

Arrowtown Lifestyle Retirement Village –

SHA Expression of Interest



RESOURCE MANAGEMENT CONSULTANTS

OVERVIEW

Arrowtown Lifestyle Retirement Village represents a joint venture between the Anderson/Armstrong Families and the Monk Family of Arrowtown.

Contained in **Appendix [A]** is a Development Overview that includes details of the persons involved their relevant histories and other key components of the proposal.

In summary the Anderson/Armstrong families have a history of developing successful retirement villages most notably the Aspiring Lifestyle Retirement Village in Wanaka.

The Monk Family own the land where the retirement village is proposed.

This proposal will be similar in many ways to the Wanaka Retirement Village containing a mix of housing typologies (standalone villas, apartments, care beds and community facilities) and like the Wanaka Retirement Village would become a significant asset for the Arrowtown community.

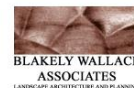
A draft master plan and accompanying indicative building designs have been developed to provide an understanding of the potential form of development and yields (attached as **Appendix [B]**). It is noted the master plan is in draft form recognising that negotiations with QLDC and the resource consent process are still to be worked through. However, it confirms at a minimum the following mix:

- 90-120 villas
- 40-55 apartments
- A 100 bed aged care facility offering rest home, hospital and dementia level care.
- Community facilities including restaurant and café, lounges, library, swimming pool, gym and bowling green (for the exclusive use of residents).
- Extensive gardens and landscape areas in keeping with the rich tradition of an Arrowtown rural style.



Arrowtown Retirement Village | Plan: Site Layout

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01

29/10/2015

Figure 1: Draft Master Plan

LOCATION

The site currently forms part of a 20ha block (Lot 5 DP 26714), which is accessed off McDonnell Road via an existing formed vehicle crossing. The land is presently farmed and contains an airstrip.

The development would be located on the flat portion of the site that would be subdivided off from the larger block as part of the proposal. Therefore the 'site' for the purposes of this proposal relates to the approximate 12-15ha of flat land.

RM090439 gave approval to subdivide Lot 5 DP26714 into three lots and identify building platforms on each lot. This consent lapses on 12 July 2020.

The intention of this proposal is to continue to provide access to the four approved building platforms and lots. Given the platforms are positioned behind the flat land they will not be affected by the proposal. The vehicle crossing off McDonnell Road would be shared with the approved access to the building platforms. A copy of the plan approved pursuant to RM090439 is attached (**Appendix [C]**). It is noted the approved plan shows a fourth building platform (Lot 3) this lot/platform was not approved in the final decision. The draft master plan has provided for access to the three approved building platforms/lots.

Site Attributes/Consideration

In deciding to proceed with the proposal on the site an extensive site consideration process was undertaken and is summarised in the Development Overview (**Appendix [A]**).

Critical to the site selection was:

- The availability of flat, north facing land of a reasonable size.
- Proximity to existing amenities/community

It is considered the site is successful in providing for all the identified requirements and demands of a proposal of this nature. Its proximity to Arrowtown is considered a significant positive benefit but its physical separation is also considered important given the growth management and unique qualities of Arrowtown discussed further below.

Arrowtown Urban Growth Boundary

Relevant to the consideration of this proposal has been the context of 'Arrowtown' and specifically the Arrowtown Urban Growth Boundary ("AUGB").

Legal advice has been sought that confirms that Resource Management considerations such as the AUGB should not take precedence in the decision making process at this stage. The HASHAA is set out in 2 Parts. Part 1 deals with matters relating to the declaration of SHAs including requirements that must be met before a SHA can be established within a district. Part 2 deals with resource consents, plan changes and variations to proposed plans in relation to developments in SHAs.

The advice confirmed consideration of RMA matters is only relevant to procedures under Part 2 and not Part 1 of the HASHAA (which includes the declaration of SHAs). The primary purpose of the HASHAA and the QLDC Housing Accord is improving housing affordability in the district. The QLDC must adopt processes and criteria consistent with the primary purpose for the evaluation of EOIs and recommendation of SHAs.

RMA matters are relevant to Part 2 procedures (consenting development in SHAs) however, the purpose of HASHAA is to be given priority over RMA matters. Section 34 (Part 2) imposes a priority list of matters the consent authority must have regard to when considering whether to approve development within a SHA. The priority list includes RMA matters but the most important consideration the consent authority must have regard to is the purpose of HASHAA.

However the proposal has been cognisant of the AUGB issue in the process of deciding on the proposed site.

The unique circumstances of this proposal, the Arrowtown context and presence of the AUGB are considered to support this proposal not being located within or adjacent to the existing urban area of Arrowtown. For this reason it is considered the proposal can be viewed as an exception to the general QLDC policy of locating SHA's in or adjacent to existing urban areas.

The site is considered to be appropriately positioned to provide physical separation from Arrowtown to respond positively to AUGB matters but close enough to ensure residents can utilise the existing path to access Arrowtown and the village can form part of the Arrowtown Community in a similar manner to Millbrook. In this respect, like Millbrook the site and proposal are considered to provide a development which can positively contribute to Arrowtown without detracting from its unique qualities.

AUGB Principles

- Landscape Setting/Settlement Pattern

The proposed location avoids the issue of sprawl along roads resulting from an extension of the existing urban boundary, a particular concern in setting the urban growth boundary for Arrowtown¹. In this respect the 'green belts' of Arrowtown will be retained and the settlement pattern of discreet, independent clusters of development sitting nearby but not adjoining Arrowtown is respected and re-enforced. The context plan (**Appendix [D]**) illustrates this pattern and the relationship and proximity of Millbrook to Arrowtown is an example of how development can sit comfortably nearby Arrowtown without having an adverse impact on the form and legibility of the town. It is considered the retirement village SHA proposal can continue this positive settlement pattern and relationship with Arrowtown. Phillip Blakely of Blakely Wallace Associates has also prepared a report considering the landscape issues relating to the proposal and AUGB. This report is attached (**Appendix [E]**). This assessment confirms the discussion noted above and supports the location of the retirement village on the proposed site.

- Entry Experience to Arrowtown

Consideration of the points of entry into Arrowtown and how the physical extent of urban development can impact on the entry experience was another key issue in determining and defining the urban growth boundary for Arrowtown².

The physical separation of the site from Arrowtown and retention of the 'Green belts' will ensure the proposal does not impact on the sense of arrival or change the point at which a person has 'entered' Arrowtown. An existing Hawthorne Hedge runs along the McDonnell boundary of the site and the site is elevated above the level of the road, limiting opportunities for passers-by to gain views of future development from McDonnell Road.

The draft master plan proposes a landscaped setback from McDonnell Road to further separate and screen future development from the Road. These unique site attributes and design responses can ensure the development reads as a distinct cluster and does not impact on the point of entry into Arrowtown or extend the sense of 'passing by' Arrowtown, being particular issues raised in the consideration of the AUGB.

Overall, it is considered the proposal and site location will ensure the setting, character and heritage values of Arrowtown can be preserved whilst providing significant positive benefits to the Arrowtown Community. Therefore the proposal and site location have responded positively to the principles of the AUGB even though as noted above, RMA matters are not considered relevant as part of this phase of the decision making process.

CONSULTATION

Consultation has been an integral component of the development and consideration of this proposal and the decision to proceed to lodge an SHA application.

¹ 3.3 Effects on the landscape of maintaining or extending the boundary of Arrowtown pg19 ENV-2011-CHC-7

² 3.3 Effects on the landscape of maintaining or extending the boundary of Arrowtown pg19 ENV-2011-CHC-7

A Consultation Summary Report is attached (**Appendix [F]**) that outlines in detail the various components of the consultation that has occurred and also attaches the 280 emails and feedback forms that have come in supporting the proposal.

Consultation has been focused on both key stakeholder groups within the Arrowtown community and broader public consultation in the form of a drop in session.

Groups consulted include:

- Arrowtown Planning and Advisory Committee
- Arrowtown Village Association
- Arrowtown Promotion and Business Association
- The Arrowtown Bowling Club
- Wakatipu Probus
- Arrowtown Golf Club
- Arrowtown Rugby Club
- Arrowtown RSA
- Arrowtown Business Women's Group
- Arrowtown Volunteer Fire Brigade
- Arrowtown St Johns Ambulance
- Arrowtown Anglican Church
- Arrowtown Catholic Church
- Arrowtown Presbyterian Church
- Arrowtown Thursday Club
- Senior Net

A draft master plan illustrating the key components of the village (villas, apartments, care facility, community facility) formed part of the information provided for consultation. A fly-through animation was prepared to demonstrate the proposal within the context of the site and the mix of activities proposed, to assist in ensuring people could gain a full appreciation of what was being considered on the site. A website has also been set up to assist people in being able to find out more information about the project (www.arrowtownretirement.co.nz).

It is considered the consultation has been extensive and thorough and illustrates an overwhelming level of support for the proposal within the Arrowtown and wider community. The applicant is also committed to continuing consultation moving forward.

Neighbours

The site is bound by:

- The Hills Golf Course to the north,
- Willowburn Arrowtown Limited (Peter McClean & Andrew Green) to the east of McDonnell Road
- Edwin and Carol Lamont to the south, and
- The balance of the site to the west and Hills Golf course beyond that.

In addition to the general consultation discussed above specific meetings have been undertaken with the immediately adjoining landowners noted above to outline the proposal and seek their feedback as the adjoining landowners.

The Consultation Summary Report (**Appendix [F]**) outlines the details of this consultation, which has been positive with letters of support provided from the Hill's, Willowburn Arrowtown Limited (Peter McClean & Andrew Green) and Lamont's. Consultation is ongoing with all neighbours with a view to providing further detail and information on the proposal to all neighbours if the proposal proceeds further.

ADEQUATE INFRASTRUCTURE

A servicing assessment report has been commissioned from Rational Limited attached (**Appendix [G]**). This report confirms the development can be serviced. Preferred options are highlighted in the report however; the applicant acknowledges that any decisions around servicing will need to be developed in consultation with QLDC. The applicant welcomes further discussion and dialogue with QLDC in refining and confirming the servicing of the development.

An assessment has also been prepared by Davis Consulting Group (**Appendix [H]**) that confirms no liquefaction hazards is shown on Council's hazard maps and after completing a PSI that it is highly unlikely that there would be any risk to human health as a result of the land use proposed.

A traffic assessment has been prepared by Carriageway Consulting (**Appendix [I]**). This assessment confirms the proposal will have minimal effect on the surrounding roading network. Specifically, this assessment confirms that adequate capacity exists to accommodate additional traffic within the existing network without any upgrades.

DEMAND FOR QUALIFYING DEVELOPMENT/RESIDENTIAL HOUSING

The Arrowtown Housing Demand assessment prepared by Insight Economics ("Insight Report") for the QLDC has confirmed a demand for residential housing exists in Arrowtown.³

Of note this assessment highlights the changing demographics and limited extent of housing stock currently on the market. It is considered the unique attributes of this SHA proposal in providing retiree housing can positively contribute to both meeting demand in the retiree segment of the market but also in freeing up existing housing stock within Arrowtown. This is considered a significant benefit, unique to this SHA proposal.

By providing an option for retirees the opportunity exists for existing housing stock within Arrowtown to be freed up without adversely affecting the existing form and character of the town. Furthermore, this SHA proposal in providing supply in the retiree market segment will not place pressure on other social infrastructure in the same manner a more traditional supply of residential housing may have on Arrowtown, for example the capacity of schools. These specific benefits highlight how the retirement village proposal can address housing demand within the particular context of Arrowtown.

³ Section 6: Summary and Conclusions – Arrowtown Dwelling Supply and Demand prepared by Insight Economics

The Development Overview attached to this report (**Appendix [A]**) confirms there is significant growth in the retiree demographic. This is supported by the Insight Report which identifies a 6% growth in the 60+ demographic⁴ between 2001 - 2013.

The Development Overview also highlights there is a significant under supply of independent living and Care Bed provision within the Queenstown Lakes District with current supply being half the New Zealand average demonstrating significant demand exists. Of note most of the increase in supply between 2009 and 2014 is a result of the retirement village development in Wanaka.

Both the Development Overview and Insight Report highlight significant anticipated growth into the future and therefore it is considered there is a demonstrated demand for housing and retiree housing in particular. Furthermore, this proposal provides the opportunity to address demand not only for retiree housing but housing demand more generally within Arrowtown by freeing up existing housing stock.

AFFORDABILITY

As identified in the Development Overview at least 20% of the villas and apartments will be set at affordable price points.

The range of products and typologies include:

- Apartments, one, two and three bedrooms,
- Standalone Villas in both two and three bedroom configurations, and
- Care beds within the care facility.

It is considered this range of housing typologies and size will ensure delivery of product to the affordable end of the market.

The proposal being retiree focussed also has the ability to target that particular segment of the market which as discussed above has an identified demand in the Queenstown Lakes District.

The ownership structure whereby the owners of the village retain long term ownership of the residences and land ensure the SHA proposal will continue to supply the retiree market into the future. This structure also effectively prohibits short term rental/visitor accommodation as promoted by the QLDC Policy.

The proximity of the proposal being within walking and cycling distance or a short car ride from Arrowtown will also have broader affordability benefits in enabling residents to remain connected with their local community without involving longer commutes that might otherwise be associated with moving to retirement villages located outside of the District.

The contribution retirees can continue to make to the Arrowtown community by remaining a part of the community will also have 'affordability' benefits through their continued contribution to Arrowtown's social infrastructure.

⁴ Table 1 pg 2 – Arrowtown Dwelling Supply and Demand prepared by Insight Economics

Consultation with the Queenstown Lakes Community Housing Trust has been undertaken and is progressing positively. Feedback from the Trust is attached to the Consultation Summary Report (**Appendix [F]**) confirming the positive discussions that have occurred.

Arrowtown Lifestyle Retirement Village is committed to reaching an agreement with the Trust on a form of contribution and considers this agreement will form an integral part of the proposal once details of the proposal are confirmed through the SHA process. The developer is happy to work with QLDC and the Trust to finalise an agreement to ensure an appropriate contribution is provided.

PREDOMINANTLY RESIDENTIAL

The preceding sections of this report have highlighted the significant contribution this proposal would provide to the retiree segment of the residential housing market.

Legal advice has been sought and confirms there is no reason a SHA could not be targeted at the retirement housing market which faces the same challenges of availability and affordability as the housing market for young working families. The purpose of the HASHAA and the Accord are not just targeted at young people entering into the housing market, they generally address housing availability and housing affordability.

As discussed above the unique attributes of the retiree market focus means the proposal will have the ability to contribute towards freeing up existing residential housing stock as well as providing housing for the retiree segment of the residential housing market.

The proposal would contain several centralised facilities in the form of a Community and Age Care Facility. These elements of the proposal are considered integral to the offering within a retirement village and also provide wider benefits to the Arrowtown community in providing for people as they age. These facilities would contain elements that would be 'non-residential' in nature. However, these components are considered ancillary to the primary function of the proposal which is to provide housing for retirees.

Therefore, taking into account the wider benefits of providing for centralised facilities for less able people and the medical component of the care facility in providing provision for this service within the District, providing some 'non-residential' elements is considered appropriate.

BUILDING HEIGHT

The draft master plan provides for single and two storey building forms with the two storey forms proposed back and centrally within the site so that they are distanced from McDonnell Road and have the hill behind as a backdrop. Design package (**Appendix [B]**) contains a site cross section that indicates the scale of the development within the context of McDonnell Road, the site and the surrounding landform (Figure 2 below).

An 8m height limit currently applies within the Rural General Zone (the operative zoning applicable to the site). For design reasons it is preferred that some flexibility around height is provided to enable gabled forms and roof articulation to the two storey elements so they can be developed in keeping with the Arrowtown style. Therefore, although developed building designs have not been

completed ideally a height limit of approximately 9m for the two storey components of the development and 10 m for the care facility would be provided.

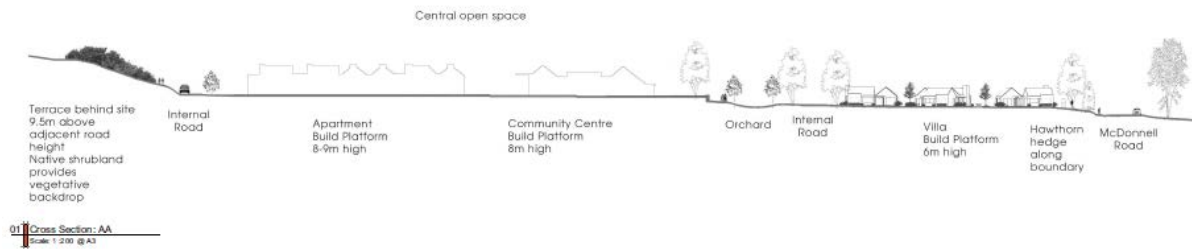


Figure 2: Cross Section

MINIMUM NUMBER OF DWELLINGS

The indicative master plan has been prepared to demonstrate the overall form and ability of the proposal to fit within the broader landscape context and potential yield for the site.

