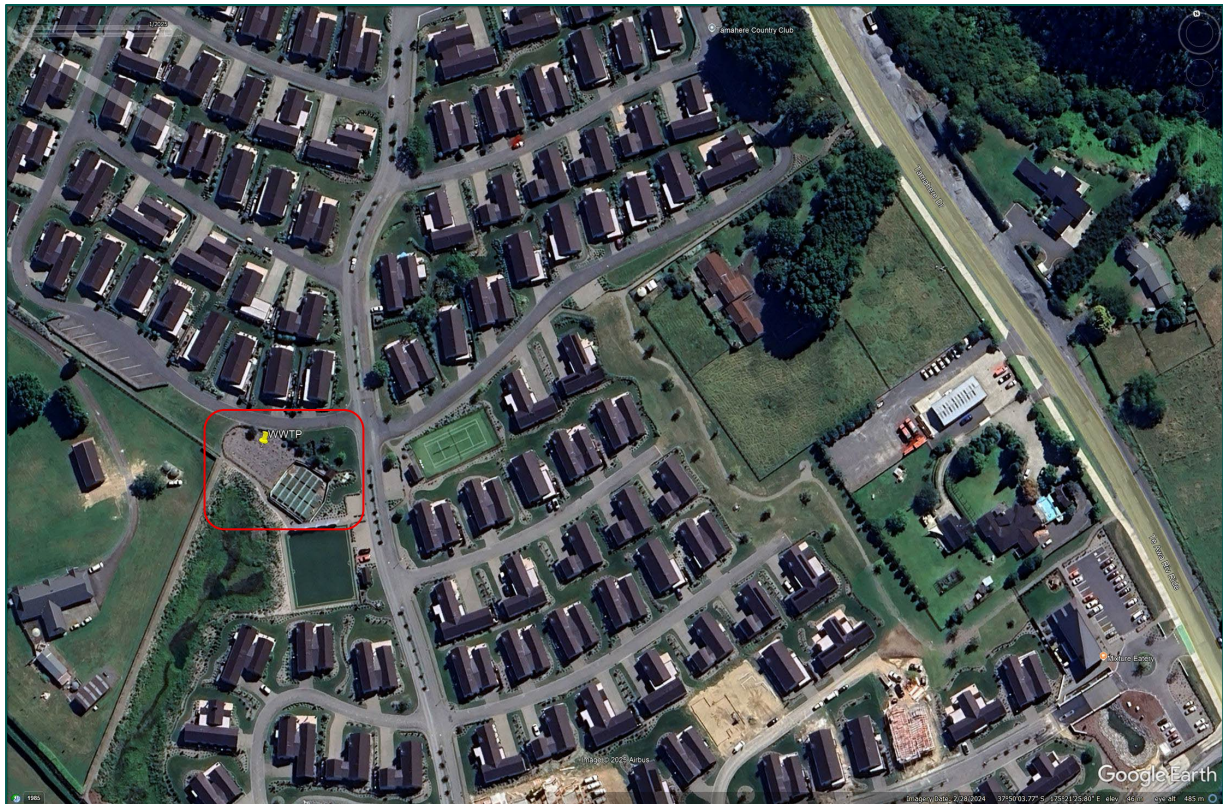


Figure 3: Location of WWTP within Tamahere Country Club outlined red



Figure 4: Tamahere Country Club WWTP. Source: Maven Associates

2.6 Item 2(h) – Planting of Wastewater Soakage Field

Confirmation of planting details for the wastewater soakage field and inclusion of the same into the area depicted as ‘Balance Land for Future Development’ shown on the site masterplan.

Please refer to the updated Overall Site Plan prepared by Greenwood Associates included as **Attachment 2A**. The disposal field is proposed to be grassed and fenced.

2.7 Item 2(i) – Wetland Hydrology

The effects on the Oxbow lakes of the existing drain being diverted away from these lakes and discharging into the Waitoa River.

As set out in the memorandums prepared by Ecological Solutions (**Attachment 4**) and WGA (**Attachment 5**), it is understood that the primary hydrological influence on the oxbow wetlands is the Waitoa River. The Ecological memorandum concludes that the effect of diverting the existing drain away from the wetlands is anticipated to be low.

2.8 Item 2(j) – Wetland and Esplanade Planting

The details and description of any proposed landscape treatment in and around the Oxbow lakes including integration with the esplanade reserve and pedestrian connectivity with the Greenway (including across the discharge channel armouring) and outline if there are any consent implications of any works proposed within this area.

