Memorandum

То:	Francelle Lupis, Partner (Greenwood Roche) & Amelia Alden, Associate (Greenwood Roche)
From:	Ryan Brosnahan, Consultant Planner (Resource Management Group)
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Project No:	PO710.08
Subject:	Holly Lea Village – Adverse Effects of Project (Part 7)

Objectives and Policies

- Before describing the anticipated and known adverse effects of the Project, it is important to set out the context of how this type of development is assessed under the District Plan through the relevant District-Wide and Residential Suburban zone objectives and policies that apply to the site.
- 2. A full assessment of objectives and policies will be undertaken to support the subsequent resource consent application should the Project be referred. For the purposes of the referral application however, the key objectives and policies are:

3.3.4 Objective - Housing bottom lines and choice

- a. For the period 2021-2051, at least sufficient development capacity for housing is enabled for the Ōtautahi Christchurch urban environment in accordance with the following housing bottom lines:
 - i. short-medium term: 18,300 dwellings between 2021 and 2031, and
 - ii. long term: 23,000 dwellings between 2031 and 2051; and
 - iii. 30 year total: 41,300 dwellings between 2021 and 2051; and
- b. There is a range of housing opportunities available to meet the diverse and changing population and housing needs of Christchurch residents, including:
 - *i.* a choice in housing types, densities and locations; and
 - ii. affordable, community and social housing and papakāinga.

14.2.1 Objective - Housing supply

- a. An increased supply of housing that will:
 - *i.* enable a wide range of housing types, sizes, and densities, in a manner consistent with Objectives 3.3.4(a) and 3.3.7;
 - *ii.* meet the diverse needs of the community in the immediate recovery period and longer term, including social housing options; and
 - *iii.* assist in improving housing affordability.

14.2.1.8 Policy - Provision of housing for an aging population

- a. Provide for a diverse range of independent housing options that are suitable for the particular needs and characteristics of older persons throughout residential areas.
- b. Provide for comprehensively designed and managed, well-located, higher density accommodation options and accessory services for older persons and those requiring care or assisted living, throughout all residential zones.
- c. Recognise that housing for older persons can require higher densities than typical residential development, in order to be affordable and, where required, to enable efficient provision of assisted living and care services.

- 3. Objective 3.3.4 seeks to provide a variety of housing options for Christchurch while Objective 14.2.1, and its supporting policy, seek to provide for elderly housing and recognise its higher density nature compared to stand alone residential dwellings. The Project is consistent with the above objectives and policy as it provides for the extension of an existing retirement village which will ensure further housing needs and choices are available and will safeguard the long-term viability of the Holly Lea Village which specifically caters for older persons housing. Importantly, retirement villages are an anticipated activity in the Residential Suburban zone, as they are permitted subject to built form standards. Therefore, the District Plan requires an assessment focused on the effects of the scale, bulk, and location of the buildings as the proposed activity, rather than those arising from the nature of the activity itself.
- 4. In light of the planning framework, the effects of the Project have been extensively assessed and it is concluded that all effects can be appropriately managed through conditions of consent.
- 5. The key matters for assessment with respect to anticipated and known adverse effects can be broadly categorised as follows:
 - Landscape, Visual and Urban Design
 - Waterways
 - Natural Hazards
 - Noise
 - Cultural
 - Transport
 - Arboriculture
 - Earthworks and Construction
 - Greenhouse Gas Emissions
- 6. With respect the above, the following preliminary technical assessments have been carried out to support the below planning assessment:
 - Urban Design Assessment
 - Integrated Transport Assessment
 - Economic Report
 - Ecology Report
 - Civil and Infrastructure Report
 - Arboricultural Report and Tree Protection Management Plan
 - Preliminary Noise Assessment
 - Preliminary Geotechnical Assessment
- 7. The Economic Report (**Appendix Seven**) and Urban Design Assessment (**Appendix Nine**) are appended to the application. The balance of the specialist reports will be available upon request.