Key attributes of the master plan are:

- Location of two storey forms centrally and against the backdrop of the hill to manage their bulk and scale.
- Provision of a landscape setback to McDonnell Road
- Clustering of villas to retain a green landscape appearance to the site.
- A single entry from McDonnell Road where the existing vehicle crossing to the site exists.

This has provided an indicative yield for the site of:

- 90-120 villas
- 40-55 apartments
- A 100 bed aged care facility offering rest home, hospital and dementia level care.
- Community facilities including restaurant and café, lounges, library, swimming pool, gym and bowling green (for the exclusive use of residents).
- Extensive gardens and landscape areas in keeping with the rich rural lifestyle of Arrowtown tradition.

The draft master plan shows a clear commitment to a range of housing products and at a minimum the ability of the site to accommodate numbers as indicated within the master plan and this application.

However, through the resource consent process and discussion with Council it is considered flexibility exists to modify numbers.

RESIDENTIAL DEVELOPMENT QUALITY

The developer is committed to a quality design outcome and has a proven track record in providing a very high quality of design and development. The Wanaka Retirement Village is considered a relevant example.

Understanding and responding to the unique qualities and building forms characteristic of the Wakatipu and Arrowtown are considered at the forefront of the design response and building forms for the site. Phillip Blakely of Blakely Wallace Associates has been engaged as part of the design team to ensure the Arrowtown qualities flow through in all aspects of the design. In collaboration with Foley Group Architecture, retirement village specialists, the foundations of a successful design team exist to ensure quality outcomes as promoted by QLDC.

The draft master plan (**Appendix [B]**) and site analysis (**Appendix [J]**) is illustrative of the careful consideration and the developer's commitment to providing a responsive and quality development.

Contained in **Appendix [K]** is an assessment of the proposal and potential to promote the development quality expectations of QLDC with **Appendix [B]** containing indicative building plans demonstrating how the Arrowtown style and a quality building form can be delivered.

CONCLUSION

This expression of interest has addressed the QLDC criteria for recommending Special Housing Areas to the Government. It is considered it has been demonstrated that there is strong support for recommending SHA status based on these criteria.

This expression of interest has identified a number of unique attributes that provide additional positive benefits for the Arrowtown Community and the ability of this proposal to address the residential housing shortage in Arrowtown and wider Wakatipu.

Significant public consultation and engagement with key stakeholder groups within Arrowtown has been undertaken and an overwhelming level of support has been identified for the proposal.

The developer is committed to delivering a quality development as it has done in the past and appreciates that continued development of the proposal and working with QLDC is integral to the realisation of the development through the SHA process.

List of Attachments:

- [A]** Development Overview
- [B]** Master Plan & Indicative Building Designs
- [C]** RM090439 Approved Plan
- [D]** Context Plan
- [E]** Landscape Assessment
- [F]** Consultation Summary Report
- [G]** Infrastructure Servicing Report
- [H]** Hazard Assessment - Presented separately
- [I]** Traffic Assessment
- [J]** Site Analysis
- [K]** Assessment of QLDC Design Criteria



Arrowtown Lifestyle Retirement Village

Development Overview – October 15

Background

A Joint Venture has been established between the Anderson/Armstrong families and the Monk family of Arrowtown to develop, own and operate a retirement village and aged care facility on 12 hectares of land on McDonnell Rd in Arrowtown.

The Joint Venture has been formed to bring together local land owners (Monk family) with experienced retirement village developers and operators (Anderson/Armstrong families).

Ron Anderson and Aaron Armstrong have worked together developing and operating retirement villages throughout New Zealand for the past 17 years. Most recently they have developed the highly successful Aspiring Lifestyle Retirement Village in Wanaka. Over 100 villas have been sold at the Aspiring Village demonstrating the strong demand for this type of lifestyle in the Queenstown Lakes District.

The People Involved

- Anderson Family – Ron Anderson and his family are local Otago people. Ron has been building and running retirement villages throughout New Zealand for the past 17 years. Ron's son Richard and his wife Jennie live in Wanaka and have managed the sales at the Aspiring Lifestyle Retirement Village in Wanaka since 2010.
- Monk Family – Roger Monk and his family own the land proposed for the retirement village. The Monks are a well-known local family and are passionate about the community.
- Aaron Armstrong – Aaron has worked on the development of retirement villages throughout New Zealand for the past 17 years. He is Managing Director of the Aspiring Lifestyle Retirement Village in Wanaka.

Proposed Village

The proposed Arrowtown Lifestyle Village will roundly consist of:-

- 90-120 villas – All single level dwellings to a maximum height of 6m built in a range of configurations from 2 bed affordable dwellings to 3 bedroom luxury villas.
- 40-55 Apartments – The apartments will be constructed to the rear of the site as two story buildings with internal access garages. The apartments are yet to be fully designed but will be in keeping with the Arrowtown & Millbrook style of architecture with sloping alpine styled gabled roof features & feature chimney's to a maximum height of 9m.

- A 100 bed Aged Care Facility offering rest home, hospital and dementia level care is proposed to be developed again to the rear of the site as a two story winged care facility overlooking feature gardens & internal courtyards. Again the detailed design is yet to be fully developed, however, the intention is that the building exterior would reflect the traditional Arrowtown architecture with sloping alpine roof lines and stone features. The maximum height of the care centre will be 10m.
- A Community Facility including dining / café, lounges, library, swimming pool, gym and bowling green is also proposed to be developed overlooking landscaped open spaces at the juncture between the villas and care facility. This building will be single story to a maximum height of 8m and will be styled in the traditional Wakatipu basin homestead architecture.
- Extensive gardens and landscaped areas all in keeping with the rich rural lifestyle Arrowtown tradition.

Like most retirement villages in New Zealand occupants will purchase an “Occupation Right Agreement” which provides them with a right to occupy their chosen villa or apartment for the rest of their lives or until they need a higher level of care and move into the aged care facility. The key advantage of this form of tenure is that the village owner is able to set the standard and vision for the village. There is no subdivision of the underlying village asset and no subsequent sell down to downstream owners who potentially may develop the residences to a different and / or lesser standard. The village owner therefore develops the village to a consistent standard, retains ownership long term and is ultimately responsible for maintaining all village assets & landscape features for the long term interest of the resident community. This is a key difference to other residential development models, one that enables a more reliable and consistent tenure over the longer term.

A range of villas and apartments will be offered in the village. There will be two and three bedroom villas and one, two and three bedroom apartments.

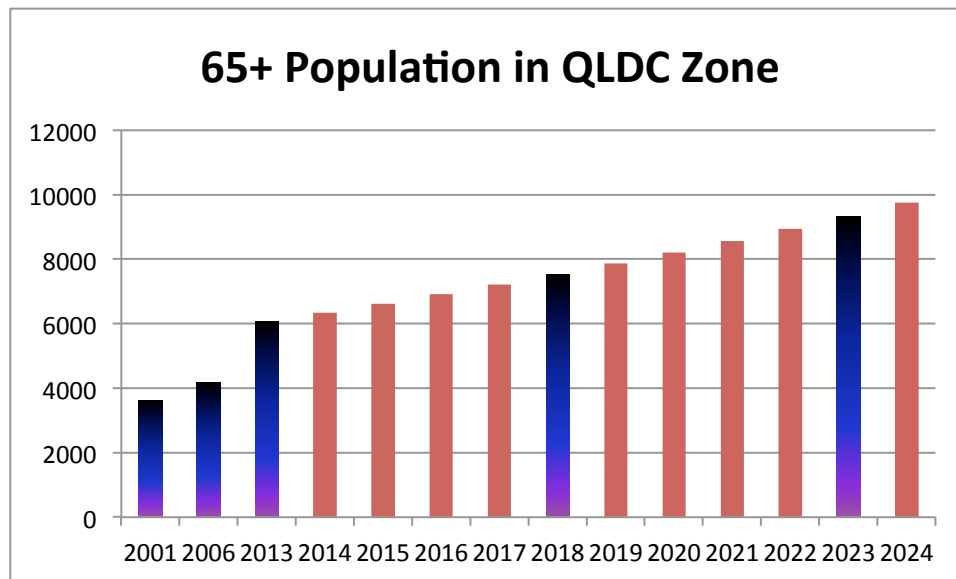
At least 20% of the villas and apartments will be set at affordable price points relative to the local real estate market. This is common for retirement village units which typically sell for around 15% below local house prices so that residents are able to free up some capital from the sale of their homes when they move into the village.

The need for a Retirement Village in the Wakatipu Basin

2013 CENSUS AND GROWTH PROJECTIONS:

The 65+ population has grown significantly in recent years, and this growth is projected to continue at an average of 4.4% per annum for the next 10 years. By 2024 there will be 9,800 people aged 65 and over in this area, compared to 6,300 today.

The 65+ segment of the population will make up approximately 23% of all people in the area. (The blue columns in the table below relate to Census years.)



CURRENT OCCUPANCY IN RETIREMENT VILLAGES/CARE BEDS IN THE AREA:

Today, there are approximately 150 people living in independent accommodation in retirement villages (the vast majority of them at Aspiring Lifestyle Retirement Village in Wanaka) and 180 in Care Beds around the community. This is a significant increase in independent living penetration – but it is still well below the New Zealand average – there is still significant potential for growth. There must be more and more people having to leave the area to find care – with penetration levels remaining significantly below the average NZ levels.

	2009	2014	NZ Average
Independent Living Penetration	0.5%	2.4%	5%
Care Bed Penetration	2.3%	2.8%	5-6%

PROJECTED MARKET GROWTH SCENARIOS:

The following growth scenarios have been modelled.

- Conservative:
 - Independent: 5% growth/annum in penetration (growing from 2.4% today to 3.9% in 2024 – still below the national average today)
 - Residential Care: 5% growth in residential care (from 2.8% to 4.6%)
- Mid-range:
 - Independent: 15% growth per annum early on to 5.5% by 2020 but remaining constant then
 - Care: 10% growth per annum early on to 5.5% by 2021 and remaining constant then

- Optimistic:
 - Independent: 15% growth per annum right through – growing to 9.6% by 2024 (same level as Tauranga now)
 - Care: 10% growth per annum right through – growing to 7.6% by 2024

The table below outlines the cumulative **under**/oversupply in the market based on the current villages only – and no further development plans. Based on all three scenarios there are considerable shortages in both independent living and residential care. The Mid-Range scenario seems the most likely.

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Independent Living											
Conservative	-0	-10	-22	-34	-48	-63	-80	-100	-121	-144	-170
Mid-Range	-3	-25	-52	-84	-124	-171	-229	-244	-260	-277	-294
Optimistic	-3	-25	-52	-84	-124	-171	-229	-299	-382	-483	-603
Residential Care											
Conservative	-3	-20	-39	-60	-83	-108	-135	-165	-198	-234	-274
Mid-Range	-6	-33	-63	-99	-139	-185	-239	-300	-321	-343	-365
Optimistic	-6	-33	-63	-99	-139	-185	-239	-300	-370	-451	-544

CONCLUSION - There is a clear & pressing need to build a lifestyle retirement village with associated aged care centre within the Queenstown Lakes District, specifically the Arrowtown area where there is a high proportion of people aged in the 65+ age bracket.

Why this site?

5 years have been spent investigating potential sites for a retirement village around Queenstown. The McDonnell Rd site is the only one we've found that we believe could accommodate a successful retirement village.

The key attributes of this site are;

- Size – the site is 12 ha and can accommodate a village of 90-120 villas, 40-55 apartments & a care facility and to be economically viable retirement villages need to be of a certain scale. Smaller sites which could only accommodate smaller numbers of units will not be economically viable.
- Large enough to allow villas – our experience tells us that a large portion of the local retiree market prefer to live in villas. This is why we have planned a 2:1 ratio of villas to apartments. We do not believe that an apartment only style retirement village which potentially might fit a smaller site will be successful because it does not deliver what a significant portion of the market wants – villas.
- Flat land- a retirement village needs to be flat for easy movement of the residents around the village and for level access to homes.
- Close to an existing community – the residents of a retirement village want to remain connected with their community. They do not want to feel isolated so a successful

village needs to be situated relatively close to an existing community and all the associated services – shops, bowling clubs etc.

- Sun – our experience from Wanaka with Aspiring Village tells us that a sunny location is one of the single most important considerations for retirees when moving to a retirement village. The north facing aspect of the Monks land holding ideally suits this necessity.

The McDonnell Rd site is the only location we have found that meets all of the above criteria.

Advantages of a Retirement Village in the Wakatipu Basin

- At the moment Arrowtown and Queenstown residents who want to move to a retirement village or need care currently have to move out of the district. This village will allow people to remain where they want to be - near their families and where they have always lived.
- Demand for the village is predominantly local & will free up housing in existing urban areas for younger families and / or greater intensification within existing urban boundaries. Nearly all residents of retirement villages have an existing home to sell. This project will have a flow on affect in freeing up homes which will assist in easing QLDC's housing supply issues. This is supported by the overwhelming support for the village identified from the recent community consultation programme undertaken by the village development team.
- The owners of the village retain long term ownership (residents purchase a license to occupy). This is not a short-term development project. The village owner retains control of and maintains landscaping and architecture.
- The village provides significant recreational amenities and places no pressure on existing community amenities.
- The owners are experienced and have a proven track record with Aspiring Lifestyle Retirement Village and other villages around the country.
- The owners are local people and care about the community.
- There is demand for a retirement village now with demand forecast to grow significantly over the coming years as the population ages.
- The project will cost \$105m and will provide significant employment opportunities both in construction and in the ongoing running of the village and care facility.
- The people of Arrowtown and Queenstown want a retirement village. We have strong support within the community.



Timing of the Village

As is evident from this application, public interest and market demand for the Arrowtown Lifestyle Retirement Village is very strong.

Subject to a successful SHA application process we expect to advance immediately into preparation & lodgement of the necessary resource consents to develop the village with the view to having all consents in place by mid 2016. Stage 1 of the development will involve delivery of the initial community facility and 12 -15 villas constructed close to the entrance with Stage 1 completed & ready for occupation by late summer 2017. Given the current high levels of interest we anticipate follow on stages to advance immediately within the order of 15 – 20 villas and / or apartments completed annually as demand dictates until completion of the village.

We also anticipate demand for the care facility to be strong with the current programmed expectation being to develop the care centre in 2-3 stages, commencing with stage 1, starting in 2018 with completion planned for late 2019. Later stages will be developed as market demand dictates the need for more care & dementia beds in the Wakatipu Basin.