No specific landscaping is proposed in and around the Oxbox wetlands. For the reasons set out in the Ecological memorandum (**Attachment 4**), it is not considered that any effects management is required for the wetlands.

With regard to the esplanade reserve, please refer to updated Landscape Drawings (**Attachment 2C**) illustrating a potential future footpath location through the esplanade reserve (to be implemented by Council). Specimen trees are proposed to be planted by the applicant through this consent process to implement an edge to the development and provide continuity of vegetation.

For completeness, it is noted that the boundary of the esplanade reserve indicated on these plans has been modified. Based on further legal advice and a review of Lot boundaries, it is noted that the esplanade is provided as per **Attachment 6**, however, does not provide for access from the Greenway or a complete esplanade adjoining the site. The lodged drawing sets, including scheme plan, will be updated to reflect this. These updates will be provided at the time of response to comments from invited parties under Section 53(2) of the FTAA.

2.9 Item 2(k) – Retained Trees

Identifying any trees within the proposed Residential Zone that could be retained as part of the proposed subdivision/development in a similar manner to that proposed for the retirement village.

As noted in the request, five of the existing 14 large trees within the Retirement Village site are proposed to be retained, with the remainder to be removed. Six small trees within the Retirement Village are also proposed for removal.

While the opportunity to retain existing trees on the residential site was explored, due to the extent of earthworks proposed it not considered feasible to retain these trees. Vegetation on existing external boundaries is intended to be retained where feasible.

2.10 Item 2(l) – Spine Road Alignment

Clarification of basis for the curved alignment of the northern end of the carriageway of the proposed Residential area adjoining Station Road in respect to offsets to nearby driveways and any safety (visibility) implications for vehicles entering and exiting the subdivision.

The following response is provided by Commute Transportation Consultants:

The intersection of Station Road and the proposed new spine road (Road 1) has been designed with a curved approach to the intersection primarily due to the proximity of the new road to the neighbouring right of way driveway.

The location of the intersection and design of the curve has also considered:

- The location of this road is in general accordance with the Eldonwood Structure Plan.
- Section 3.12.3 Table 3C of the MPDCDM gives minimum separation distances between rural vehicle crossings and intersections (such as those already on Station Road in the vicinity of the site).
- For Station Road, which has a posted speed of 80 km/hr this is 45m when measured from the centre of the intersection to the centre of the vehicle crossing.

- Intersection spacing standards for intersections on opposite sides of the road in Residential and Rural Residential zones require that for an 80 km/hr operating speed on collector / local roads this requires a spacing of 30m. These distances are shown below.

This results in a need to balance the location of the intersection, to maximise the available spacing between the vehicle crossings on the south side of Station Road, and the intersection of Aporo Drive on the northern side of Station Road.

Ideally, the vehicle crossings located to the west of the intersection would be relocated to the new spine road (Road 1), however there currently is no mechanism to enable this without the consent of the landowners of the neighbouring properties. Should approval be granted for these vehicles crossings to be relocated prior to the implementation of the later stages of the development – this would enable the road to be redesigned to provide a straighter approach. We would support the provision of a condition requiring confirmation of the feasibility of relocating the vehicle crossings and reconfirmation of the intersection design prior to implementation. We are open to options that work should there be positive feedback from those neighbouring properties in question post the conclusion of comments being received.

The current intersection location provides good sight distance in both directions, and in the longer term the intersection is not the sole entrance to the development, with the southern portion of the development expected to reach the surrounding network via Peakedale Road. The intersection has also been located as far from the existing vehicle crossing as is practicable to maximise available distance, while still providing a core spine road in general accordance with the Structure Plan.

2.11 Item 2(m) – Cumulative Effects of Construction

The manner by which cumulative construction effects can be identified and conditioned across all staged activities on the site.

As set out within the application material, the Ashbourne substantive is formed of separate activities that are intended to be held as separate resource consents that allow for the respective landuse activities being applied for. This will enable the applicant to give effect to multiple parts of the application at once, with an indicative timeframe for this set out in the submitted “Appendix 1U_Overview Construction Staging and Timeframes_Redacted”. In summary, the indicative timeframes are:

Earthworks:

	2026/2027 Summer	2029/2030 Summer	2031/2032 Summer	2033/2034 Summer
Residential	Stage 1 Earthworks	Stage 2 Earthworks		Stage 3 Earthworks
Retirement Village	Stage 1 Earthworks	Stage 2 Earthworks		Stage 3 Earthworks
Northern Solar Farm	Site Prep and Civil Works			
Southern Solar Farm			Site Prep and Civil Works	

Civil Works/Construction

	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	Stage 1	Stage 1 & Stage 2	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
Retirement Village	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8	Stage 9 & Stage 10
Northern Solar Farm	~12-month construction								
Southern Solar Farm						~12-month construction			

When considering cumulative construction effects, it is considered that effects in relation to construction traffic, noise and vibration, and dust generation are of relevance. In this regard, the following assessment is provided.

