

**QUEENSTOWN LAKES DISTRICT COUNCIL**  
**VARIATIONS HEARING COMMITTEE**  
**FOR HEARING COMMENCING 18 DECEMBER 2006**

**REPORT FOR VARIATION No: 26**  
**ISSUE: RIVERSIDE STAGE 6**

**SUBMITTED BY:**                    **JENNY PARKER, ARROW RESOURCE MANAGEMENT, FOR THE QUEENSTOWN LAKES DISTRICT COUNCIL**

**REPORT DATED:**                    **NOVEMBER 2006**

**CONTENTS**

1.0	Introduction	1
2.0	Background	2
3.0	List of Submitters	3-4
4.0	Planners Report	4
4.1	Accept the Variation in its entirety	5
4.2	Resource study for the wider area	6
4.3	Minimum allotment size	7
4.4	Stormwater Management	9
4.5	Inclusion of Lot 51 DP7458	10
4.6	Provision for solid fuel burners	11
4.7	Minor amendments to the district plan provisions to correct any errors	14
4.8	Management of traffic effects- reverse sensitivity issues	15
4.9	Traffic management issues- access between Riverside Stage 6 and the State Highway	21
Appendices		
1	Recommended amendments to Plan provisions	
2	Amended Structure Plan	
3	Amended Zone Plan	

**1.0 INTRODUCTION**

This Report discusses and makes recommendations on submissions received in relation to Variation 26 Riverside Stage 6. Although this Report is intended as a stand-alone document, a more in-depth understanding of the Variation, the process undertaken, and related issues may be gained by reading the Section 32 report and associated documentation prepared for Variation 26, publicly notified on 3 August 2006. Where changes are recommended as a result of submissions, the effectiveness and efficiency of such changes has been assessed in accordance with the requirements of Section 32 of the Resource Management Act.

The relevant provisions in the Queenstown Lakes District Council's Partially Operative District Plan which are affected by the Variation are:

<b>Plan Section</b>	<b>Provision</b>
9.1.3.3	Additional issues statements
9.1.4	Objectives and Policies- Albert Town; addition of objectives, policies and implementation methods.
9.2	Township Zone Rules- addition of rules relating specifically to Riverside Stage 6.

9.3.2	Township Zone Assessment Matters- addition of assessment matters relating specifically to Riverside Stage 6.
15.2	Insertion of subdivision standards relating specifically to Riverside Stage 6.
Maps	Amendment of District Plan maps by changing the zoning of the Riverside Stage 6 land from Rural Residential to Township Zone and Open Space Zone.

Submissions are assessed in groups based on issues raised where the content of the submissions is the same or similar.

In summarising submissions, the name of the submitter is shown in **bold**, with their submission number shown in normal font within square brackets. In summarising further submissions, the name of the further submitter is shown in **bold italics**, with their submission number shown in *italics* within square brackets.

Where there is any inconsistency between the provisions contained in Appendix 1 and amendments made by the Recommendations, then the provisions in Appendix 1 shall be considered correct.

## 2.0 BACKGROUND

The Riverside Stage 6 site is a 43 hectare parcel of land in Albert Town which, prior to the notification of this Variation, was zoned for Rural Residential purposes. Infinity Investment Group Limited, owners of the 43 hectare parcel of land, holds an approved resource consent which enables the subdivision of the site into 65 Rural Residential allotments. The subject land is depicted in the map below denoted by the red boundary.



Growth projections for the Queenstown Lakes District, and particularly Wanaka, have identified that there is a need for more residential zoned land in and around Albert Town. In addition, it has been recognised that there is a need to provide inclusive/affordable housing in order to accommodate the diverse future housing needs of the Wanaka and Albert Town communities.

Rezoning the Riverside Stage 6 site at Albert Town has been recognised as an opportunity to provide adequate residential zoning to meet the population growth forecast in the Queenstown Lakes District Council's growth projections while also achieving the objective of providing inclusive housing. In pursuing such a variation, the Council established clear objectives to ensure that the new development would be generally consistent with the existing development within Albert Town, and would be developed in a comprehensive manner providing high amenity values into the future.

In determining the most appropriate zoning for the site, a comprehensive Section 32 analysis has been prepared; this provides an analysis of the different zoning options for the site, and draws on a range of technical reports, including ecological, landscape and traffic assessments, and an urban design analysis. This report should be read in conjunction with the Section 32 analysis and the associated technical reports.