Report prepared by Aaron Armstrong

Founder - Arrowtown Retirement Village





01 | Cross Section: AA
Scale: 1 :200 @ A3



01 Villa: North East View



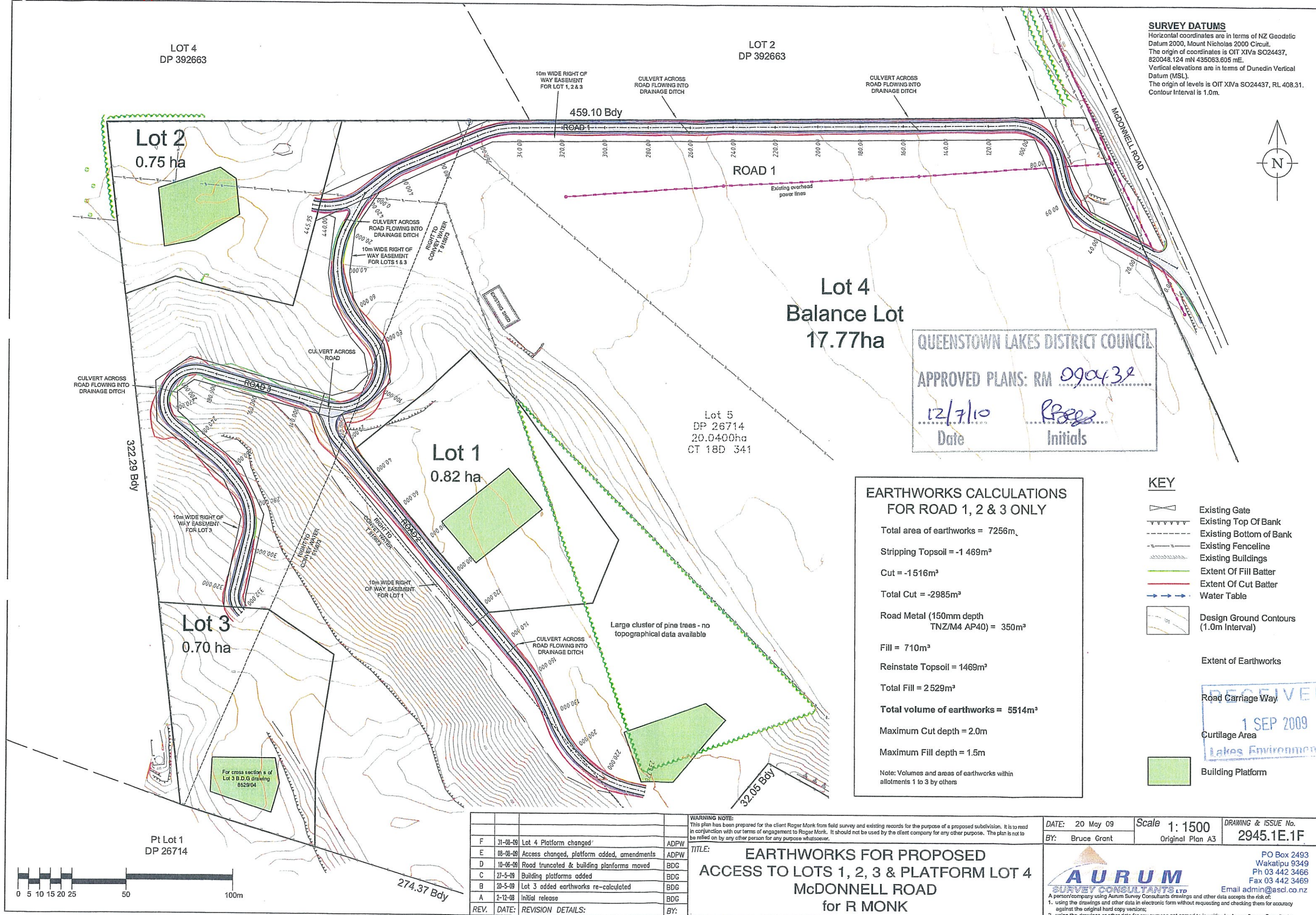
01 Village Entry



01 | Community Centre/Apartments Concept

SURVEY DATUMS

Horizontal coordinates are in terms of NZ Geodetic Datum 2000, Mount Nicholas 2000 Circuit.
The origin of coordinates is OIT XIVa SO24437, 820048.124 mN 435063.605 mE.
Vertical elevations are in terms of Dunedin Vertical Datum (MSL).
The origin of levels is OIT XIVa SO24437, RL 408.31.
Contour Interval is 1.0m.



QUEENSTOWN LAKES DISTRICT COUNCIL

APPROVED PLANS: RM 090438

12/7/10
Date

R. Grant
Initials

EARTHWORKS CALCULATIONS FOR ROAD 1, 2 & 3 ONLY

Total area of earthworks = 7256m²

Stripping Topsoil = -1 469m³

Cut = -1516m³

Total Cut = -2985m³

Road Metal (150mm depth
TNZ/M4 AP40) = 350m³

Fill = 710m³

Reinstate Topsoil = 1469m³

Total Fill = 2529m³

Total volume of earthworks = 5514m³

Maximum Cut depth = 2.0m

Maximum Fill depth = 1.5m

Note: Volumes and areas of earthworks within allotments 1 to 3 by others

KEY

- Existing Gate
- Existing Top Of Bank
- Existing Bottom of Bank
- Existing Fenceline
- Existing Buildings
- Extent Of Fill Batter
- Extent Of Cut Batter
- Water Table

Design Ground Contours
(1.0m Interval)

Extent of Earthworks

Road Carriage Way

1 SEP 2009

Curtilage Area

Lakes Environment

Building Platform

REV.	DATE	REVISION DETAILS	BY:
F	31-08-09	Lot 4 Platform changed	ADPW
E	08-08-08	Access changed, platform added, amendments	ADPW
D	10-06-08	Road truncated & building platforms moved	BDG
C	27-5-09	Building platforms added	BDG
B	20-5-09	Lot 3 added earthworks re-calculated	BDG
A	2-12-08	Initial release	BDG

WARNING NOTE:
This plan has been prepared for the client Roger Monk from field survey and existing records for the purpose of a proposed subdivision. It is to read in conjunction with our terms of engagement to Roger Monk. It should not be used by the client company for any other purpose. The plan is not to be relied on by any other person for any purpose whatsoever.

TITLE:
**EARTHWORKS FOR PROPOSED
ACCESS TO LOTS 1, 2, 3 & PLATFORM LOT 4
McDONNELL ROAD
for R MONK**

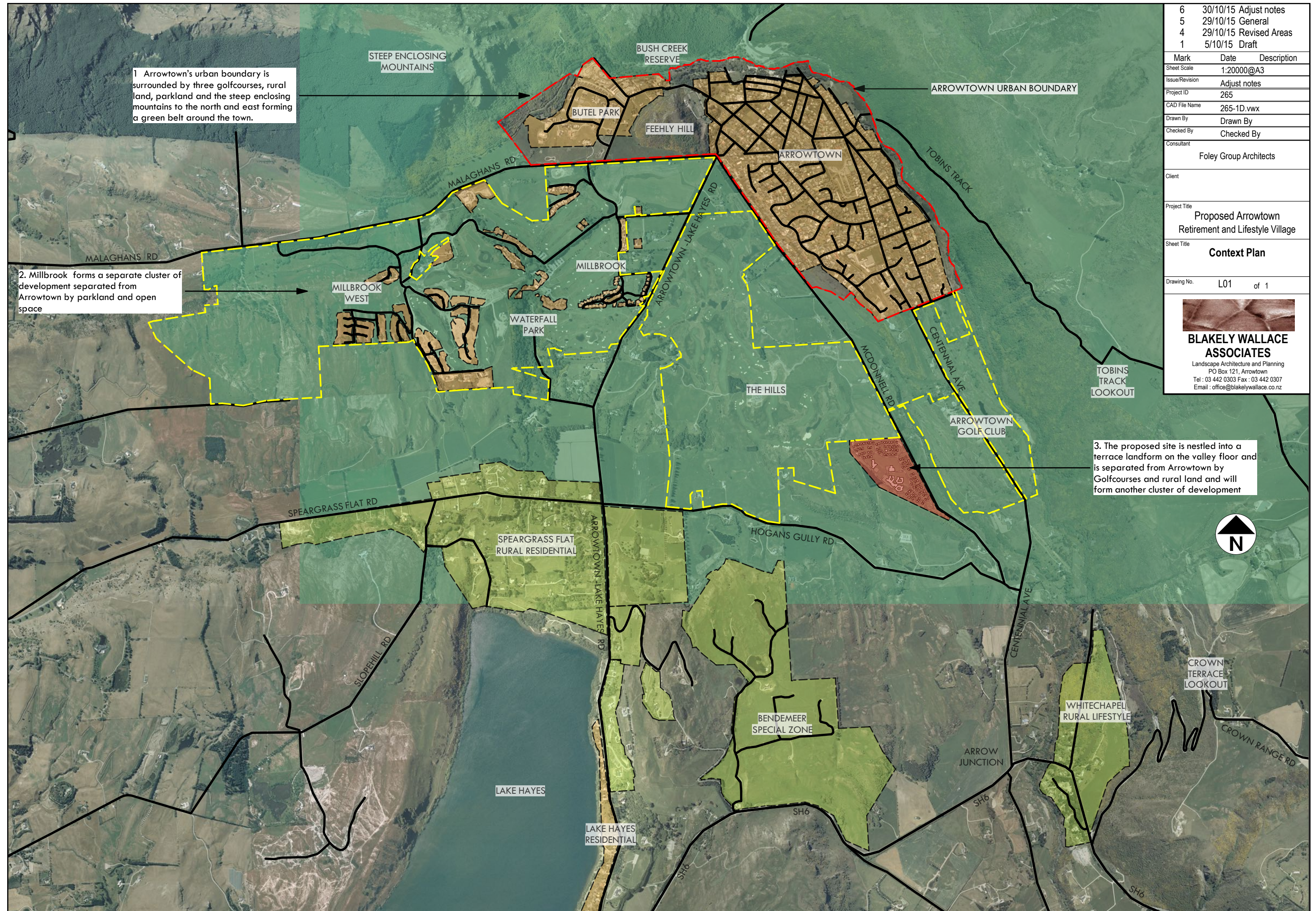
DATE: 20 May 09
BY: Bruce Grant

Scale 1: 1500
Original Plan A3


DRAWING & ISSUE No.
2945.1E.1F

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6	30/10/15	Adjust notes
5	29/10/15	General
4	29/10/15	Revised Areas
1	5/10/15	Draft

Mark	Date	Description
Sheet Scale	1:20000@A3	
Issue/Revision	Adjust notes	
Project ID	265	
CAD File Name	265-1D.vwx	
Drawn By	Drawn By	
Checked By	Checked By	
Consultant	Foley Group Architects	
Client		
Project Title	Proposed Arrowtown Retirement and Lifestyle Village	
Sheet Title	Context Plan	
Drawing No.	L01	of 1
 BLAKELY WALLACE ASSOCIATES Landscape Architecture and Planning PO Box 121, Arrowtown Tel : 03 442 0303 Fax : 03 442 0307 Email : office@blakelywallace.co.nz		



BLAKELY WALLACE ASSOCIATES

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ARROWTOWN RETIREMENT AND LIFESTYLE VILLAGE

Brief site description

The site is situated at the southern end of Mc Donnell Road, approximately 1 km SW of Arrowtown. The land is glacial derived outwash surface with free draining soils typical in the Arrowtown and wider Wakatipu Basin valley floor.

The topography is gently undulating with two or three internal low terrace landforms back dropped by a higher alluvial terrace. It is currently grazed farmland with a pine plantation on the terrace face above and at rear of the site. It is north facing, open and sunny. An existing air strip is used by the owner of the property.

Landscape Context

The 15 ha site is located midway between Arrowtown, Millbrook, Arrow Junction and the north end of Lake Hayes in the north east corner of the Wakatipu Basin. Hogan Gully Road is south of the site separated by low ice sculptured hills. The Hills Golfcourse property boundaries the site to the north and the Arrowtown Golfcourse is east of the site. The immediate surrounds are predominantly rural with scattered rural residential development, grazed land and Golfcourses.

Rationale for Retirement and Lifestyle Village

Arrowtown is visually absorbed within the basin landscape because it is tucked into terrace landform in the north east corner of the Wakatipu Basin beneath the high enclosing mountain ranges that surround the wider basin. The town fits snugly, hugging the natural landform and is surrounded by green areas including three Golfcourses and rural land, (though this has been fragmented to some extent in recent years).

Millbrook Resort forms a separate more recent cluster of development approximately 1 km to the west centred around the historic early Millbrook farming property. Millbrook also integrates well into basin landscape because of its predominantly valley floor location and clusters of residential development with a strong architectural theme separated by generous golfing greenways and open space.

On the basis of landscape and visual there are several strong reasons in favour for a Retirement and Lifestyle Village at the proposed Mc Donnell Road site. These include:

- 1 Preservation of the Arrowtown Urban boundary.
- 2 Landform and topographic factors
- 3 Historic settlement pattern.
- 4 Visual

1. Urban Boundary

Preserving Arrowtown's urban boundary has been a major issue for the town for many years and a sticking point for other proposals on the edge of the town.

This proposal allows for another village which is physically separate, and a discrete cluster of development away from the urban boundary of Arrowtown. As with Millbrook It will be separated from Arrowtown by rural land and/or open space. At the same time it is sufficiently close to Arrowtown to still feel part of the Arrowtown community (in the same way as Millbrook). It is easily within walking and biking distance.

2. Topographic and landform

The site is situated at the base of the terrace landform and the development will be nestled into the landform at the base of the terrace on the valley floor. As such the development fits into the natural landform in the same way that Arrowtown and Millbrook do.

3. Historic settlement patterns

Historically early settlement was located on the valley floor for pragmatic reasons such as shelter, access to water and ease of building. Respecting early settlement patterns is considered an important basis for successfully absorbing new development in the basin. The proposed site is on the valley floor and avoids spreading development over more visually sensitive ice sculptured hills.

4. Visual

Visual considerations and visibility are discussed in more detail under Visual Effects and visibility below. The site is reasonably well screened from public views. On McDonnell Road the road is at a lower level, below the site along most of the road frontage and is predominately screened by the existing hawthorne hedgerow. Viewed from McDonnell Road in a vehicle the viewer will be aware that there is a development within the hedge but it will not be a dominant feature.

Other Considerations

Building design and landscape are recognised as important in terms of fitting the local context. Buildings will be designed to reflect the Arrowtown and Millbrook style with emphasis on appropriate scale and design and to reinforce the Arrowtown and surrounds aesthetic and not a transplanted standard retirement village typology from somewhere else.

With the exception of larger buildings such as Community Centre, the Aged Care facility and the apartments, the villa units are smaller scale single level villas clustered in residential pods and separated by greenways. A large landscaped open space is planned as a feature of the Village.

Villas will be small in scale with green spaces and trees between. This will assist with visual absorption and fitting into the landscape.

Visual Effects and Visibility

In visual terms the site is fairly well hidden from public viewing areas. There are very limited areas where the village will be visible from.

Public areas where it will be visible from include:

1. McDonnell Road
2. Tobins Track
3. Crown Range lookout and Zig zag
4. Advance Terrace and Cotter Ave, Arrowtown
5. Feehly Hill, Arrowtown

McDonnell Road

Visibility from McDonnell Road has already been discussed. An existing hawthorn hedgerow on the west side of McDonnell Road will substantially screen and mitigate the development from McDonnell Road. The gaps in the hedge along the road frontage will be infilled with additional hedge planting to achieve a full screen on this boundary

Tobins Track and Lookout

From the upper part of Tobins Track (above the trees) and from the lookout at the top of the track the Village will be highly visible at just over 1km away looking directly down onto it.

While the view will be different from the open rural land at present and there will be a significant change over time to a built up residential area it is considered that it is an acceptable change. This is due to the factors discussed above with respect to the sites suitability for this kind of development ie the sites ability to absorb development due to topographic considerations; it's consistency with historic settlement patterns; use of the Arrowtown style in building and landscape, and importantly maintaining the urban boundary or green belt around Arrowtown.

In addition the design of the village with clusters of buildings of medium density interspersed with large green areas, trees and open space extensively covering the site will assist with softening and visual absorption.

In summary it is considered the site and wider landscape can absorb this development from this viewpoint.

Crown Terrace lookout and Zig Zag

The site is approximately 2.5km from the Crown Range Look Out. The site is visible from the look out and from the upper sections of the zigzag. Due to the distance viewed the proposed village will not be a dominant feature from this viewpoint. In addition from the actual viewing area and memorial, trees partly obscure views in the direction of the site.

The village development can be absorbed within the basin landscape from this location.

Advance Terrace and Cotter Ave, Arrowtown

From these new areas of Arrowtown on the ridge or edge of the terrace the site is less than a kilometre in distance. This will also be a significant change viewed from these locations from open farmland but will not be an adverse landscape or visual effect. With the extensive planting proposed, open space and village layout, placement of buildings, the development can be absorbed within the context of the local landscape.

Feehly Hill, Arrowtown

From Feehly Hill scenic reserve the site is approximately 2.5km and will not be visually dominant and can be absorbed within the existing settlement pattern.

DESIGN CONCEPT

Village design

The rationale for the village design came from the sites unique characteristics and features as well as visual considerations. At the outset it was recognised that a central open space would be a key feature forming a centrepiece and focus for the village. Also a prime determinant at an early stage was recognition that large buildings such as the Community Centre, Aged Care Facility and Apartments needed to be at the rear of the site set against the terrace landform as this would be the best location to absorb larger buildings nestled in against the hill face.

Topography was also a key determinant of village layout in other ways particularly with road layout and building placement working with the contour and utilising natural form and terrace and to minimise large earthworks.

Key urban design and landscape principles were identified at the start to be incorporated into the design (attached as Appendix 1). The design that evolved has a hub of larger double story buildings centred at the rear of the site with cells of single story residential villas clustered around the site, broken up and linked by greenways and open space.