The following three scenarios have been used to assess a worst-case scenario for cumulative effects:

- (1) The construction of the northern solar farm at the same time as the residential subdivision
- (2) The construction of the northern solar farm at the same time as the retirement village
- (3) The construction of the retirement village at the same time as the residential subdivision

Traffic

An assessment of the above three scenarios is provided in the memorandum prepared by Commute Transportation Consultants (**Attachment 7**). In summary, it is considered that the cumulative truck movements per day across multiple activities remain relatively low and able to be readily accommodated within the existing road network. Construction traffic will also generally access the respective sites at different locations, further spreading the potential cumulative traffic effects. Construction Traffic Management Plans are included as conditions of consent, and it is considered that cumulative traffic effects can be adequately managed through the provision of a CTMP, and it is proposed to update conditions of consent to require CTMPs to specifically address cumulative traffic effects across the wider Ashbourne development.

Noise and Vibration

Styles Group have undertaken additional noise modelling to assess the potential cumulative construction noise effects of the above scenarios.

Scenario 1: The construction of the northern solar farm at the same time as the residential subdivision

The noise contour map in **Figure 5** shows the earth works occurring in the Residential subdivision at the same time as the piling for the northern solar farm.

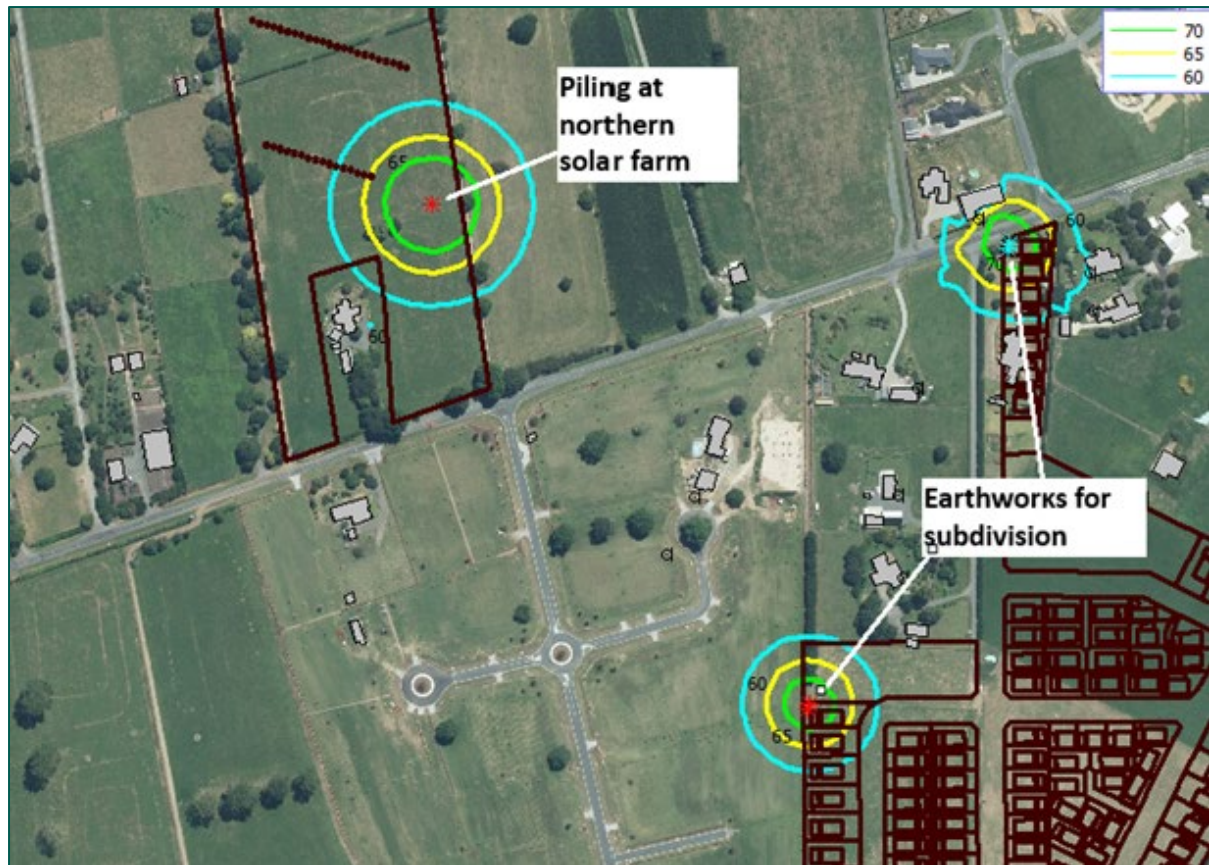


Figure 5: Noise Contours - Residential Earthworks and Northern Solar Farm Piling. Source: Styles Group

The dwellings located at the end of Orchard Place are centrally located between the northern solar farm and the residential subdivision.

The noise contour map shows that there is adequate separation distance between the piling in the northern solar farm and the earthworks for the residential subdivision. It is unlikely that there will be any significant cumulative construction noise effects if these works occur concurrently.

Scenario 2: The construction of the northern solar farm at the same time as the retirement village

The noise contour map below shows the earth works occurring in the retirement village and the piling for the northern solar farm.



Figure 6: Noise Contour Map - Retirement Village Earthworks and Northern Solar Farm Piling. Source: Styles Group

The dwelling located at 172 Station Road is centrally located between the northern solar farm and subdivision construction areas.

The noise contour map above shows that there will be adequate distance between the piling in the northern solar farm and the earthworks for the retirement village. It is unlikely that there will be any significant cumulative construction noise effects if these works occur concurrently.

The construction noise from both sites (northern solar and retirement village earthworks) will likely be audible at the dwelling located at 172 Station Road, but the cumulative noise levels will be well below the permitted construction noise limit of 70 dB L_{A10} . The highest predicted construction noise level at 172 Station Road from construction of the northern solar and retirement village concurrently is 57 dB L_{A10} .