Landscape, Visual and Urban Design Effects

- 8. While the Project will be assessed as a discretionary activity, the matters of discretion contained in 14.15.9 Retirement villages, 14.15.3 Impacts on neighbouring property, and 14.15.17 Street scene road boundary building setback, fencing and planting of the District Plan provide appropriate guidance to consider. Broadly, these matters cover:
 - Engagement with public realm;
 - Integration of access, parking areas and garages;
 - Response to existing buildings or landscape features;
 - Response to context;
 - Incorporation of Crime Prevention Through Environmental Design (CPTED);
 - Residential amenity for neighbours; and
 - Creation of visual quality and interest.
- 9. An assessment of the Project with respect to the above matters has been undertaken by Jane Rennie, Urban Designer of Boffa Miskell (refer **Appendix Nine**). By way of summary, Ms Rennie's assessment of the above matters is as follows:

Engagement with the public realm and impacts on street scene

- 10. Recognising the residential context, the general approach to the street interfaces has been to manage boundary treatments in a softer way, using a combination of planting, solid and permeable fencing, and gates to individual units.
- 11. Both Buildings D and E are orientated to the adjoining streets and include units that will overlook the public realm, along with most of the ground floor units having pedestrian access from the street via a gate and pathway.
- 12. Both Buildings D and E are orientated to corners, with Building E located on the most prominent corner of Fendalton Road and Heathfield Avenue providing a strong built form edge along both streets.

Integration of access, parking areas and garaging

13. Pedestrian access is proposed via separate pathways adjoining the vehicle access providing a safe environment and guiding users on where to go. Surface car parking is consolidated to the south of Building E and screened from Heathfield Avenue with two internal garages integrated into the building's south elevation.

Response to existing buildings or landscape features

14. The areas of the site where Building E and Building D will be constructed are currently vacant. The Building E site includes three heritage listed trees on the northern and western boundary to be retained along with additional mature vegetation along the northern,

eastern and western boundaries which contribute to the amenity of the area and will also be retained.

Response to context

15. Whilst the scale of Buildings D and E are larger than the existing residential properties, effort has been made to break down the proposed built form. In both instances, articulation of the building facades provides finer grained features that are more domestic in character, including pitched roof forms with overhanging eaves, chimneys and a residential neutral palette. Pergola structures, low walls, railings and shrub / low tree planting are domestic features carried through into the landscape to help the development further integrate into its context.

Incorporation of CPTED

- 16. High levels of surveillance will be achieved given the activity proposed, occupation of the units both day and night, along with 'active' frontages through a high number of living room and bedroom windows and associated balconies providing considerable passive surveillance benefits.
- 17. The site is well defined with good boundary edge activation and the ability to effectively manage access to internal parts of the Holly Lea Village through gates and secure door systems to each of the buildings.
- 18. The areas of the site where Building E and Building D will be constructed both include a strong built edge and clear threshold demarcation through paving changes at the pedestrian entrance signalling a change from semi-public to private spaces.

Residential amenity of neighbours

- 19. Key amenity considerations are outlook, privacy and access to sunlight, with visual simulations from adjoining streets and residential properties along with shading analysis prepared to determine the extent of the potential effects.
- 20. Building D has an internal boundary with No.23 Tui Street, separated only by Waimairi Stream. Mitigation of potential amenity effects has been largely achieved by:
 - a 17-18 metre setback between Building D and No.23 Tui Street;
 - a two-storey pavilion as a transition with the adjoining dwelling;
 - full height privacy screens on second and third floor windows to limit potential overlooking; and
 - a proposal for dense planting adjoining the Waimairi Stream to largely screen the pavilion building over time.
- 21. As a result, any overlooking or privacy effects are anticipated to be less than minor in magnitude.

- 22. The breach of the height limit and recession plane will result in minimal additional loss of sunlight access when compared to an anticipated baseline development and when considered across all four seasonal dates. A small portion of the second storey encroaches into the recession plane if this is measured from the north of Waimairi Stream and any effects of this are considered negligible.
- 23. For Building E, mitigation of potential amenity effects has been largely achieved in comparison to a Baseline scenario such that any outlook, overlooking and privacy effects are anticipated to be less than minor.
- 24. The nature of loss of sunlight effects for No's 4 Heathfield Avenue and 1/127 and 2/127 Fendalton Road properties that have been analysed are considered to be less than minor having limited impacts on the living/dining areas of the neighbouring properties and associated outdoor living spaces.