### 3.0 LIST OF SUBMITTERS

Original Submitters	Submission #
Albert Town Community Association	26/1/1
Kirsty Alexander	26/2/1
Tony Brown	26/3/1
Coast Land Trust Holdings Limited	26/4/1, 26/4/2, 26/4/3, 26/4/4
Colquin Holdings Limited	26/5/1
Mandy Deans	26/6/1
Mike Franklin	26/7/1
Ainslie Furlong	26/8/1
Gary Grant	26/9/1
John Hare	26/10/1
Bruce and Alison Hebbard	26/11/1
Michael Kelly	26/12/1
Paul Knowles	26/13/1
Charles Latchford	26/14/1
Nicola Latchford	26/15/1
Darryn Wilkie and Craig Lyon	26/16/1 (withdrawn)
Colin Moorfoot	26/17/1
Otago Regional Council	26/18/1, 26/18/2, 26/18/3
Michael Pearce	26/19/1
Kerry Quin	26/20/1
Riverside Residential Limited	26/21/1
Sally Matheson Family Trust	26/22/1
Alyson Schuler	26/23/1, 26/23/2
Richard Sheldon	26/24/1
D F Stewart	26/25/1
Melonie Telk	26/26/1
Phillip Templeton	26/27/1
Transit New Zealand	26/28/1, 26/28/2, 26/28/3, 26/28/4, 26/28/5
Fergus Turnbull	26/29/1
Shona and Phil Turner	26/30/1, 26/30/2

Hetty Van Hale	26/31/1
David Vass	26/32/1
Derrick Wales	26/33/1
Rod Webb	26/34/1
Jayne Wilson	26/35/1
Russel Wilson	26/36/1
<b>Further submissions</b>	
Bruce and Alison Hebbard	100/26/14/1, 100/26/15/1, 100/26/25/1
Riverside Residential Limited	101/26/28/1, 101/26/28/2, 101/26/28/3, 101/26/28/4
Transit New Zealand	102/26/32/1

#### 4. PLANNERS REPORT AND RECOMMENDATIONS

The following Sections of this report provide a brief summary of each submission, and a recommendation in response to each of the decisions sought. The submissions are grouped into sections based on issues or concerns raised by the submissions.

##### 4.1 ACCEPT THE VARIATION IN ITS ENTIRETY

The following submitters support the Variation, and request that the Variation be accepted in its entirety:

**Albert Town Community Association** [26/1/1], **Kirsty Alexander** [26/2/1], **Tony Brown** [26/3/1], **Colquin Holdings Limited** [26/5/1], **Mandy Deans** [26/6/1], **Mike Franklin** [26/7/1], **Ainslie Furlong** [26/8/1], **Gary Grant** [26/9/1], **John W Hare** [26/10/1], **Michael C Kelly** [26/12/1], **Paul Knowles** [26/13/1], **Charles Latchford** [26/14/1], **Nicola Latchford** [26/15/1], **Colin Moorfoot** [26/17/1], **Kerry Quin** [26/20/1], **Riverside Residential Limited** [26/21/1], **Sally Matheson Family Trust** [26/22/1], **Richard Sheldon** [26/24/1], **DF Stewart** [26/25/1], **Melonie Telk** [26/26/1], **Phillip Templeton** [26/27/1], **Fergus Turnbull** [26/29/1], **Shona and Phil Turner** [26/30/1], **Hetty Van Hale** [26/31/1], **Derrick Wales** [26/33/1], **Rod Webb** [26/34/1], **Jayne Wilson** [26/35/1], **Russell Wilson** [26/36/1]

***Bruce and Alison Hebbard** lodged a further submission to the submissions of Charles Latchford [100/26/14/1], Nicola Latchford [100/26/15/1], and DF Stewart [100/26/25/1]. However, the further submission did not state whether it was in support or opposition to those original submissions.*

##### 4.1.1 Explanation

The key reasons for support of the Variation can be summarised as follows:

- Care and attention provided by the landowner in other stages of development.
- Provision of a mixture of section sizes provides for more affordable options and opportunities for a variety of lifestyles and sectors of the community. The Variation will provide realistic housing for those employed in the Wanaka service and tourism industry and enables the Council to implement the Affordable Housing Strategy.
- The Variation will result in an efficient use of land, helping to avoid urban sprawl into the future. If the existing zoning was retained (i.e Rural Residential), further piecemeal subdivision would occur, which in turn would result in an ad hoc provision of services.
- The provision of open space, through protection and enhancement of the escarpment (including protection of kanuka) and wetland area, and the provision of neighbourhood parks throughout the zone.