Entrance off Mc Donnell Road

A single entrance is proposed off McDonnell Road at the location where the topography allows for easy access to the site as well as good visibility in both directions on McDonnell Road. The main entrance will also provide service access around a laneway that follows along the north boundary and provide for an access easement to consented allotments at the rear of the site towards Hogan Gully.

The frontage on McDonnell Road will maintain a rural aesthetic and retain grass verges, a simple rural gate using a traditional stone wall and wooden gates. The existing Hawthorne hedge will remain and gaps in the hedge infilled to consolidate screening.

Inside the hedge is a 10m building setback next to McDonnell Road.

Building Design

Villas – the style is typical of Central Otago / Arrowtown / Queenstown typology, with an emphasis on gable forms, good roof pitches, and the overall form being a series of roofs coming together, in a manner with reduced scale and materials that “humanise” the Villas. Verandahs encourage and define outdoor links. All the Villas are single storey, and are typically arranged into 3 to 4 clusters giving definition to the location and elevation of the different platforms on site.

The Villa plans will be strongly oriented towards sun and the north aspect, and have been designed so Villas will each face north irrespective which side of the laneways they are on.

Apartments - Apartments (or Assisted Living Aged Care Units) are 2 storey, and are located on the rear platform closest to the escarpment. The style here is again Arrowtown /

Millbrook, with each Apartment duo (ground and first floor) given architectural treatment that expresses these units externally (as opposed to a multitude of units in a long form with the only distinction being the balconies). The Apartments will be focussed predominantly towards north, and with the anticipated footprint there is a very strong visual outcome of “Village cluster” when viewing the Apartment building. With the resultant individual and communal landscaping treatment, this individualisation of each Apartment is further strengthened.

Care Facility – this building is also 2 storey, and arranged into 3 wings of Care beds, 2 wings being Hospital level care, and 1 wing being single storey Dementia level care. This building is focussed along the rear of the site abutting the escarpment. The scale of the building is divided into wing “components”, having expressed roof forms and links that give the building a “village cluster” feel also.

Community Centre – this building is the central hub of the Village, housing all the communal functions and activities for the Village, and providing a social hub for the residents of the Villas and Apartments. It will have 3 main roof forms that again diminish the scale, using typologies familiar in the local area. Its internal space is functional and flexible, catering for large and small groups alike, so the architectural treatment has responded accordingly by creating a series of gabled forms linked together. Pergolas and shade devices soften the edges of the building, linking internal and outdoor spaces seamlessly.

Central Amenity and Open space

The central open space is a key feature of the village. From the entrance it will lead up to the focal point of the village, the Community Centre on the upper terrace landform. Feature stone retaining walls will emphasise grade changes in the approach to the main facilities and contribute to the Arrowtown aesthetic with the use of local schist rock. A water feature in the form of a mining or farm water race with pools and gentle waterfalls will descend from the Aged Care facility down through the orchard towards the entrance.

A bowling green and petangue court are located close to the Community Centre with outdoor seating and trees located in green spaces alongside pedestrian paths.

‘The Hills’ boundary

A setback agreement with the Hills requires no trees greater than 4m for a set back of 25m and no buildings greater than 4m for a set back of 20m.

A hedgerow is located on the the Hills boundary to assist with visual separation and screening from the Hills side and provide shelter as well as sunlight and high views out to the mountains from within the village.

The character of the road following the boundary will be that of a country lane with a narrow road, rural hedgerow and trees.

Road network and design

The road network provides local and clear circulation within the village with a clear road hierarchy and way finding to the central facilities. The roading layout attempts to reflect some of the characteristics and layout of old Arrowtown with a rural small town feel in preference to more urban layouts. Other features that tie it to the Arrowtown style will be narrow roads to slow traffic without concrete kerbs and channels and with grass drainage

swales in the Arrowtown tradition. Roads within Villa pods will be narrow with 'hammerhead' cul de sacs and provision for off street parking bays for visitors.

Parking and service access for the Aged Care facility are at the rear of the building against the base of the high terrace. Parking for apartments will be housed within the building.

Pedestrian Cycle Network

Internal pedestrian paths will connect all areas of the village via greenways. In addition narrow roads will encourage safe, dual use of roads for pedestrians and vehicles as happens in Arrowtown.

Pedestrian walkways will connect to the Queenstown Trail network that runs alongside the site on McDonnell Road. There is also an existing pedestrian access easement to the Arrowtown Golfcourse from McDonnell Road which the Village will link into.

Stormwater

Stormwater will be designed around green engineering principles. Stormwater will go to ground and overflow to attenuation basins as required within the site.

Communal Gardens and Orchards

Community gardens, including glasshouses and orchard trees will be located in pocket parks within Villa areas and community orchards will be within the main open space and in the south east corner of the site.

Native planting on rear terrace escarpment

The existing pine plantation is to be removed on the terrace escarpment and will be planted in local native shrubland species for biodiversity and to create a soft indigenous backdrop to the Village. It will also assist with screening the scar created by the road up the terrace face (outside the applicants property).

Appendix 1

Landscape/urban design principles/objectives for Village Masterplan

- McDonnell Road to maintain a rural aesthetic ie grass verge, hawthorn hedgerow and simple rural unpretentious entrance
- Topography to be a key determinate of village layout. Appears to be 2 main terraces within the site (excluding high rear terrace). Perhaps terrace risers are free of buildings and form part of the matrix of open space within the village. Topography may also influence roading layout.
- Possible buffer (no build zone) next to McDonnell Rd.
- Village to consist of clusters of development separated by open space.

- Placement of large buildings needs to be carefully considered (probably at the rear of the site against the high terrace).
- Roads and streets to be narrow to reduce urban/suburbaness but also slow traffic. Roding in the Arrowtown style eg no kerb and channel, gravel shoulders, grass swales and verges.
- Create easy walking environment. Roads - dual purpose for vehicles and pedestrian maybe.
- Avoid white road markings
- Villas to have small private gardens with communal gardens common per residential clusters. Communal gardens include : orchards/vege gardens/glasshouses as well as amenity gardens
- Landscape elements and materials to also be in Arrowtown style eg hedges, stonewalls, avoidance of overly urban paving types.
- Possible link to mining/farming history of Arrow Basin
- Villas possibly facing street in the Arrowtown style with rear lanes for garaging (maybe?)
- Stormwater to ground. Possible retention basins if needed. Grey water treated and disposed on site.
- Avoidance of urban style lights
- Predominantly deciduous trees for maximum sunlight in winter, summer shade and autumn colour. Incorporate/restore an element of indigenous biodiversity.
- Removal of pine woodlot (Rogers intention anyway)



Arrowtown Lifestyle Retirement Village

Public Consultation Summary

- Neighbours Submissions – Refer summary below
- Community Groups Submissions – Refer summary below
- Members of community – Total 282 submissions received.

Consultations Meetings Log

Date	Consultation	Attendees:
3/08/15	<p>Community leaders meeting, Queenstown Resort College.</p> <p>Initial presentation to key leaders in the community to present the concept for the Arrowtown Lifestyle Retirement Village and gain feedback on the proposal.</p> <p><i>Outcome: Positive feedback received and questions raised regarding how services will be met, transport questions, village inclusions, and possible avenues for gaining consent.</i></p>	<p>Approximately 25 attendees including:</p> <ul style="list-style-type: none"> • Scott Stevens (QLDC Councillor) • David Clarke (Arrowtown Planning and Advisory Committee) • Sue Patterson (Arrowtown Promotion and Business Association), • Annette Seddon (Arrowtown Village Association)
4/08/15	<p>Presentation to Queenstown Lakes District Council Councillors, QLDC Office.</p> <p>Workshop style presentation to QLDC councillors and planners.</p> <p><i>Outcome: The QLDC councillors recommended we undertake wide consultation with the Arrowtown community to gauge support for the proposal within the community.</i></p>	<p>In Attendance:</p> <ul style="list-style-type: none"> • Vanessa van Uden • Lyal Cocks • Scott Stevens • Merv Aoake • Alexa Forbes • Mel Gazzard • Ella Lawton • Calum MacLeod • Marc Bretherton • Matthew Paetz
5/08/10	<p>Meeting held with Dame Elizabeth and Murray Hanan, Hanan residence.</p> <p>Discussions held with key local resident Dame Elizabeth Hanon and her husband Murray to outline the proposed retirement village. The Hanans were invited to visit the Aspiring Lifestyle Retirement Village in Wanaka.</p> <p><i>Outcome: Dame Elizabeth acknowledged the need for a retirement village in the area however would prefer it be built in an alternative location.</i></p>	<ul style="list-style-type: none"> • Elizabeth Hanon • Murray Hanon

8/09/15	<p>Arrowtown Community Groups & Associations Meeting – Committee Members, Arrowtown Bowling Club</p> <p>An invitational meeting for local community groups and associations to present the proposal to their committee members.</p> <p><i>Outcome: Positive feedback received, and the group wished to express the urgent need to get the village built as quickly as possible. Supporters forms completed by many attendees.</i></p>	<p>Approximately 30 attendees with representatives from:</p> <ul style="list-style-type: none"> • The Arrowtown Village Association • The Arrowtown Planning and Advisory Committees • The Arrowtown Promotions and Business Association • The Arrowtown Bowling Club
25/09/15	<p>Presentation to Wakatipu Probus Group, St Johns Rooms, Frankton.</p> <p>1 hour Presentation to 40 attendees to overview the Arrowtown Lifestyle Retirement Village proposal.</p> <p><i>Outcome: The group was extremely supportive and moved during the meeting to write a letter of support on behalf of Probus Wakatipu.</i></p>	40 Wakatipu Probus Group members
30/09/15 & 1/10/15	<p>Arrowtown Community Groups & Associations Meeting – Wider Member Groups Arrowtown Bowling Club</p> <p>An extended invitational meeting for local community groups and associations to present the proposal to the wider members and participants.</p> <p>Two meetings were held to cater for the high number of attendees.</p> <p><i>Outcome: Overwhelmingly positive feedback received, and the group wished to express the urgent need to get the village built as quickly as possible. Supporters' forms completed by many attendees.</i></p>	<p>Approximately 135 attendees across two presentations. Invitations sent to:</p> <ul style="list-style-type: none"> • All general members of The Arrowtown Village Association • All general members of The Arrowtown Planning and Advisory Committees • All general members of Arrowtown Promotions and Business Association • All members of The Arrowtown Bowling Club • All members of The Arrowtown Golf Club • All members of The Arrowtown Rugby Club • All members of The Arrowtown RSA • All members of The Arrowtown Business Woman's Group • The Arrowtown Volunteer Fire Brigade • Arrowtown St Johns Ambulance • Arrowtown Anglican Church

		<ul style="list-style-type: none"> • Arrowtown Catholic Church • Arrowtown Presbyterian Church • Senior Net • Arrowtown Thursday Club
12/10/15	<p>Meeting held with Michael and Emma Hills, neighbouring property owners, The Hills where the Arrowtown Lifestyle Retirement Village proposal was formally presented and explained.</p> <p>The Hills have acknowledged by email that they've sited the proposed masterplan of the retirement village and have also indicated their initial support for this development.</p>	<ul style="list-style-type: none"> • Michael Hill • Emma Hill
12/10/15	<p>Meeting with The Lamonts, neighbouring property owners to the south of the subject site where the Arrowtown Lifestyle Retirement Village proposal was formally presented and explained.</p> <p>2nd November;- Formal written comment was provided via the Lamont's Accountant.</p>	<ul style="list-style-type: none"> • Ed Lamont • Carol Lamont
Oct 15	<p>Meetings held with Peter McLean & Andrew Green owners of 219 McDonnell Rd immediately opposite the subject site.</p> <p>The owners have provided an affected party approval form.</p>	<ul style="list-style-type: none"> • Peter McLean • Andrew Green
29/10/2015	<p>Arrowtown Lifestyle Retirement Village Open Day, Arrowtown Bowling Club</p> <p>An open invitation to the general public to attend a "drop in day" at the Arrowtown Bowling Club on the 29th of October. . The Open Day was widely advertised in local publications including the Mountain Scene, the Lakes Weekly Bulletin and The Loop. In addition the Open Day was advertised on the Arrowtown Retirement Village website (www.arrowtownretirementvillage.co.nz)</p> <p><i>Outcome: A positive response was received. Supporters' forms completed by many of the attendees. The Wanaka Bowling Club also indicated that they plan to write a letter of support following their committee meeting on</i></p>	<ul style="list-style-type: none"> • 60+ attendees

	3/11/15	
8/12/15	<p>Queenstown Rotary Club Presentation, Wild Thyme Restaurant, Queenstown.</p> <p>An invitation to speak at an upcoming evening to the Queenstown Rotary Club in December has been accepted</p>	<ul style="list-style-type: none"> • TBA

Note. Moving forward the applicant intends to continue to extend this consultation process to the wider Queenstown Lakes Area.

30 October 2015

Shane Fairmaid
C/- Armstrong & Associates
Box 109696
New Market
Auckland

ATTENTION: Shane Fairmaid

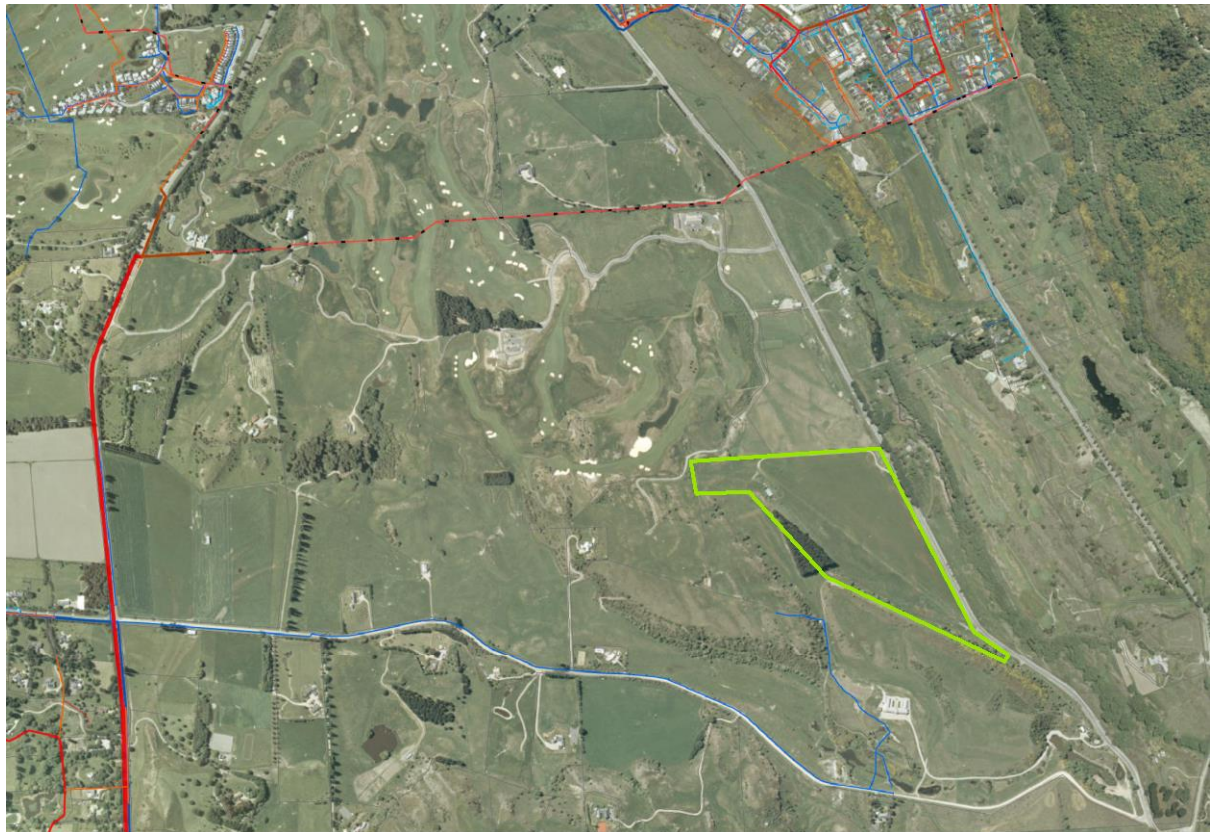
Dear Shane,

RE: Arrowtown Retirement Village, McDonnell Road, Arrowtown

Further to our feasibility report, delivered to Aurum Survey Consultants Ltd on 07/09/15, and as outlined in your e-mail dated 5 October 2015, we have completed the following assessments of the water and wastewater connections for the proposed Retirement Village development on McDonnell Road.