Creation of visual quality and interest

- 25. The creation of visual interest is achieved across both buildings to varying degrees through building steps, variety in building form, openings, materials, and colour. A simple colour and material's palette is adopted and has been thoughtfully applied to different building elements to provide visual interest and contrast.
- 26. Specifically, in relation to the form and mass of Building D, the three-storey element aligns with the site entrance, supporting a legible entry point, with the building stepping down to a smaller two storey box form aligning with the Waimairi Stream in response to the context.
- 27. In relation to Building E, the built form along Fendalton Road is broken up into two distinct elements or bays (each approximately 20m wide), separated by a communal terrace in the centre (measuring approximately 10m wide). To reduce the visual dominance of the roof along the southern elevation and as viewed from No.4 Heathfield Avenue, the roof profile has been reduced in conjunction with further changes to the depth of the building 'steps' and cladding colour. This assists to reduce the visual dominance and continuous building length along this elevation.

<u>Conclusion</u>

28. Based on the assessment of Ms Rennie, the Project is acceptable from an urban design perspective in achieving the outcomes sought through the District Plan.

Waterways

29. A 31.56m² section of Building D, including associated earthworks and landscaping will be carried out within the 10m waterbody setback required for Waimairi Stream which is identified as an Upstream Waterway and a Site of Ecological Significance listed in Schedule A of Appendix 9.1.6.1 of the District Plan.

- 30. Either a retaining wall will be installed in the bed of Waimairi Stream or the bank will be naturalised for bank re-stabilisation as the existing retaining is not fit-for-purpose.
- 31. In the event dewatering is required, this water may be discharged to Fendalton Stream which exceeds the rate of flow in the stream. In addition, flocculants may be used to treat dewatering water prior to discharge to Fendalton Stream.
- 32. Key adverse effects on the waterway for assessment purposes include natural values, amenity and character, and maintenance access.

Natural values

- 33. Consideration of adverse effects on the natural values of Waimairi Stream has been undertaken by Mark Taylor of Aquatic Ecology. By way of summary, Mr Taylor's preliminary assessment notes:
 - Bank re-stabilisation will be required for Waimairi Stream and landscaping will ensure a canopy of vegetation is available for ecological purposes. The primary ecological function at this location is to provide local bankside cover for large trout which spawn in the vicinity.
 - The building intrusion within the setback of Waimairi Stream is considered insubstantial.
- 34. In terms of discharges to Fendalton Stream, given the unnatural state of the waterway, any discharge of treated dewatering water to the stream is considered to be a more acceptable solution than discharging to the more ecologically sensitive Waimairi Stream. Groundwater which is taken for the purpose of dewatering would be settled prior to any discharge to Fendalton Stream as there is unlikely to be any flow in the stream to naturally dilute any remaining total suspended solids in the discharge. The dilution can be achieved via a network of settling tanks or flocculation dosing. The exact method has not been determined but will ensure that the concentration of total suspended solils in the discharge does not exceed 50g/m3. If flocculants are used to reduce the sediment load, this has the potential to affect water quality.
- 35. Conditions will be adopted for previous discharge consents which required a Chemical Treatment Plan to be prepared and certified by ECan if flocculants were to be used.

Amenity and character

36. The reduction in the 10m setback from the Waimairi Stream is considered less than minor in nature as the majority of Building D is further than 10m from the Stream and the step in plan and recesses along this southern façade help break up the length of the building. The small area of intrusion into the 10m setback is limited in nature and not considered to be materially different in effects to a building that was located 10m from the Waimairi Stream.

Proposed landscaping within the setback area will help mitigate any adverse effects that might arise.

37. Overall is it considered that any adverse visual impacts on the natural form and character of the waterbody will be less than minor, subject to landscaping conditions.

Maintenance access

38. The encroachment into the 10m setback of Waimairi Stream will not prevent access to the waterbody for maintenance purposes, or any associated natural hazard protection works.

Natural Hazards

<u>Flooding</u>

- 39. Part of the site is subject to the Flood Management Area overlay in the District Plan. In addition, Building D and associated earthworks will occur within the 10m waterbody setback required for Waimairi Stream. As a result, an assessment of flooding effects has been undertaken by Lindsay Blakie of E2 Environmental.
- 40. By way of summary, Mr Blakie makes the following conclusions regarding flooding effects:
 - Existing contours across 19 and 21 Tui Street are about 20.20 to 20.40 and from anecdotal observations most of 19 Tui Street is assumed to be nearer 20.40.
 - Council may require compensatory storage for displaced flood water where existing ground levels are lower than the modelled flood levels (i.e., where land is filled by Building D). This will be mitigated to some extent by the earthworks proposed to the stream bank where up to 150m³ of flood plain capacity will be added.
 - A compensatory flood assessment will be refined during the design phases.
 - Secondary flow path between Building A and D will be maintained.
- 41. The applicant is likely to require dewatering water to be discharged to Fendalton Stream as undertaken for previous buildings on site. Fendalton Stream is ephemeral and only has continuous surface flows during rainfall events. Any discharge rate will be minimal when compared with the existing peak flow as was determined for previous consents. As such, any effects on flows as a result of discharging dewatering water to the stream are considered to be less than minor.