- Pedestrian linkages throughout the site, which will provide access to the township and remove pedestrians and cyclists from the State Highway.
- This is a logical area to expand Albert Town, enabling the expansion of the town while ensuring that it is contained geographically.
- Extending the Township Zoning onto this site ensures the majority of sites are developed to a similar size and density as the existing Township.
- The Variation is consistent with the relevant objectives and policies of the District Plan.
- The rules and associated assessment matters will result in the development of the site in a comprehensive manner that will:
  - complement the character of Albert Town;
  - provide an interconnected network of streets that facilitates a safe, efficient and pleasant walking, cycling and driving environment;
  - provide for a variety of lot sizes and densities;
  - promote the efficient and sustainable use of land;
  - protect and enhance significant landscape and environmental features;
  - facilitate an integrated approach to the design of open space and urban water management;
  - create cost effective and resource efficient development;
  - manage the effects of State Highway 6 on the Riverside Stage 6 site.
- The consultation undertaken in the preparation of this Variation was extensive, and answered queries raised by the community.
- The Variation upholds the purpose and principles of the Resource Management Act, particularly Section 5, Section 6 (b-d) and Section 7 (b-d) and (f).
- The new link road to Aubrey road should reduce some traffic on State Highway 6, and will be safer for entrance and exit to Riverside.

The following comments were also made:

- Further details of the community housing should be presented to the Albert Town Community.
- Poplar trees would be inappropriate within this development given the lot sizes promoted.
- Commercial activities should be focussed around the existing Albert Town Inn.
- The open space areas should be vested in Council as reserve in order to ensure future maintenance.
- While the provision of affordable housing is supported, appropriate design is important. It is anticipated that the design guidelines will help maintain the quality of homes being built.

#### **4.1.2 Discussion**

Rezoning the Riverside Stage 6 site is logical, and reflects the need to ensure future growth is managed effectively. The provisions as notified for Riverside Stage 6 ensure that a high quality urban environment is established. Given its location between existing Albert Town, Rural Residential allotments and the State Highway, Variation 26 represents an opportunity for the efficient use of the Riverside Stage 6 site into the future. The Section 32 analysis identifies that Variation 26 is the most appropriate option for the Riverside Stage 6 land.

While it is recommended that the Variation is accepted, some minor changes are suggested in response to other submissions received.

#### **4.1.3 Recommendation**

That the following submissions are accepted:

**Albert Town Community Association** [26/1/1], **Kirsty Alexander** [26/2/1], **Tony Brown** [26/3/1], **Colquin Holdings Limited** [26/5/1], **Mandy Deans** [26/6/1], **Mike Franklin** [26/7/1], **Ainslie Furlong** [26/8/1], **Gary Grant** [26/9/1], **John W Hare** [26/10/1], **Michael C Kelly** [26/12/1], **Paul Knowles**

[26/13/1], **Charles Latchford** [26/14/1], **Nicola Latchford** [26/15/1], **Colin Moorfoot** [26/17/1], **Kerry Quin** [26/20/1], **Riverside Residential Limited** [26/21/1], **Sally Matheson Family Trust** [26/22/1], **Richard Sheldon** [26/24/1], **DF Stewart** [26/25/1], **Melonie Telk** [26/26/1], **Phillip Templeton** [26/27/1], **Fergus Turnbull** [26/29/1], **Shona and Phil Turner** [26/30/1], **Hetty Van Hale** [26/31/1], **Derrick Wales** [26/33/1], **Rod Webb** [26/34/1], **Jayne Wilson** [26/35/1], **Russell Wilson** [26/36/1]

*That the further submission of **Bruce and Alison Hebbard** [100/26/14/1], [100/15/1] and [100/26/25/1] is rejected.*

The further submission did not identify whether it supported or opposed the original submissions, and therefore can not be accepted.

#### **4.1.4 Reasons**

As identified in the Section 32 analysis, the amendments to the District Plan promoted by Variation 26 are considered the most appropriate in achieving the purpose of the Act, and the objectives and policies of Parts 4 and 9 of the District Plan.