Background

The proposed site (shown in green) for the retirement village is located along McDonnell Road, to the south of Arrowtown between The Hills golf course and the Mt Soho winery. This location is a significant distance from the existing water and wastewater infrastructure and is midway between the Arrowtown and Lake Hayes Schemes giving potential options to connect to either scheme.



Wastewater

Two locations from the feasibility report have been investigated further for this report:

Option 3 - A pump station onsite with a rising main discharging into manhole SM14173 outside 100 Centennial Avenue. Conveying wastewater to Norfolk Street Pump Station via a 150 mm diameter gravity main.

Option 5 – A pump station onsite with the rising main injecting into the existing 300 mm main on Arrowtown – Lake Hayes Road at the junction with Hogan's Gully Road. Conveying wastewater to the Arrowtown – Lakes Hayes Road (Bendemeer) Pump Station via the 300 mm diameter main.

Some further investigation into the network infrastructure has been undertaken since our original report with the key points below:

- The connection point for option 3 is not a manhole. A cleaning eye is installed, but if connection to this point is the preferred option then a manhole would need to be constructed.
- There is little detail available on the Arrowtown – Lake Hayes Road trunk main from the top of McIntyre Hill to its discharge at the Arrowtown – Lake Hayes Road Pump Station. However, from available evidence it appears that it is a sealed construction from the receiving manhole at the top of McIntyre Hill. It is thought that injecting into this main at the junction with Hogan's Gully Road would be feasible as the main is essentially running under gravity at this point and would not be subject to significant pressure.
- The Norfolk Street Pump station was potentially thought to be controlled to a flow by VSDs. However, further discussions with Veolia have clarified that there is no control on these pumps and the current pump flow is the limit for the installed pumps.
- The current configuration at the junction with Shotover Country is unclear. A 'balance tank' was built, at QLDCs request, by the Shotover Country developers so that the three rising mains could discharge and then be conveyed by gravity from that point. However, it is understood that the Arrowtown – Lake Hayes Road Pump Station rising main was never reconfigured to flow into the tank. The future of the tank is also not known, as it has been moved due to a redesign of the roundabout at the junction with the highway. The model has this main configured as a dedicated main from the Arrowtown – Lake Hayes Road Pump Station to the treatment plant.

Modelling - Wastewater

Wastewater modelling is based on the Wakatipu dynamic wastewater model (2012), calibrated to flow data January 2012 and June 2013. The modelling has been carried out on the current day scenario to assess the current impact of the development connecting to the scheme. As the development is outside of the current scheme boundary it is recommended that the future growth scenarios are also considered to ensure that the network has sufficient capacity allocated for developments that are compliant with the current district plan. It is recommended that this is carried out once updated models are available later in the 2015/16 financial year.

The objective of this work is to determine if the wastewater network has sufficient capacity with the addition of this development. It is noted that this development is outside of the current scheme boundary (shown as a dashed red line) and will increase the previous ultimate flow projection for the Arrowtown Scheme.

We have completed our investigations based on the development containing the following loads:

Load Type	Units	Total Units	Load / Unit / Day (l/d)	PDWF (l/d)	Approx Peaking Factor	Rainfall Catchment Area (Ha)
Villas	People	196	245	48,020	2.1	
Apartments	People	46	245	11,270	2.1	
Aged Care	People	60	245	14,700	2.1	
Total	People	302	245	73,990	2.1	11.4

The above wastewater generation rate has been calculated from the standard wastewater model load of 735/connection/day and an assumed average of 3 people/connection.

All other loads have been modelled as per the standard load from the calibrated model. Additional rainfall catchment area has been added to the model as per the above table. The same infiltration parameters as the neighbouring Arrowtown catchments have been applied.

Assessment of Capacity

The relevant sections of the network have been checked for capacity using the following criteria:

- No overflows allowed at any network element.
- No pump station overflows based on the duty pump capacity.
- As per the infrastructure code (section 2.7.10.6), emergency storage of 8 hours of average daily dry weather flow is required or emergency generation.

It should be noted that the following calculations of emergency storage requirement are calculated assuming that 8 hours storage of average daily flow over the peak day flow is required. The use of peak day flows in this estimate is likely to be conservative and may overestimate the storage requirement compared to the intended interpretation. The Infrastructure Code is now superseded by the QLDC Land Development and Subdivision Code of Practice, the Code of Practice does not stipulate any requirements for pump station design. The infrastructure code parameters have been retained as an indicator of emergency storage capacity / emergency management requirements.

Results – SM14173 to Norfolk Street Pump Station (Option 3 Only).

- There are no related network elements overflowing. See attached map.
- Pump station inflow significantly exceeds outflow, but the level of storage is sufficient to avoid overflows. This is based on a single duty pump capacity of 52 l/s and a total storage volume of 247 m³. See Figure 1.
- There is dedicated external emergency storage at this pump station of 220 m³, plus the wet well storage of 27 m³. There is no on-site backup generator. The storage requirement, as per the

infrastructure code, is estimated to be 353 m³, increasing to 377 m³ with the addition of this development.

Results – Norfolk Street Pump Station / Hogan's Gully Road to Arrowtown - Lake Hayes Road Pump Station (Option 3 and 5).

- This trunk main is believed to be a sealed construction and therefore no overflows can occur. The modelled flow is approximately 52% of the calculated capacity of this main, for both scenarios, indicating that sufficient capacity exists. It should be noted that the pipe lengths indicated in the map as having flow above the capacity of the pipe are actually the parallel main flows to Lake Hayes Pump Station 2 and not the trunk main from Norfolk Street Pump Station. See attached map.
- Pump station inflow does exceed outflow, but does not cause an overflow. This is based on a duty/assist pump capacity of 80 l/s and a total storage volume of 275 m³. See Figure 2 and Figure 3.
- There is dedicated external emergency storage at this pump station of 224 m³, plus the wet well storage of 50 m³. Compliance with the infrastructure code is fulfilled by the use of an on-site backup generator. Without the generator the storage requirement, as per the infrastructure code, is estimated to be 455 m³, increasing to 480 m³ with the addition of this development. This does not include any potential upstream or network storage.

Results – Arrowtown - Lake Hayes Road Pump Station to Shotover Treatment Plant (Option 3 and 5).

- This trunk main has been modelled as a dedicated rising main through to the treatment plant and no overflows can occur. The original plan for the 'Balance Tank' at the junction with Shotover Country was that all downstream reticulation would be designed to convey at least the combined pump capacity of the three pump stations discharging to this point (Arrowtown – Lake Hayes Road Pump Station, Lake Hayes Estate Pump Station 4 and Shotover Country Pump Station). As the addition of this development would not trigger the requirement of an upgrade to any pump station it is assumed that the original design of the balance tank and downstream reticulation remains valid.

Discussion - Wastewater

Modelling of the network from the proposed development through to the treatment plant indicates that the existing QLDC network, has sufficient capacity to handle the addition of this development, based on the above assumptions.

For option 3, the model indicates that the Norfolk Street Pump Station is nearing capacity and almost all of the emergency storage is used with the addition of this development. However, it should be noted that this does not result in an overflow, although the risk of overflow is significantly increased.

Option 5 would avoid using the spare capacity within the Arrowtown network and the Norfolk Street Pump Station. Modelling indicates that there would be no capacity issues in the network downstream of the connection point. However, it is noted that this connection point could be more costly and may be more technically difficult to complete.

It is noted that if a blockage occurred along the Arrowtown – Lake Hayes Road trunk main there is a risk of surcharging back up the proposed rising main. However, the highest point of the rising main will be higher than the discharge manhole at the top of McIntyre Hill which would be the first point of overflow.