Liquefaction management

- 42. The site is identified as a Liquefaction Management Area in the District Plan.
- 43. The applicant has engaged geotechnical engineering input to assess the geotechnical suitability of the land. It has been determined that there are various foundation options available for the site including shallow raft foundations, deep ground improvement (to the shallow gravels), or deep piles that will mitigate liquefaction hazard risk. Further

investigations will be carried out on the site prior to a full application being submitted to confirm the appropriate foundation option for the proposed buildings.

Noise

- 44. The Project is expected to comply with the District Plan's permitted construction noise standards.
- 45. Building E adjoins Fendalton Road which is classified as a Major Arterial Road in the District Plan. As the closest façade of Building E is within 40m of the nearest marked traffic lane of Fendalton Road, a higher level of acoustic insulation is required under the District Plan.
- 46. A preliminary review of the development has been undertaken by Jack Soffe of Acoustic Engineering Solutions.
- 47. Based on the findings of Mr Soffe, it is anticipated that bedrooms located on the northern side of Building E will require mechanical ventilation in order to comply with the District Plan standards. Construction upgrades may also be required, including an increased glazing thickness, additional linings on walls or ceilings, increased mass in RAB layers.
- 48. Building E is being designed accordingly, and confirmation that compliance with the District Plan standards will be achieved will be provided as part of the consenting process.
- 49. Regarding operational noise, it is unlikely that any adverse effects will arise during operation of Buildings D and E as the retirement village activity is not dissimilar to a higher density residential development. No adverse effects are anticipated.

Cultural values

- 50. No consultation has yet been undertaken with Te Rūnanga o Ngāi Tahu. However, an email has been sent to the relevant local Rūnanga via Mahaanui Kurataiao Limited with respect to works adjacent to Waimairi Stream which is identified in the District Plan as a Site of Ngāi Tahu Cultural Significance (Ngā Wai).
- 51. The applicant proposes to employ the same measures as previous developments on the Site to protect cultural values during construction. These measures will include:
 - indigenous plantings between Building D and Waimairi Stream to enhance mahinga kai values and biodiversity;
 - Erosion and Sediment Plan be developed and strictly adhered to be in place during works; and
 - an Accidental Discovery Protocol be in place to ensure works cease in the event of koiwi tangata (human bones) or taonga (treasured artefacts) are discovered.

- 52. The Fendalton Stream does not have Nga Wai classification, as it does not have the capacity to support traditional uses, such as mahinga kai. As was determined during previous consents, any proposed discharges (dewatering water and flocculants) to Fendalton Stream are not considered to adversely impact on the cultural values.
- 53. An initial response has been received from Mahaanui Kurataiao Limited but due to time constraints, they are unable to provide formal feedback from the local Rūnanga before lodgement. Notwithstanding, the applicant acknowledges that further consultation will continue up to and during the consenting process.

Transport

- 54. An Integrated Transport Assessment (*ITA*) has been prepared which assesses the various transport non-compliances generated by the Project. By way of summary, the ITA makes the following conclusions:
 - It has been concluded that the additional traffic will have a negligible effect on the safe and efficient operation of the existing Fendalton Road and Tui Street vehicle access points. The potential vehicle exit from the Building E car parking area to Heathfield Avenue would be expected to carry very low traffic volumes and it would operate safely.
 - The design and layout around both Buildings D and E for pedestrians and other noncar travel modes is considered appropriate given the low traffic volume and low vehicle speed nature of the retirement village environment.
 - The site is in a very accessible location for non-car travel modes given its residential surroundings as well as its proximity to the bus stops and pedestrian / cycle infrastructure on Fendalton Road.
 - The car parking aisle widths do not meet the long-term parking standard however it has been assessed that in conjunction with the car parking space widths, car parking manoeuvring will be acceptable and there will be negligible adverse effects on the safety and efficiency of the car parking areas.
 - A wall proposed next to the exit side of the Tui Street vehicle access point would be within the required visibility splays for that driveway. It has been assessed that the approximately 2.2m separation between the footpath and the wall will allow adequate visibility between the low volume of pedestrians walking past the site and the low number of drivers exiting the site.
- 55. In conclusion, any adverse safety and efficiency effects on the transport network are considered to be less than minor and will be appropriately managed.