Scenario 3: The construction of the retirement village at the same time as the residential subdivision

The Highgrove Avenue dwellings will be located next to both the retirement village and the residential subdivision construction areas.

The noise contour map below shows the aboveground construction of the Retirement Village occurring concurrently with the Civils works within the Residential subdivision.



Figure 7: Noise Contour Map - Retirement Village and Residential Civiis. Source: Styles Group

As illustrated in Figure 7 above, there are not anticipated to be any cumulative noise or vibration effects during Scenario 3.

Summary

Based on the above, it is considered that no persons will be adversely affected by cumulative noise and vibration effects, and that any potential effects can be managed by the proposed CNVMP and relevant conditions of consent.

Dust Generation

Dust suppression measures are included as conditions of consent in all consents, and all consents include conditions for complaints management and Construction Management Plans. While some dust effects are likely to arise, these are temporary in nature and are considered likely to be adequately managed by the provision of dust suppressants.

2.12 Item 2(n) – Stormwater Management Plan

Clarification of the following matters in Table 5, page 15 of the Stormwater Management Plan May 2025:

- i) Why is the 0.5 RITS factor not applied to all soakage test areas?*
- ii) The column “soakage rate adopted for design purposes” is either higher than or the same as the “soakage rate factored by 0.5” column; this does not appear to be correct.*
- iii) The design soakage rates for the southern and northern residential catchment areas appear to be based on only one soakage test in each area. Have other soakage test been done in those areas? If not, is it appropriate to base design on the results of one soakage test?*

Responses are provided by Maven Associates as follows:

Barker & Associates

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Kerikeri | Whangārei | Warkworth | Auckland | Hamilton | Cambridge | Tauranga | Havelock North | Wellington | Christchurch | Wānaka & Queenstown

- (i) & (ii) All soakage rates in table 5 allow for the 0.5 RITS factor. The northern and southern residential soakage values were incorrectly recorded under the “Results” and “soakage rate adopted for design purposes” column and should be 2x what is currently shown (i.e. they were showing the factored rate, instead of the rate derived from soakage testing) . Table 5 of the SMP will be updated to reflect this.
- (iii) Additional soakage tests have been undertaken throughout the site which revealed significant variability in soakage performance. According to the Geotechnical Report, areas of lower than expected rates are likely attributed to perched groundwater, where infiltrating water is impeded by underlying less permeable layers, resulting in temporary saturation near the surface.

As a result, representative soakage tests used for design were selected for each stormwater catchment. Further soakage testing and groundwater investigations are proposed in future to inform the detailed design.