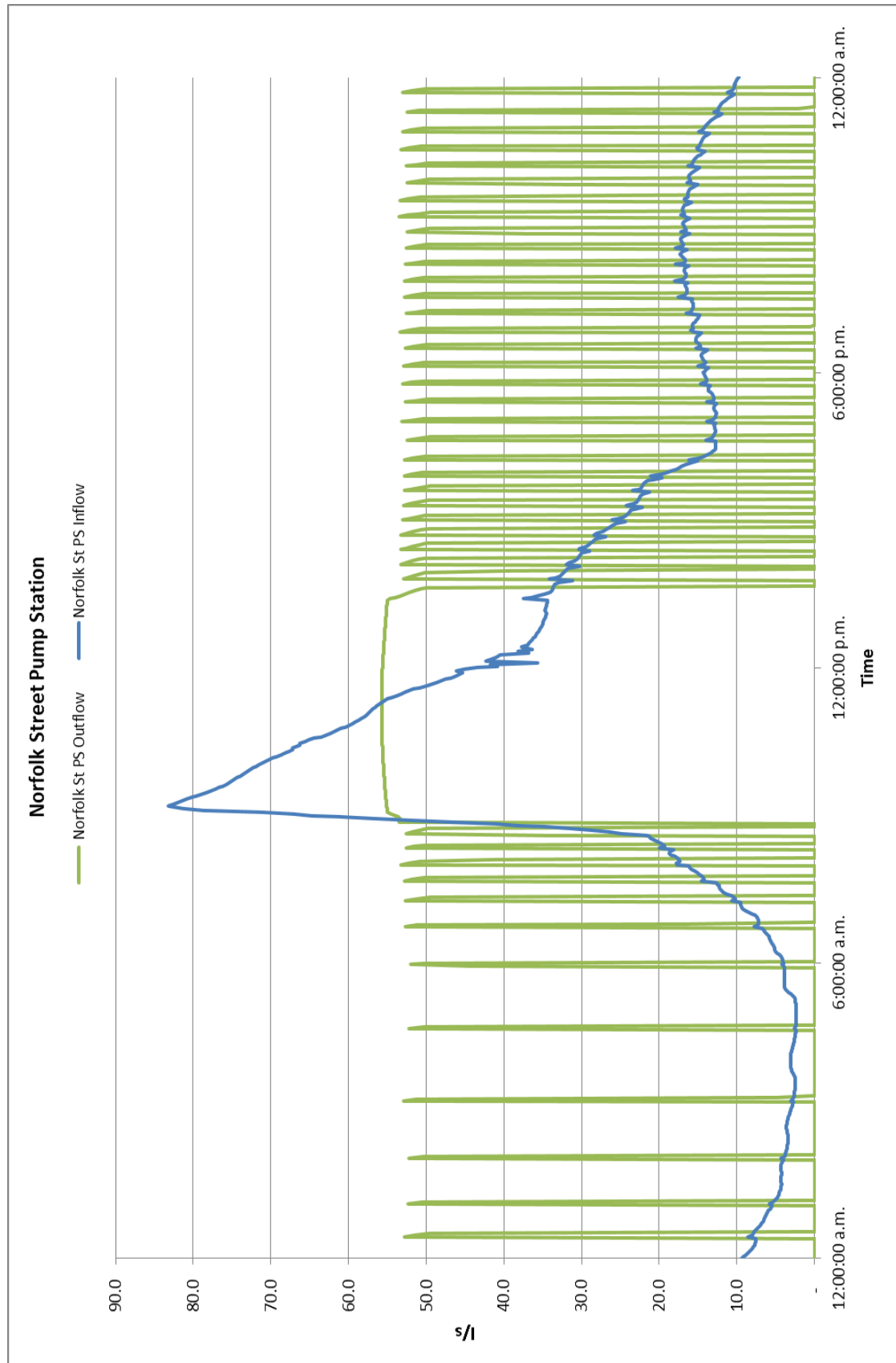


Figure 1 - Option 1 - Norfolk Street Pump Station Inflow/Outflow

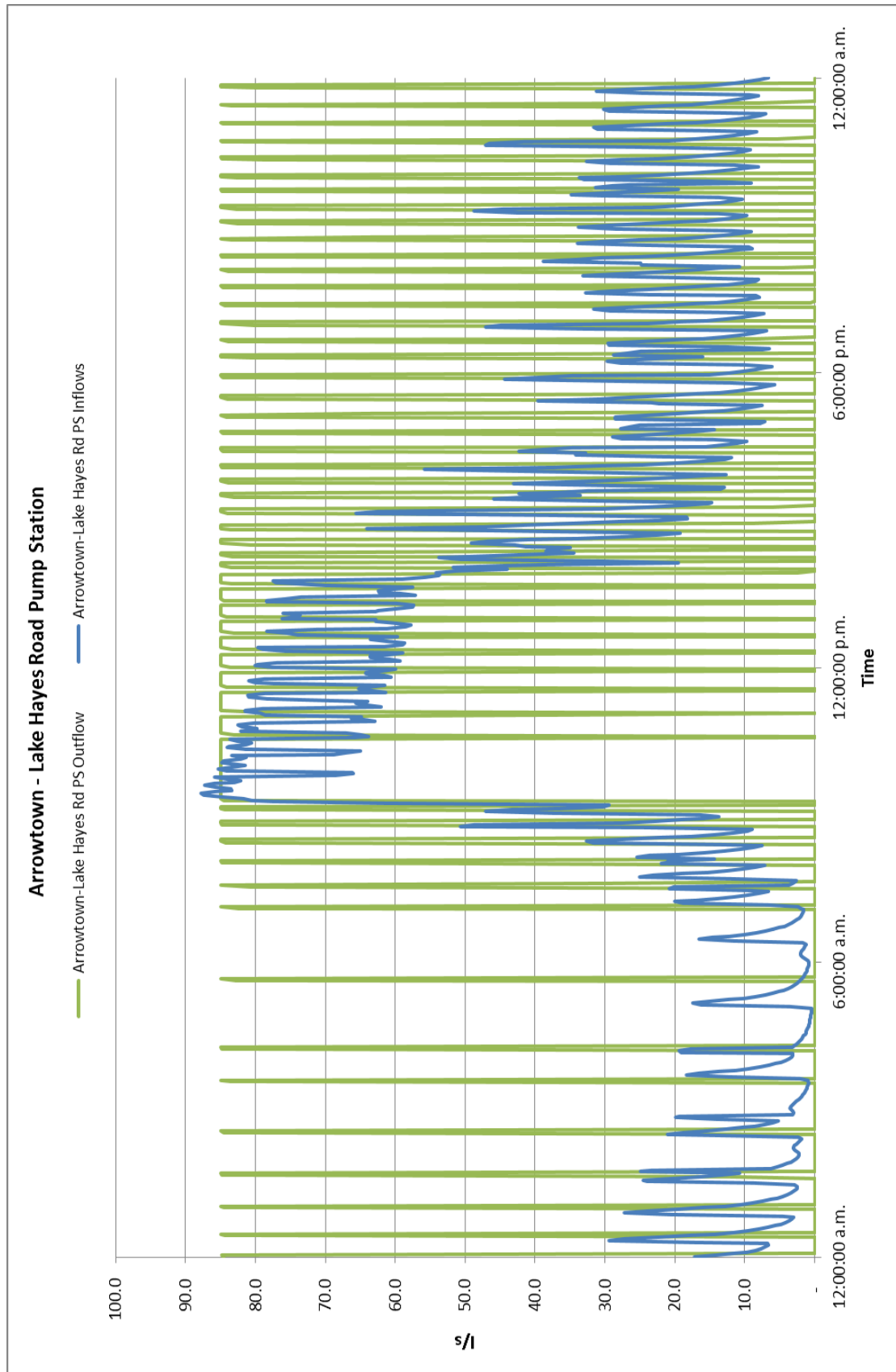


Figure 2 - Option 1 - Arrowtown - Lake Hayes Road Pump Station Inflow/Outflow

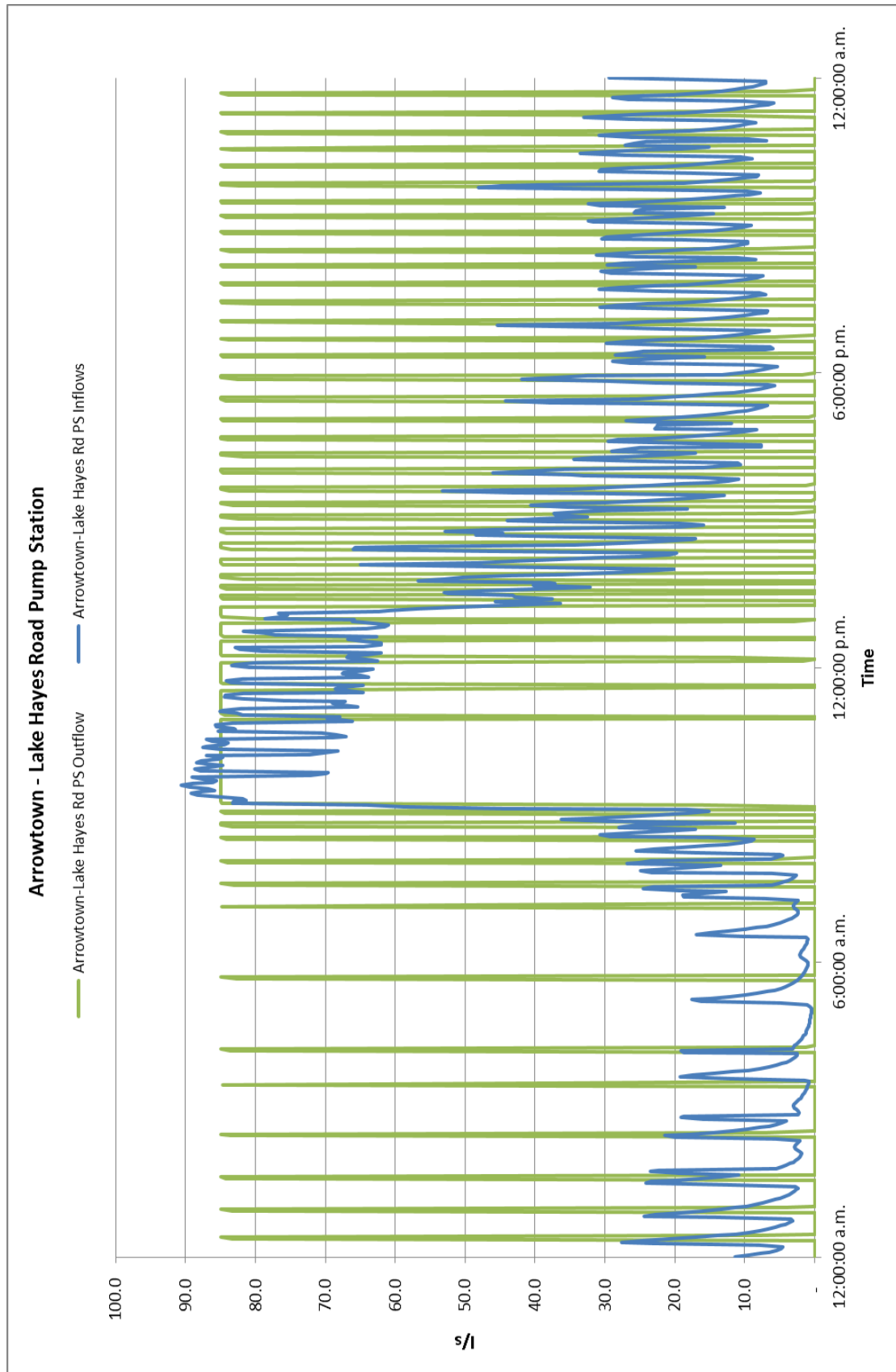


Figure 3 - Option 2 - Arrowtown - Lake Hayes Road Pump Station Inflow/Outflow

Water Supply

Both options highlighted in the feasibility report have been investigated further:

1. Connection to the 200 mm main in McDonnell Road – Arrowtown Scheme.
2. Connection to the 100 mm main in Hogan's Gully Road – Lake Hayes Scheme. It is assumed that the 32mm pipe connecting the Mt Soho Winery is upgraded and extended to service the development. The modelling of a 200 mm diameter connection in this option assumes that the main is upgraded back to the main on Arrowtown - Lake Hayes Road.

Some further investigation into the network infrastructure has been undertaken since our original report with the key points below:

- The Arrowtown water source has been confirmed as to be approaching the total pump capacity and is likely to require to be upgraded in the near future.
- A significant upgrade to the Lake Hayes network is being undertaken with the addition of new bores at the Shotover Country development that is intended to supply Shotover Country and Lake Hayes Estate. A proposed operational change to the PRV located where the pipe enters Lake Hayes Estate will also restrict the flow to Lake Hayes Estate from the existing bores and reservoir which should free up sufficient capacity to supply the proposed development from the Lake Hayes scheme.

Modelling – Water Supply

Water supply modelling is based on two dynamic water supply models (2012) built by Tonkin and Taylor. Both of these models have a low confidence in terms of the results, but will indicate if there will be significant issues with the addition of the proposed development. Updated and calibrated models will be available late in the 2015/16 financial year if more detailed investigation is required.

The modelling has been carried out on the current day scenario to assess the current impact of the development connecting to the scheme. As the development is outside of the current scheme boundary it is recommended that the future growth scenarios are also considered to ensure that the network has sufficient capacity allocated for developments that are compliant with the current district plan. It is recommended that this is carried out once the updated models are available.

Arrowtown

The Arrowtown model is not fully calibrated, but is balanced to recorded flows from 2011. The 2016 growth scenario (3983 m³/day) has been used as the basis of this exercise and matches recorded peak demand from 2014/15 (4040 m³/day) well.

Lake Hayes

The Lake Hayes model is uncalibrated but the model does include the final design for the new Shotover Country infrastructure and the new bore. However, the demand for the 2012 scenario was approximately double the recorded flow for the peak day for 2014/15. The model had demand of 10,082 m³/day, of which 4,416 m³/day was for the existing Lake Hayes scheme. The highest recorded flow for the 2014/15 year was 2,204 m³/day, which included supplying water to a small part of Shotover Country that was already developed.

Therefore the overall model demand has been scaled back to 5,041 m³/day to achieve a more suitable level of demand. It is acknowledged that water restrictions were in place at the time of the recorded peak, but the model demand of 5,041 m³/day results in demands in excess of 2,500 l/d/connection which is thought to be more representative of the scheme moving forward given that the scheme connections are moving towards a smaller proportion of rural residential connections that have historically been the large users of water. This also aligns well with the demands as outlined in the QLDC Land Development and Subdivision Code of Practice.

Objective

The objective of this work is to determine if the water supply network has sufficient capacity with the addition of this development. It is noted that this development is outside of the current scheme boundary (shown as a dashed red line) and will increase the previous ultimate flow projection for the Lake Hayes Scheme.

We have completed our investigations based on the development containing the following loads:

Load Type	Total People	Water Demand per Person (l/d)	Average Day to Peak Day Factor	Load (l/d)	Max Diurnal Peaking Factor
Villas	196	250	3.3	161.7	2.0
Apartments	46	250	3.3	38.0	2.0
Aged Care	60	250	3.3	49.5	2.0
Total	302	250	3.3	249.2	2.0

The above assumptions result in an average flow, over the peak day, of 2.88 l/s and a peak demand of 5.77 l/s.

The water demand used for this assessment is from the QLDC Land Development and Subdivision Code of Practice and is likely to be conservative for this type of development. It could be argued that this type of development has the potential to be significantly more efficient in its use of potable water for the following reasons:

- The centralised landscaping that will be in place would result in less water demand than a typical garden of a residential development.
- The developer also has a water take that could be used for irrigation to save potable water being used.

It is noted that some centralised facilities are planned for the site. These will be for the residents of the development and are unlikely to create significant extra demand. With the demand already deemed to be conservative no demand has been added for the central facilities.

Assessment of Capacity

Each connection option has been modelled at two connecting pipe sizes to test if the required pipe size can be optimised. Each option has also been assessed for the following scenarios:

- Restricted Supply - a restricted connection whereby onsite tanks would be used to buffer the diurnal peak and to supply firefighting requirements.
- On Demand – the network (including the existing reservoirs) is required to supply water 'on-demand' throughout the day to the required flow and pressure.
- FW2 Firefighting – 25 l/s for 30 minutes. This is in addition to the 'normal' demand above.
- FW3 Firefighting – 50 l/s for 60 minutes. This is in addition to the 'normal' demand above

The actual firefighting requirement is not known at this point in time, although it is thought to be at least FW2 plus any sprinkler system requirement. It is thought that testing the system to FW3 would indicate sufficient capacity for this minimum requirement.

The relevant sections of the network have been checked for capacity using the following criteria:

- A minimum pressure of 300 kpa or 30.6 m under normal peak data demand.
- A maximum pressure of 900 kpa or 91.8 m under normal peak data demand.
- Firefighting capacity has been assessed in addition to the peak day flows with the requirement for a residual pressure of 100 kpa or 10.2 m.

Results – Network Capacity

Option	Pipe Size	Delivery Pressure *	Restricted Supply	On Demand	FW2	FW3
1.1	200 mm	68-84 m	✓	✓	✓	✓
1.1	100 mm	67-84 m	✓	✓	x	x
2.1	200 mm	18-39 m	✓	x	x	x
2.2	100 mm	2-38 m	✓	x	x	x

* Delivery pressure is dependent on time of day and location on the site and is taken from the on-demand scenario.

Maps indicating the results for the cells shaded in blue are attached to this letter.

In regards to firefighting the following should be noted:

- There has been no historical provision for firefighting requirements beyond FW3 in Arrowtown.
- Firefighting requirements could also be provided (or supplemented) in compliance with SNZ PAS 4509:2008 (the New Zealand Fire Service Firefighting Water Supplies Code of Practice) by the use of onsite tanks. These tanks could be filled with a non-potable water supply, such as the irrigation supply discussed previously.

Results – Storage Requirements

The requirements for storage are not clear at this time. The existing reservoirs provide 1,350 m³ of storage, but utilising the previous Infrastructure Code requirements indicates that there would be a 730m³ shortfall following the addition of this development, of which 543m³ is generated by this development.

Storage Element	Requirement	Volume (m ³)
Firefighting	FW3	180
Emergency	4 hours of peak day flow (44 l/s)	636
Operational	8 hours of average flow (25 l/s)	720
Current Requirement		1,536
Proposed Development	4 hours of peak day (2.9 l/s)	418
	8 hours of peak day (0.9 l/s)	125
Proposed Total		2,079

It is advised that discussions are entered into with QLDC as to the level of storage that would be required and how it may be attained.

Discussion – Water Supply

The current consent limit of 7,800m³ /day for Arrowtown will not be exceeded with the addition of this development and is expected to be sufficient for the foreseeable future compared to the modelled demand of 4286 m³/day including the proposed development.

The bore capacity issue (as discussed earlier in this letter) has been acknowledged by QLDC but at this point it is not programmed within the current Long Term Plan. This development or other significant growth is likely to be the trigger for bringing this upgrade forward. As there is likely to be a wider benefit to the community it is recommended that QLDC complete this project.

It is not known at this point if the treatment plant capacity is significantly higher than the pump capacity. Therefore, at this time, no comment can be made on the treatment plant would also require to be upgraded.

Confirmation of storage requirements will be required from QLDC, the desktop assessment outlined above indicates that there may be insufficient storage available and onsite storage (or other solution) may be required.

The simplest, and likely the most cost effective way, for this development to connect to the water supply network is likely to be option 1 (connecting by a 200 mm pipe along McDonnell Road) as this will provide the required level of service without any additional upgrades.

The level of service that would be provided by connecting to the Lake Hayes Scheme, even if Hogan's Gully Road is upgraded to 200 mm diameter, will be limited due to the lower elevation of the reservoirs. This option is only likely to be viable if the connection is either boosted or a restricted connection with onsite tanks is chosen.

Providing firefighting capacity through the irrigation supply is likely to increase costs as the irrigation network would require significant upgrades in terms of storage / reticulation capacity and redundancy. It is unlikely that there would be a similar drop in costs for the potable water supply. However, tanks located close to the larger centralised facilities (e.g. Aged Care centre) could be used to supplement the firefighting provision beyond FW2 for those buildings without any need to upgrade the reticulation.

There are two points that may change the decision on the preferred option:

- The connection via approximately 1.3km of single pipe does result in a low level of resilience. Given the type of development, it may be beneficial to have some storage on-site to retain a lower level of service if the pipe did fail or a shutdown was required.
- The requirement for reservoir storage will need to be confirmed and the discussion entered into as to how any shortfall in storage could be addressed. If it is decided that storage would be constructed onsite for this development then a restricted supply may become a more economical option.

Recommendations

It is our recommendation that the development is allowed to connect to the water and wastewater schemes as per the following options:

- Wastewater – Option 5
- Water Supply – Option 1, utilising a 200 mm pipe.

However the following considerations would be required to be raised with QLDC:

- Timing of the programmed upgrade to the Arrowtown water source.
- Confirm the requirement for storage and how to address any shortfall.
- Confirming the ability to connect to the existing wastewater trunk main on Arrowtown – Lake Hayes Road.

Due to the rapid growth occurring in this area, the validity of this letter should be checked any time it is used as supporting evidence in a consent application.

It should be noted that the wastewater and water supply models are an attempt to simulate a physical system using hydraulic equations and various assumptions, hence it bears some uncertainty. QLDC's GIS data was used to develop the models and we can offer no guarantee on the accuracy of this information. The sanitary loads / water demands and diurnal patterns are an approximation of the patterns in the townships which have been agreed with QLDC. It should also be noted that the water models are not fully calibrated and will, hence, provide a lower level of confidence in the results.