Arboriculture

56. The site contains three protected trees and adjoins serval Council owned trees within the road corridor which are also protected more generally by the District Plan provisions. As the Project requires building and earthworks within the dripline of these protected trees, an Arboricultural Report has been prepared to assess the effects of that work and provide mitigation measures to protect the trees during construction.

- 57. The Arboricultural Report prepared by Craig Taylor of Simply Arb concludes that, subject to a Tree Protection Management Plan and supervision by an arborist, any adverse effects on all protected trees, including those in the road corridor, will be negligible to less than minor with no long-term impacts on tree health expected.
- 58. Further arboricultural assessments and input will be carried out during the final detailed design stages.

Earthworks and construction

- 59. Earthworks are required to form building platforms, hard landscaping, and vehicle access and parking areas. The earthworks will exceed District Plan standards for volume and depth. As well as this, there will unlikely be more than 1m of undisturbed material between the base of excavations and the high water table which could impact on groundwater. Finally, construction phase stormwater may be discharged to land via soakage and infiltration means.
- 60. Importantly, the level of construction effects that will be generated by the Project is entirely consistent with a residential development, as contemplated by the site's zoning.
- 61. It is considered the proposed earthworks will not generate any amenity issues for persons of adjoining sites as the works do not involve significant site re-contouring. There will be no impacts on outlook, overlooking, and privacy for adjoining sites. Therefore, any adverse effects on amenity are considered to be less than minor.
- 62. Earthworks have the potential to affect the stability of land and its susceptibility to subsidence erosion. As the extent of earthworks is limited, no retaining is required to support fill. Based on this, it is considered that any adverse effects relating to land stability will be less than minor subject to conditions.
- 63. Earthworks have the potential to cause noise, dust, sedimentation and erosion effects as well as effects on drainage and water quality which can cause nuisance to neighbouring properties and the wider environment. As with other consents of this scale, conditions of consent can appropriately address any realistic concerns on nuisance.
- 64. Construction phase stormwater will be managed in accordance with an ESCP to ensure groundwater quality is not impacted by sediment.

Greenhouse gas emissions

65. The proposed retirement village density has advantages over traditional lower density development in reducing greenhouse gas emissions. The Project will enhance these benefits by increasing the existing density of units on the site.

- 66. Holly Lea Village, and the Project specifically, is inherently a lower generator of vehicle movements from residents, minimising resultant emissions.
- 67. Additionally, there are a range of amenities provided on-site that reduce the need for residents to travel. Where residents do wish to travel, the site's positioning in close proximity to a number of key amenities enables access to these on foot or by mobility scooter. The integration of the Project with the existing retirement village will enhance these efficiencies.
- 68. In terms of the village's day-to-day operations, Holly Lea Village has goals in place to reduce carbon emissions in target areas, as set out below:
 - energy, where key initiatives include:
 - emission friendly designs;
 - seeking carbon neutral electricity suppliers; and
 - electric pool covers to keep heat in the heated pools.
 - waste, where key initiatives include:
 - village design layouts that include effective waste management;
 - green waste collections; and
 - supplier take-back schemes.
 - paper:
 - moving paper-based records online;
 - printers with FollowMe printing to cut down on unclaimed printing; and
 - double sided printing on default.
 - travel:
 - Zoom video-conferencing facilities;
 - improved travel planning; and
 - ride sharing.
 - fertilisers:
 - selecting environment-friendly fertilisers for garden maintenance.
- 69. The Project will adopt these initiatives, and specifically the village has pool cars as a number of residents do not have their own car. In addition, the village uses water reducing plumbing fittings, and has communal vegetable gardens for residents and village kitchen.

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Ryan Brosnahan Consultant Planner

Resource Management Group Limited PO Box 908 Christchurch Box Lobby CHRISTCHURCH 8140 s 9(2)(a)