## **4.2 RESOURCE STUDY FOR WIDER AREA**

**Coast Land Trust Holding Limited** [26/4/1, 26/4/2, 26/4/3, 26/4/4] submits that:

- (a) The Council should undertake an Area Wide Resource Study of the area bounded by Peninsula Bay, Rata Street, Aubrey Road, Clutha River and the State Highway at Albert Town [26/4/1]; and
- (b) The proposed zone boundaries and plan provisions should be modified to take into account the resources, information and values determined through the Area Wide Resource Study [26/4/2]; and
- (c) A greater level of integration with adjoining land use be achieved, subject to the findings of the Area Wide Resource Study [26/4/3]; and
- (d) Further additional, amended or consequential changes to any relevant parts of the District Plan are made as are considered necessary to address the issues and concerns raised in this submission [26/4/4].

***Riverside Residential Limited** [101/26/4/1, 101/26/4/2, 101/26/4/3, 101/26/4/4] opposes the submissions of Coast Land Trust Holding Limited.*

### **4.2.1 Explanation**

Coast Land Trust Holding Ltd supports the proposed plan change, which in general is considered to be an appropriate and sustainable use of the land. It is submitted that the Section 32 analysis should thoroughly assess the compatibility of the proposal with the surrounding landuse in terms of amenity, transport linkages, recreational opportunities and open space.

The submitter believes that the process adopted for the Jacks Point Variation in Queenstown provided a precedent and should be followed in this situation. This is considered necessary in order to achieve the requirements of Part 5 of the Act and undertake a thorough Section 32 analysis.

It is submitted that it is important to ensure that when considering plan changes/variations for Peninsula Bay, Kirimoko, and Riverside Stage 6 the land in between these areas has been considered in terms of integrating roading, pedestrian linkages, reserves and services in order to avoid piecemeal development. The District has a limited supply of land for future growth; and the submitter seeks to provide for a more efficient use of a limited resource. Finally, it is submitted that the proposed variation is constrained by legal property boundaries rather than the real geographical boundaries of the site and the area.

RRL oppose the submission of Coast Land Trust Holding Limited, and consider that it is inconsistent with Wanaka 2020 and the Wanaka Structure Plan, which provide sufficient strategic direction for Wanaka, and a clear determination of the servicing and infrastructure needs for future urban land.

### **4.2.2 Discussion**

The need to ensure comprehensive analysis of the existing and future land uses in the area surrounding the land subject to this Variation is supported, and it is believed that this has been achieved through the significant amount of work undertaken by the Council through Wanaka 2020 and the Wanaka Structure Plan processes.

The Structure Plan in particular considers the Wanaka area as a whole, identifying potential recreational linkages and green spaces, in addition to potential development areas, servicing issues, and a staging approach to development. While it is acknowledged that this was undertaken on a much broader scale than the Coneburn Study, it is envisaged through the Structure Plan that those detailed analyses will be undertaken at the plan change stage, concentrating on the subject site, but also considering its relationship to other neighbouring sites, and the overall objectives for Wanaka.

The Riverside Stage 6 land is contained within Albert Town, and is bounded by Township and Rural Residential zoned land and the State Highway. It is believed that for these reasons, it is in fact geographically contained. Linkages between the site and its surrounds have been ensured through the provision of key walkway linkages through the site, and the provision of key road linkages, ensuring that the development of the site relates well to its surroundings.

In summary, the Section 32 analysis focuses on the site itself, but in light of the surrounding landscape and land uses, and its relationship to the Wanaka town and surroundings. It is believed that the analysis undertaken is robust and that further studies are not necessary for the purposes of completing this Variation.

#### 4.2.3 Recommendation

That the submissions of **Coast Land Trust Holding Limited** [26/4/1, 26/4/2, 26/4/3, 26/4/4] are rejected, and that the further submissions of **Riverside Residential Limited** [101/26/4/1, 101/26/4/2, 101/26/4/3, 101/26/4/4] are accepted.

#### 4.2.4 Reasons

The Section 32 analysis for this Variation builds on the comprehensive work of the Wanaka 2020 and Wanaka Structure Plan processes. The Variation has been designed to ensure linkage and continuity between the Variation and its surrounds. For these reasons, further studies are not considered necessary.

### 4.3 MINIMUM ALLOTMENT SIZE

**Bruce and Alison Hebbard** [26/11/1] support the Variation. However, they oppose the provision of minimum allotment sizes of less than 800 square metres. **Michael Pearce** [26/19/1] opposes the Variation, in particular, Site Standard 9.2.5.1.