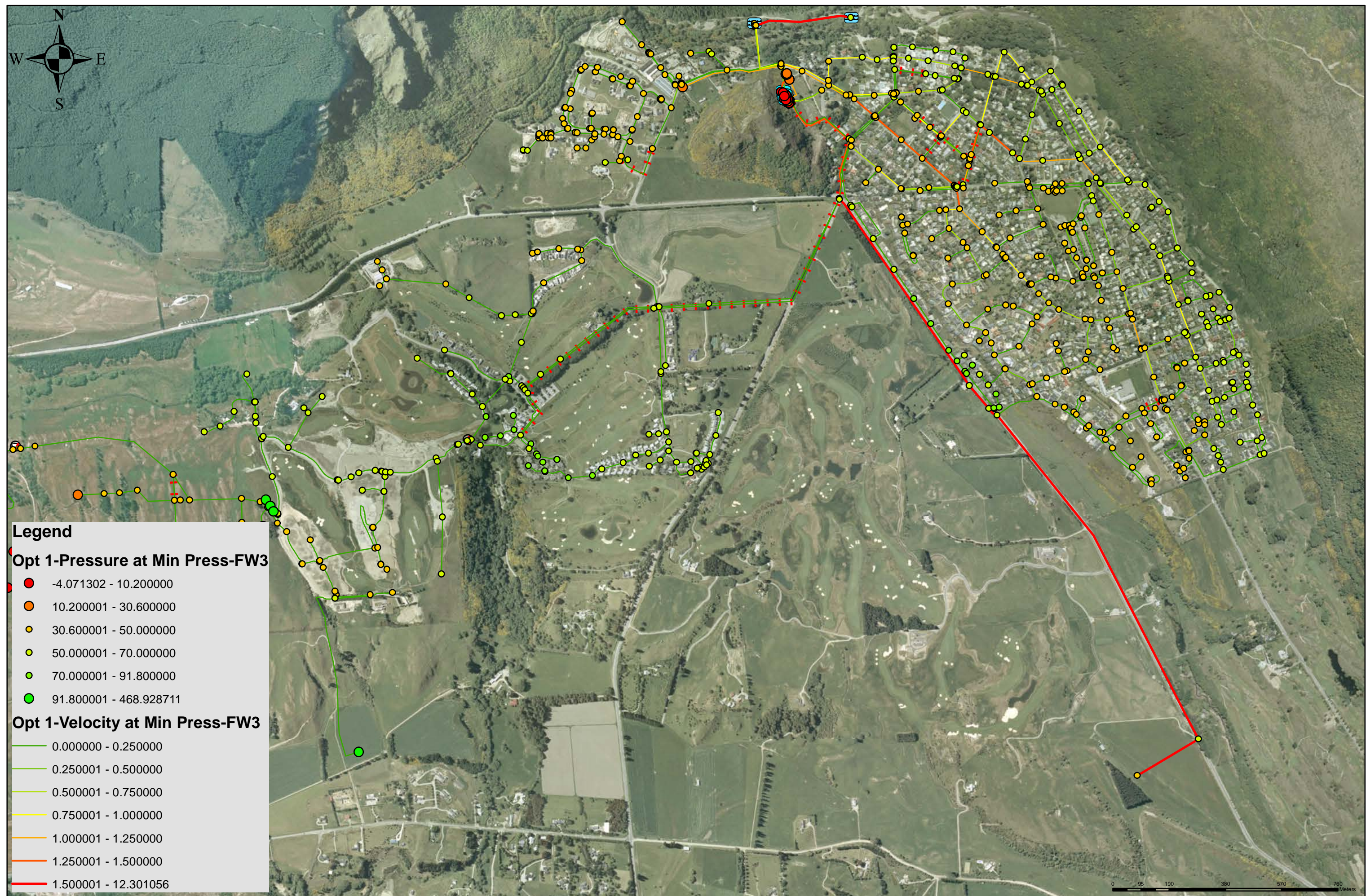
Yours Sincerely,



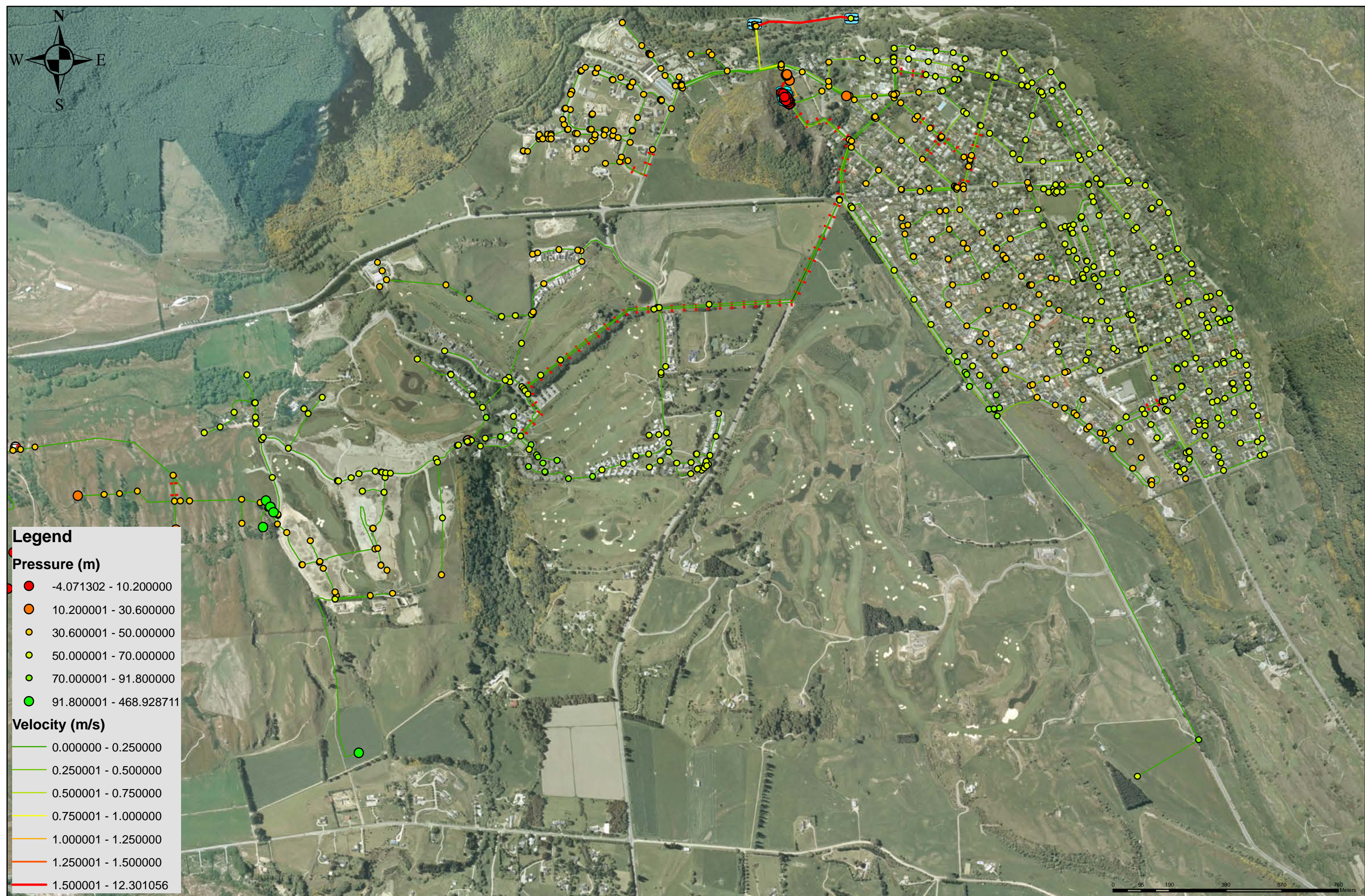
Mark Baker
Infrastructure Analyst



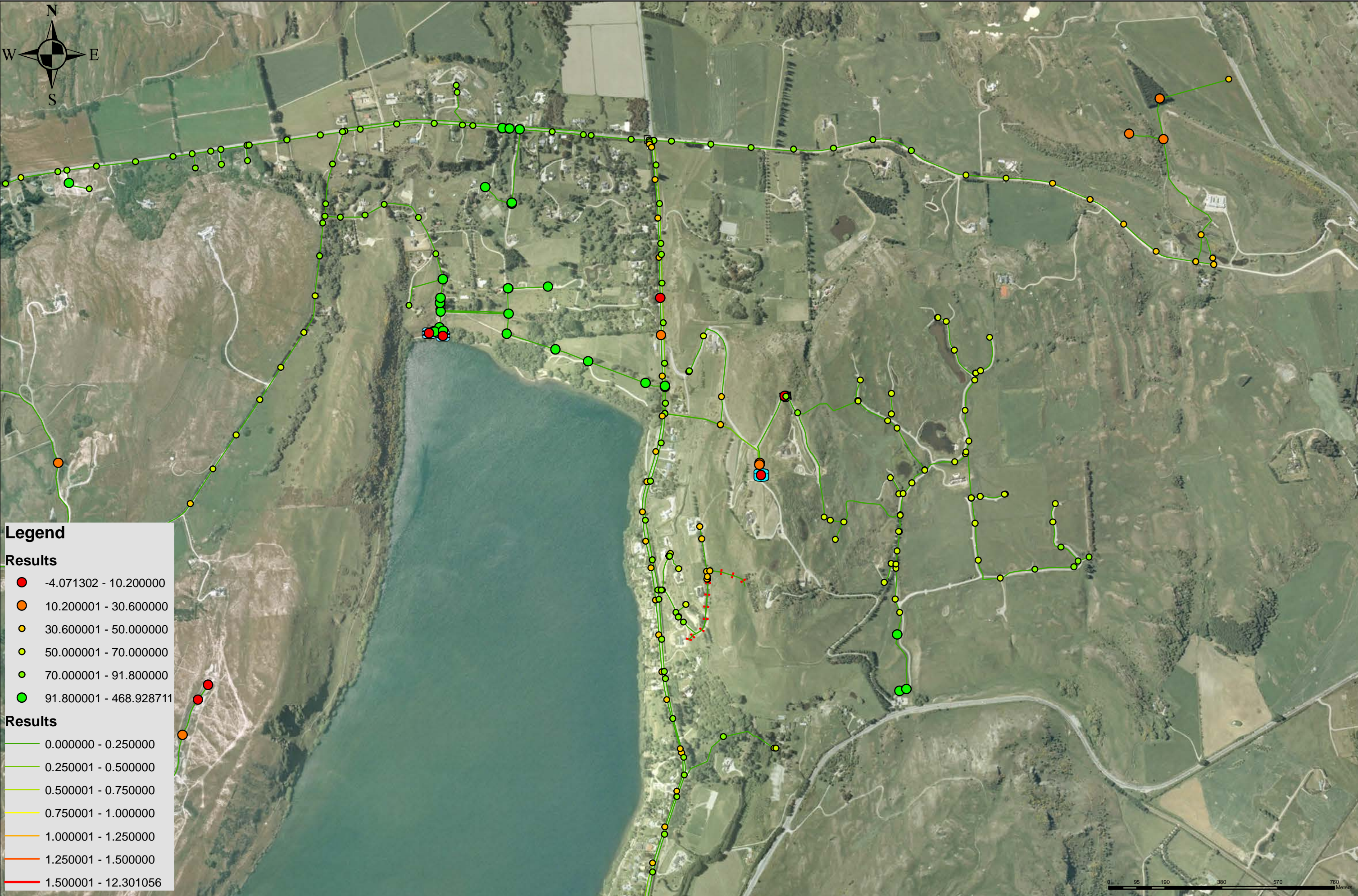
Tom Lucas
Director / Infrastructure Analyst



QLDC Water Supply - Arrowtown Retirement Village - Option 1, 200 mm Main, FW3 Results



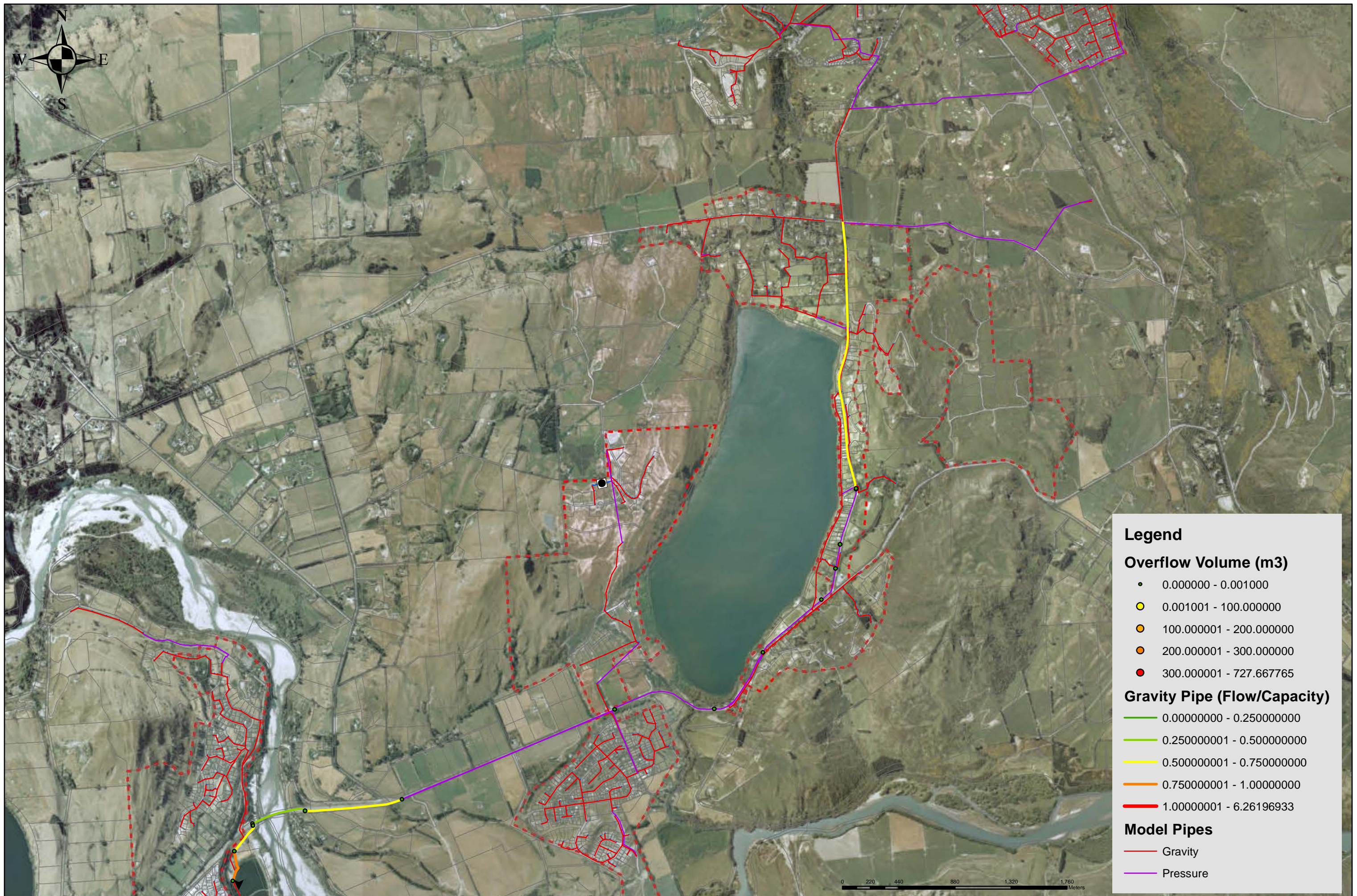
QLDC Water Supply - Arrowtown Retirement Village - Option 1, 200 mm Main, Peak Day Normal Demand Results



QLDC Water Supply - Arrowtown Retirement Village - Option 2, 200 mm Main, Normal Peak Day Demand Results



QLDC Wastewater Network Capacity - Arrowtown Retirement Village - Option 3



QLDC Wastewater Network Capacity - Arrowtown Retirement Village - Option 5

CCL Ref: 14050-271015-fairmaid

27 October 2015

Shane Fairmaid
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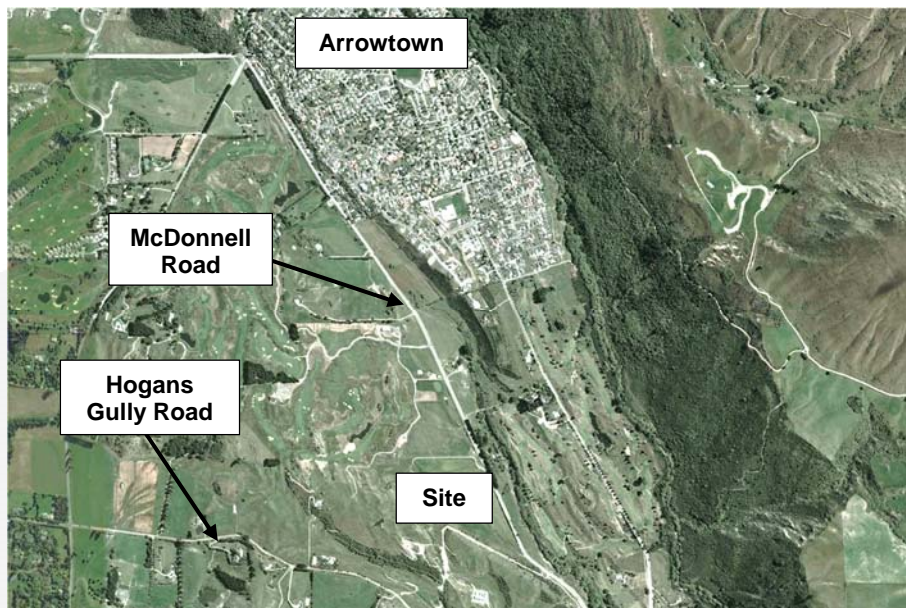
Dear Shane

Anderson Monk Retirement Village, Arrowtown: Overview of Traffic Effects

Further to our recent discussions and subsequent e-mails, we have carried out a preliminary and high-level assessment of the likely traffic and transportation effects of the proposed retirement village at McDonnell Road, Arrowtown.

Background

Based on the information received, the development site is located towards the northwest of the McDonnell Road / Hogans Gully Road intersection, approximately 2.1km south of Arrowtown town centre.



Photograph 1: Aerial Photograph of Site

We understand that up to 120 independent villas are proposed, as well as up to 55 apartments and 100 beds within an aged care facility offering rest home, hospital and dementia care. There will also be ancillary amenities provided, including dining facilities, lounges, a library, swimming pool, gym, bowling green and gardens / landscaped areas.

Access to the site will be via one vehicle crossing onto McDonnell Road, located approximately 1km northwest of the McDonnell Road / Hogans Gully Road intersection.



McDonnell Road is a Local Road under the Queenstown Lakes District Plan. In the vicinity of the site it is subject to an 80km/h speed limit and provides two traffic lanes (one in each direction) of 3.5m width each. There is a shared walkway/cycleway which runs along the western (site) side of the road, which is metalled.

Further north, McDonnell Road becomes more urbanised and the speed limit reduces to 50km/h. There is residential property along the eastern side of the road together with a parking lane of 2.5m width, and numerous private driveways. There are also four speed humps on this part of the road, each of which has an advisory speed limit of 25km/h.

At its northern end, McDonnell Road meets Arrowtown-Lake Hayes Road, Berkshire Street and Malaghans Road at a priority-controlled, crossroad intersection. Priority is given to the Arrowtown-Lake Hayes Road / Berkshire Street route and therefore traffic on McDonnell Road must give-way.

Council records show that McDonnell Road carries approximately 950 vehicles per day (two-way). Applying standard ratios, this indicates that the road carries around 120 to 140 vehicles (two-way) in the peak hours. The Austroads Guide to Traffic Management Part 3 ('Traffic Studies and Analysis') sets out a way by which the level of service on a road can be calculated, and using this methodology, McDonnell Road presently provides Level of Service A. This is the best level of service, and is described by the guide as "*a condition of free flow in which individual drivers are virtually unaffected by the presence of others in the traffic stream...and the general level of comfort and convenience provided is excellent.*"

Anticipated Traffic Generation

By their nature, retirement villages have a lower traffic generation than other types of residential property, and travel in the peak hours is also lower. This is because the traffic generation of standard residential properties is in large part determined by the need to travel for employment and education (that is, travel to work and the 'school run') and these journeys generally need to be made in the early morning and late afternoon. Residents in retirement villages do not need to undertake employment and education travel, and typically also have greater discretion to make trips for other purposes at different times of the day.