#### 4.3.1 Explanation

Bruce and Alison Hebbard oppose any lot size below 800m<sup>2</sup>, and submit that lot sizes of 800m<sup>2</sup> would blend seamlessly into the existing township of Albert Town. The submitters do not object to duplex or apartment type development on a 900m<sup>2</sup> lot as currently allowed in Wanaka Low Density Residential Zone, as long as this also applied to the existing Township Zone in Albert Town.

Michael Pearce opposes the Variation, and submits:

- Postage stamp size sections and duplex dwellings are totally out of character with the wide open space surroundings;
- The other side of the State Highway is 4 hectares;
- There is no shortage of sections or potential subdivision opportunity;
- Statistically half the size of the section does not mean half the price; instead, the real saving is about 30-35% of the 800m<sup>2</sup> section for a 400m<sup>2</sup> section;
- Building cost incentives or lowering compliance costs would make a more sensible approach to cheaper housing;
- Less desirable smaller houses will be built and will be out of keeping with the existing Riverside Developments in Albert Town and Albert Town residences in general;

- Smaller sections means more dwellings, and more dwellings means more people. The traffic impact report already indicated a significant impact on the surrounding roads as well a result of more sections;
- Smaller sections and duplexes may in the future be seen as undesirable and thus have a negative impact on the Stage 6 development.

Michael Pearce submits that the developer and Council would be the only ones to benefit from higher density; whereas the landscape, environment or potential home buyers will not. It is also submitted that the 'gift' of sections to the QLDC shows a conflict of interest and motivation.

#### 4.3.2 Discussion

When initiating the Variation, the Council established key objectives. Of relevance to the discussion of density, these included:

- *A variety of housing types and densities within the context of a low density residential development.*
- *The development of the site in an efficient and sustainable manner.*
- *The promotion of a high level of residential amenity which is consistent with the character of the existing Albert Town township.*
- *Provision of affordable Community Housing.*

In order to achieve these objectives, it was identified that provision should be made for some development of a higher density than that currently provided in the Township Zone. However, it was recognised that such development should be located so that adverse effects on the existing township could be avoided, and high amenity values for those persons living in the higher density dwellings could be achieved. Consequently, the Structure Plan (attached as Appendix 2) identifies 3 different sub-zones. Sub-Zone A, in which higher densities can be achieved is located along key transport routes, near public open space, and towards the centre of Riverside Stage 6.

In terms of the areas of each Sub-Zone as identified in the structure plan, Sub-Zone A is approximately 3 hectares in size, Sub-Zone B is 14 hectares, and Sub-Zone C 3 hectares. This means that Sub-Zone A makes up only 17% of the site. The rules require that only 55% of the lots within Sub-Zone A can be subdivided to 400m<sup>2</sup>. This demonstrates that while some higher density is allowed, it is a small percentage of the overall development, and has been designed in such a way that adverse effects from such density can be appropriately managed.

The relevant density provisions for each of the sub-zones are prescribed in Site Standard 9.2.5.1 of the District Plan, which has been amended to read as follows: (additions underlined)

##### ***i Site Density***

*The minimum net allotment size for each residential unit shall be 800m<sup>2</sup> **except:***

*(b) Within Subzone 'A' of the Riverside Stage 6 site at Albert Town, the minimum net allotment size per residential unit shall be 400m<sup>2</sup>;*

*Or*

*Two residential units or a duplex (being two residential units sharing a common wall) may be erected on the site.*

*The lots to which this rule applies shall be depicted in the Outline Development Master Plan, approved pursuant to Rule 9.2.5.2(viii).*

*(c) Within Riverside Stage 6, Subzone 'B', there shall be one residential unit per allotment.*

The minimum allotment size is defined by Rule 15.2.6.3(i). This Rule specifies that within Sub-Zone A, the average lot size shall be 600m<sup>2</sup>, with a minimum allotment size of 400m<sup>2</sup>. In Sub-Zone B, the



average lot size is 800m<sup>2</sup>, and in Sub-Zone C, the minimum allotment size is 1000m<sup>2</sup>, and the maximum 2000m<sup>2</sup>.

In addition to controlling the location of the higher density development, the plan provisions require that before any subdivision or development occurs, a resource consent for an Outline Development Plan is approved by the Council. This consent would be assessed against the new objectives and policies that have been inserted as part of this Variation. This process ensures that the increased density within Sub-Zone A is managed effectively, so that high amenity values are maintained into the future, and adverse effects on the amenity of the existing Albert Town are avoided.

The Variation also requires rear lane access for the higher density sites. This ensures that the residential units front the street, and garaging and carparking is provided at the rear of each dwelling. It is believed that this mechanism will also assist in ensuring the maintenance of high amenity values.

It is believed that because of the comprehensive objectives, policies, assessment matters and the structure plan for the Variation, the increase in density in Sub-Zone A can be achieved with limited adverse effects on the environment. It is anticipated that this will create a better effect than what could occur from allowing the construction of two units on any 900m<sup>2</sup> lot throughout the Riverside Stage 6 site. Such an approach would be more ad hoc, and would not be supported by comprehensive planning provisions.

#### **4.3.3 Recommendation**

That the submission of **Bruce and Alison Hebbard** [26/11/1] is accepted in part. That part accepted is the submission in support of the Variation. That part rejected is the submission opposing lot sizes smaller than 800m<sup>2</sup>.

That the submission of **Michael Pearce** [26/19/1] is rejected.

#### **4.3.4 Reasons**

Increasing density within specific areas of the subject site, with associated provisions to ensure high amenity values are achieved and effects on the amenity of the existing township are avoided is considered appropriate. The higher density also enables the Council to achieve its objectives associated with providing a range of housing types, and providing for community housing through design.

### **4.4 STORMWATER MANAGEMENT**

The **Otago Regional Council** (ORC) [26/18/1, 26/18/2, 26/18/3] supports the Variation, particularly the promotion of levels of insulation and the restriction on the use of solid fuel burners. The ORC seeks the following:

- (a) At the detailed engineering design and implementation of the stormwater disposal system stage, adopt the general concept design described in the Paterson Pitts Partners report dated 12 June 2006 and titled "Preliminary stormwater disposal design Riverside Stage 2 Rezoning- Albert Town". The stormwater disposal system must include all the overland flow paths, detention ponds, wetlands, inlets and outlets structures, and reticulation system as described in the report. [26/18/1]
- (b) Ensure that the stormwater disposal structures described in Patterson Pitts Partners (Wanaka) Limited report dated 12 June 2006 incorporates as a safeguard a facility that allows outflow to the proposed wetland and Albert Lagoon to be stopped (shut off) when high water level in the Clutha River/Mata-Au controls the Albert Lagoon flow. [26/18/2].
- (c) Undertake a geotechnical assessment of the escarpment bordering the proposed detention pond and wetland and include the constraints of the assessment in the final design of the detention pond/wetland system. [26/18/3]

#### **4.4.1 Explanation**

The ORC is impressed with the proactive nature of the Variation. ORC submit that if the proposed stormwater design and measures are implemented as per the Patterson Pitts 12 June 2006 report the

development of Riverside Stage 6 will not increase the potential for future flooding from the Lagoon and will ensure that the water quality of the stormwater runoff from Riverside Stage 6 maintains its pre development standard.

The geotechnical assessment of the escarpment bordering the proposed detention pond and wetland is to ensure that seepage and thus potential for land slip does not undermine the integrity of the escarpment and detention pond/wetland system.

#### **4.4.2 Discussion**

Once the Variation for Riverside Stage 6 is confirmed, a subdivision application can be lodged with the Council as a controlled activity, subject to meeting all the site and zone standards within Section 15: Subdivision, of the Partially Operative District Plan. Of particular relevance, Section 15.2.12 is entitled 'Controlled Subdivision Activities- Stormwater Disposal'. This section states the matters over which control is reserved when assessing stormwater disposal, and lists assessment matters which the Council may have regard to. These provisions enable the Council to ensure that at the subdivision stage, the stormwater management plans identified through reports supporting the Variation are implemented.

#### **4.4.3 Recommendation**

That the submissions of the **Otago Regional Council** [26/18/1, 26/18/2, 26/18/3] are accepted, and no changes are made to the Variation as notified.

#### **4.4.4 Reasons**

The ORC supports the proposed stormwater management techniques identified within the technical reports supporting the Variation. At the time of subdivision, the Council can ensure that these management techniques are adopted through the implementation of provisions within Section 15.2.12 of the Partially Operative District Plan. The need for a geotechnical assessment will be determined at the time of subdivision.

### **4.5 INCLUSION OF LOT 51 DP 7458 WITHIN RIVERSIDE STAGE 6**

**Riverside Residential Limited** (RRL) [26/21/2] and **Shona and Phil Turner** [26/30/2] submit that Lot 51 DP 7458 should be included within the Variation.