Based on the traffic generation characteristics of other retirement villages that have been accepted elsewhere in the South Island, we anticipate that the independent villas and apartments will each generate 2 vehicle movements per day (allowing for both residents and guests). With up to 120 independent villas and 55 apartments being proposed, this equates to 350 vehicle movements per day (two-way).

We also expect that each care bed will generate 1.5 vehicle movements a day (which allows for visitors, staff and service vehicles) and with up to 100 beds proposed, this will result in 150 vehicle movements per day (two-way).

The ancillary facilities will not generate any traffic movements on McDonnell Road, because they will be available only to residents who are already within the site.

In total then, the site will generate 500 vehicle movements per day. Allowing for 20% of these to be generated in the peak hours, the proposed development would generate 100 vehicle movements (two-way) at the busiest times.



Type of Unit	Maximum Number	Trip Rate Per Day	Trips Per Day	Peak Hour Trips
Villas	120 units	2 (residents and visitors)	120 in + 120 out	48 (two-way)
Apartments	55 units	2 (residents and visitors)	55 in + 55 out	22 (two-way)
Care beds	100 beds	1.5 (residents, visitors and service vehicles)	75 in + 75 out	30 (two-way)
Total	-	-	240 in + 240 out	100 (two-way)

Table 1: Traffic Generation of Proposed Development

Anticipated Traffic Effects

A detailed analysis of the likely traffic effects and access layout at the retirement village is beyond the scope of this report and will need to be carried out as part of the resource consent application. However, we have recalculated the level of service on McDonnell Road using the anticipated daily and peak hour flows, plus the traffic associated with the retirement village. Our analysis shows that Level of Service B would be provided. This is described in the Austroads Guide to Traffic Management Part 3 ('Traffic Studies and Analysis') as "*in the zone of stable flow where drivers still have reasonable freedom to select their desired speed and to manoeuvre within the traffic stream. The general level of comfort and convenience is a little less than with Level of Service A*". As such, a very good level of service will still be provided on the road within the development in place.

The peak hour traffic equates to one additional vehicle movement every 36 seconds, and in our view it is unlikely that this will be perceptible. At other times of the day, the traffic generation will be lower than this, and thus any change in the traffic stream will continue to be unnoticeable.

For comparative purposes, we have looked at the current peak hour traffic flows on Berkshire Street as the main entrance into Arrowtown. Surveys carried out in 2014 showed that north of Wiltshire Street, Berkshire Street carries around 275 vehicles in the peak hours, equivalent to one vehicle movement every 13 seconds. In practice, the traffic generated by the retirement village will be dispersed on the network (that is, some will travel to Queenstown, others to destinations to the east, and some to Arrowtown) but if an absolute worst case is adopted of **all** traffic using Berkshire Street, the rate of flow would change to one vehicle movement every 9.6 seconds. We consider that this difference is unlikely to be noticeable.

Finally, we have reviewed the likely change in performance at the Berkshire Street / Wiltshire Street roundabout (taking into account the recently-consented refuelling facility). Again allowing for the absolute worst case of all retirement village traffic using Berkshire Street, our analysis shows that the queues at the roundabout in the peak hours would increase by less than one vehicle, and delays would change by under half a second. This difference is unlikely to be noticeable.

With regard to road safety matters, there is no evidence of any existing road safety issues in the immediate area. We therefore do not anticipate that the increased traffic volumes will result in any difficulties arising.

Conclusions

We reiterate that a more detailed analysis will be required to accompany the resource consent application, taking account of the confirmed number of units and beds, and the detailed site layout. On the basis of our analysis to date, we consider that the level of service on the roading network will change slightly as a result of the development but will remain very good. Moreover, even



assuming the worst case of all peak hour retirement village traffic travelling into Arrowtown, the differences in queues and delays at intersections within the town will be negligible.

Please do not hesitate to contact me if you require anything further, or clarification of any matters discussed above.

Kind regards

Carriageway Consulting Limited

Andy Carr

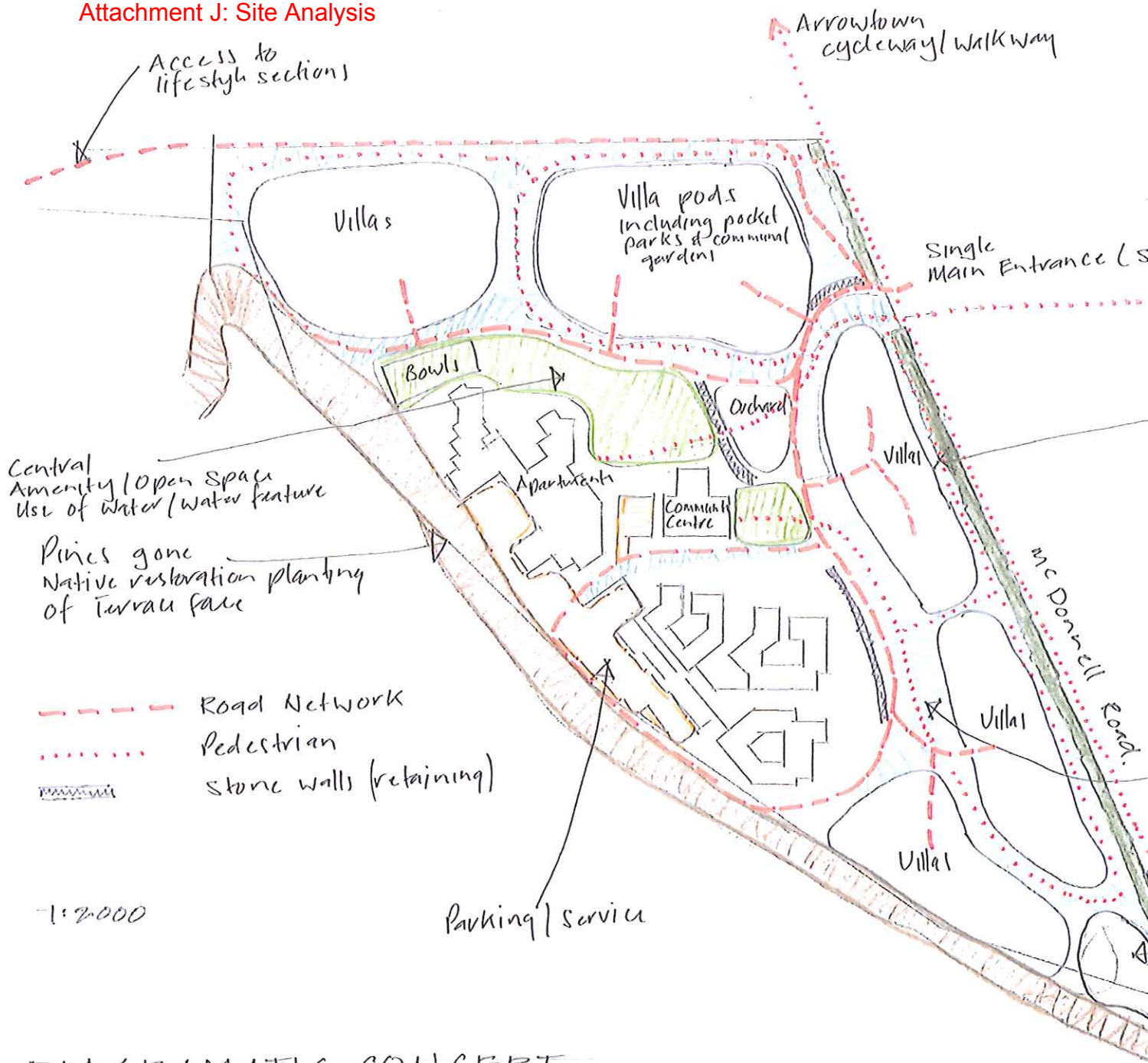
Director | Traffic Engineer

Mobile 027 561 1967

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Attachment J: Site Analysis





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ARROWTOWN RETIREMENT AND LIFESTYLE VILLAGE

Village design (Overall)

The rationale for the village design came from the site's unique characteristics and features as well as visual considerations. At the outset it was recognised that a central open space would be a key feature forming a centrepiece and focus for the village. Also a prime determinant at an early stage was recognition that large buildings such as the Community Centre, Aged Care Facility and Apartments needed to be at the rear of the site set against the terrace landform as this would be the best location to absorb larger buildings nestled in against the hill face.

Topography was also a key determinant of village layout in other ways particularly with road layout and building placement working with the contour and utilising natural form and terrace and to minimise large earthworks.

Key urban design and landscape principles were identified at the start to be incorporated into the design (refer Appendix 1). The design that evolved has a hub of larger double story buildings centred at the rear of the site with cells of single story residential villas clustered around the site, broken up and linked by greenways and open space.

RESPONSE TO SHA CRITERIA FOR ASSESSMENT

The proposed Arrowtown Retirement and Lifestyle Village aligns with and promotes the criteria the Council has produced for SHA applications. This is addressed below.

1. Integrating into the Neighbourhood

a. Connections

The proposal reinforces existing vehicular, pedestrian and cycling connections.

McDonnell Road forms the main access to the Village development and provides easy and safe access to the site. The Queenstown trail is located alongside the site on McDonnell Road providing easy access to the trail network and walking and biking connectivity to Arrowtown and Millbrook and beyond.

There is the opportunity to provide walking access to the Arrowtown Golfcourse from McDonnell Road through an existing access easement. The Hills boundary forms the northern boundary which at present is used as a driving range. Consultation with The Hills has resulted in setback agreements for buildings and tree plantings. A hedge is proposed on the Hills boundary for visual separation and screening. The remaining boundaries are either owned by the applicant or are rural land with no immediate existing buildings.

b. Facilities and services

The village development is close (approximately 1.5km from Arrowtown) with access to shops, and community facilities Clubs etc. The Village is planned to have its own facilities such as community centre, parks, café, bowling green. A bowling green and petanque court are located close to the Community Centre with outdoor seating and trees located in green spaces alongside pedestrian paths.

c. Public Transport

The nearest public transport is Arrowtown. Given the size of the proposed village its possible public transport maybe able to service the development. Shuttles will be run by the Village to Arrowtown and Frankton.

d. Meeting Local Housing Requirements

The proposal includes a range of housing types including apartments and villas. A range of villas are planned to cater from more affordable units to higher end product.

2. Creating a Sense of Place

a. Articulation and Design

The development has been designed to create a very high degree of visual interest and variation.

The central open space is a key feature of the village. From the entrance it will lead up to the focal point of the village, the community centre on the upper terrace landform. Feature stone retaining walls will emphasise topographical changes in the approach to the main facilities and contribute to the Arrowtown aesthetic with the use of local schist rock. A water feature in the form of a mining or farm water race with pools and gentle waterfalls will descend from the Aged Care facility down through an orchard towards the entrance.

The buildings while respecting the local aesthetic in terms of the Arrowtown and Millbrook styles which will provide a coherent theme but at the same time provide variation to avoid monotony and blandness.

Villas

All the Villas are single storey, and are typically arranged into 3 to 4 clusters giving definition to the location and emphasising topography.

The Villa plans will be strongly oriented towards sun and the north aspect, and have been designed so Villas will each face north irrespective which side of the laneways they are on.

Apartments - Apartments (or Assisted Living Aged Care Units) are 2 storey, and are located on the rear platform closest to the escarpment. The style here is again Arrowtown / Millbrook, with each Apartment duo (ground and first floor) given architectural treatment that expresses these units externally (as opposed to a multitude of units in a long form with the only distinction being the balconies). The Apartments will be focussed predominantly towards north, and with the anticipated footprint there is a very strong visual outcome of "Village cluster" when viewing the Apartment building. With the resultant individual and communal landscaping treatment, this individualisation of each Apartment is further strengthened.

Care Facility – this building is also 2 storey, and arranged into 3 wings of Care beds, 2 wings being Hospital level care, and 1 wing being single storey Dementia level care. This building is focussed along the rear of the site abutting the escarpment. The scale of the building is divided into wing “components”, having expressed roof forms and links that give the building a “village cluster” feel also.

Community Centre – this building is the central hub of the Village, housing all the communal functions and activities for the Village, and providing a social hub for the residents of the Villas and Apartments. It will have 3 main roof forms that again diminish the scale, using typologies familiar in the local area. Its internal space is functional and flexible, catering for large and small groups alike, so the architectural treatment has responded accordingly by creating a series of gabled forms linked together. Pergolas and shade devices soften the edges of the building, linking internal and outdoor spaces seamlessly.

b. Working with the site and its context

The existing topography and the landscape features and context were key generators of the design. Large buildings have been sited against the rear terrace escarpment to help ‘bed’ them into the landscape and all buildings face north for maximum sun orientation and views. The topography was also a key determinant for roading layout working with the contour to lessen earthworks and fit the lie of the land.

The rear terrace escarpment will be planted in native shrubland to enhance local biodiversity.

c. Creating well defined streets and places

The central open space is a focus of the development connected to greenways within villas residential pods. Streets are planned to be narrow and without kerb and channel with grass swales in the Arrowtown tradition, with extensive hedging and trees to provide privacy and amenity.

d. Easy to find your way around.

The road network provides local and clear circulation within the village with a clear road hierarchy and way finding to the central facilities. The roading layout attempts to reflect some of the characteristics and layout of old Arrowtown with a rural small town feel in preference to more urban layouts. Clear signage will also assist with wayfinding.

3. Street and home

a. Carparking and Access

Carparking for the Aged Care and Apartments is provided at the rear of the buildings with covered parking for the Apartments. Garaging and off street parking is provided for individual villas. Small visitor parking bays are provided in residential cul de sacs.

Carparking is integrated into the overall design and will not dominate the environment.

b. Public and private spaces

Public and private spaces are clearly defined. Private spaces around individual villas will be defined by hedging and other planting and connected to public open space.

The overall effect will be attractive, functional, well managed and safe.

c. Good quality homes

Both apartments and villas will be comprehensively designed by an architect for the developer to ensure they are well designed, comfortable, well insulated and practical, optimise solar gain and provide good storage.

4. Environmental Responsibility

The proposal as a whole minimises its environmental footprint. The village development is compact and nestled into a site that can absorb development within the context of the Arrow basin and separate from the Arrowtown urban boundary.

Stormwater will go to ground and be disposed of within the site with the use of drainage swales and retention area.

Maximising solar gain has been central to building layout and design.

Buildings will be designed using sustainable building materials and to low energy consumption principles.

Community gardens, including glasshouses and orchard trees will be located in pocket parks within Villa areas and community orchards will be within the main open space and in the south east corner of the site to encourage growing vegetables and fruit and nuts.

Appendix 1

Landscape/urban design principles/objectives for Village Masterplan

- McDonnell Road to maintain a rural aesthetic ie grass verge, hawthorn hedgerow and simple rural unpretentious entrance
- Topography to be a key determinant of village layout. Appears to be 2 main terraces within the site (excluding high rear terrace). Perhaps terrace risers are free of buildings and form part of the matrix of open space within the village. Topography may also influence roading layout.
- Possible buffer (no build zone) next to McDonnell Rd.
- Village to consist of clusters of development separated by open space.
- Placement of large buildings needs to be carefully considered (probably at the rear of the site against the high terrace).

- Roads and streets to be narrow to reduce urban/suburbaness but also slow traffic. Roothing in the Arrowtown style eg no kerb and channel, gravel shoulders, grass swales and verges.
- Create easy walking environment. Roads - dual purpose for vehicles and pedestrian maybe.
- Avoid white road markings
- Villas to have small private gardens with communal gardens common per residential clusters. Communal gardens include : orchards/vege gardens/glasshouses as well as amenity gardens
- Landscape elements and materials to also be in Arrowtown style eg hedges, stonewalls, avoidance of overly urban paving types.
- Possible link to mining/farming history of Arrow Basin
- Villas possibly facing street in the Arrowtown style with rear lanes for garaging (maybe?)
- Stormwater to ground. Possible retention basins if needed. Grey water treated and disposed on site.
- Avoidance of urban style lights
- Predominantly deciduous trees for maximum sunlight in winter, summer shade and autumn colour. Incorporate/restore an element of indigenous biodiversity.
- Removal of pine woodlot