#### **4.5.1 Explanation**

Riverside Residential Limited (RRL) and Shona and Phil Turner submit that lot 51 DP 7458, which is located between the Riverside Stage 6 site and the current Township Zone of Albert Town, should be zoned Township. It is submitted that should the Variation be confirmed, retaining this lot, which comprises 0.4047 hectares, as Rural Residential Zone, would be an anomaly. RRL submit that if this land is included within the Variation, it should be included in the Structure Plan as Subzone 'C', and be subject to the Riverside Stage 6 provisions.

#### **4.5.2 Discussion**

The Turner's land is located adjacent to State Highway 6. It is bounded to the north by the existing Albert Town Township Zone, and to the south and west by the Riverside Stage 6 site. Prior to the notification of the Variation, both the Turner's lot and Riverside Stage 6 were zoned Rural Residential. However, upon notification of the Variation, Riverside Stage 6 land was rezoned Township, and lot 51 was retained as Rural Residential.

The submitters are correct in identifying that this is an anomaly in planning terms, given that the site is now surrounded by Township zoning. Once Riverside Stage 6 is developed, this lot would remain as a larger section in the midst of higher density. It is therefore considered appropriate that this site is rezoned Township. Given its location alongside the Stage Highway, it is also appropriate that it is included within Sub-Zone 'C', and is subject to the Riverside Stage 6 provisions. These ensure that the subject site is included within the comprehensive development of Riverside Stage 6.

### 4.5.3 Recommendation

That the submissions of **Riverside Residential Limited** (RRL) [26/21/2] and **Shona and Phil Turner** [26/30/2] are accepted, and lot 51 DP7458 is rezoned Riverside Stage 6-Township, and that consequently:

- (a) The structure plan for Riverside Stage 6 is amended to include lot 51 DP7458 within Sub-Zone C.
- (b) Planning maps 18 and 24 are amended to include lot 51 DP7458 within the Township Zone.

The amended structure plan and zone map are contained within Appendix 2 and 3 to this report respectively.

### 4.5.4 Reasons

Given the location and size of the Turner's property it is logical that it is included within Sub Zone C of the Riverside Stage 6 Township Zone.

## 4.6 PROVISION FOR SOLID FUEL BURNERS

**Alyson Schuler** [26/23/1] requests that the provisions for restrictions on solid fuel burners is reconsidered.

### 4.6.1 Explanation

Alyson Schuler submits that the provisions for restricting solid fuel burners should be reconsidered to ensure that all alternatives are considered in full.

### 4.6.2 Discussion

Air quality is becoming a significant issue throughout New Zealand, and according to local residents within Albert Town, it is already an issue in this location. It was identified through the consultation process that if Riverside Stage 6 were to allow solid fuel burners in each dwelling, air quality within Albert Town could be degraded. To help resolve this issue, Method ii(a) of the provisions for Riverside Stage 6 reads:

- (a) Private covenants for design guidelines, insulation and solid fuel burners.

Zone Standard 15.2.6.3(h) reads:

Any subdivision of the Riverside Stage 6 site at Albert Town shall include a covenant on each resultant certificate of title that requires:

(...)

- (c) restrictions on the use of solid fuel burners

These provisions ensure that on each certificate of title within Riverside Stage 6, a covenant or consent notice<sup>1</sup> would be imposed restricting the use of solid fuel burners. The submitter requests that this provision is reviewed, so that all options are considered in full.

Firstly, it is important to consider whether controls on the use of solid fuel burners are necessary at the District Council level, and whether they are in fact within the functions of the District Council.

Section 30 of the Resource Management Act defines the functions, powers and responsibilities of Regional Councils. Of relevance, this includes:

*31(f) The control of discharges of contaminants into or onto land, air or water and discharges of water into water.*

Section 31 identifies the functions of territorial authorities (District Councils). Of relevance, Clause 31(1)(a) reads:

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<sup>1</sup> Note that response to submission [26/28/4] replaces reference to covenant with consent notice

- (a) *the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district.*

In addition, clause 31(b) reads:

*The control of any actual or potential effects of the use, development, or protection of land, including for the purpose of-*

It is noted that while clauses 31(b)(i)-(iii) don't include reference to air quality, the introductory statement is inclusive, rather than exclusionary. Additionally, Section 74 of the Act, which identifies matters to be considered by territorial authorities, states in clause 1:

*74(1) A territorial authority shall prepare and change its district plan in accordance with its functions under Section 31, the provisions of Part 2, a direction under Section 25(2), its duty under Section 32, and any regulations.*

Part 2 of the Act includes the purpose of the Act (Section 5), matters of national importance (Section 6), and other matters (Section 7). Of particular relevance, Section 7 includes:

- (ba) *the efficient use and development of natural and physical resources;*  
(c) *the maintenance and enhancement of amenity values;*

Therefore, while the functions under Section 31 do not specifically address the effects of discharges from domestic heating sources, it is suggested that because the clauses of Section 31 are inclusive and Section 74 refers to the provisions of Part 2, that it is within the jurisdiction of the District Council to control emissions of discharges from domestic heating for the purposes of maintaining amenity values. Therefore, the next question is whether such controls are necessary, or whether controls at the national or regional level can be relied upon to ensure that Part 2 of the Act is achieved.

### **National Standards**

The Ministry for the Environment (MfE) has issued National Environmental Standards for the use of wood burners. These impose standards on the installation of any wood burner after 1 September 2005, and require the following:

*All wood burners installed after 1 September 2005 on lots smaller than 2ha in size must have:*

- *An emission of less than 1.5 grams of particles per kilogram of dry wood burnt as measured in accordance with AS/NZS 4013:1999; and*
- *a thermal efficiency of greater than 65% as measured in accordance with AS/NZS 4012:1999.*

In terms of enforcement, the MfE recommend that District Councils include an advice note with building consents, and that the standard is enforced by Regional Councils. However, ensuring a direct linkage between the building consent process implemented under the Building Act and the resource consent process implemented under the RMA may be difficult.

A further issue with the National Standard is that it only applies to wood burners, not open fires, coal burners or cooking stoves. This means that if the Variation relied solely on the National Standard to ensure air quality was retained, multi fuel burners could still be installed, negating the effect of restricting wood burners.

### **Regional Council controls**

The Otago Regional Plan: Air includes provision for discharges from domestic burners, however, their restrictions only apply to sites located within 'Schedule 1.2'. Albert Town is not included within Schedule 1.2. In addition, the standards imposed by the Regional Council require emissions of less than 4g/kg; which is more permissive than the national standards. Therefore, while the Regional Plan does control domestic home heating, the rules do not apply to Riverside Stage 6.

### **Summary**

It can be concluded that

- While there are national standards controlling the use of solid fuel burners these only apply to wood burners, and therefore enable use of other solid fuel burners such as coal burners and stoves which may in fact cause more significant adverse effects than wood burners;
- The Regional standards only apply to areas identified within the Air Quality Plan;
- The Regional standards are more permissive than the National Standards;
- While no report has been commissioned for Riverside, it is expected that there is a potential air quality issue;
- If solid fuel burners are not controlled prior to development, extensive costs could be incurred through having to retrofit to meet future standards;
- A rule is needed that is easy to understand, and can be enforced by the District Council;
- A consent notice ensures that each certificate of title shows clearly to the prospective landowners that they can not install solid fuel burners.

It is concluded that the use of solid fuel burners needs to be controlled at the District Council level. There are three methods available to the Council:

1. Rule in a District Plan;
2. Consent notice on each title;
3. A combination of the above.

Enforcement of both a consent notice and District Plan rules is the responsibility of the District Council. In terms of ensuring awareness of restrictions, when purchasing a new property landowners may consider in detail the consent notice on their certificate of title more than provisions in the District Plan. However, staff at the Council may only become aware of such a consent notice if a resource consent application is lodged.

Both options enable some flexibility, depending on the status of the rule in the District Plan (which determines the process for resource consent applications). Changing a consent notice on the title is subject to a similar process to resource consents under the District Plan.

A combination of both the District Plan rule and consent notice reduces any potential for non-compliance, given that notice is given on the certificate of title for each allotment, and is also provided for within the District Plan. A concern with applying only a consent notice is that the exact form of that notice would be determined at the time of subdivision consent, and may not fully achieve the objectives of the Variation. If it is reinforced by a rule in the District Plan, it is clear as to what will be achieved. Applying both mechanisms does not require any additional constraints; if the standard in the District Plan is complied with then no resource consent is required. The consent notice on the title can be considered as a means of informing landowners, and ensuring that the standard is achieved into the future.

There are a range of rules that could be adopted to manage the effects of solid fuel burners. For example, a rule could be inserted that requires adherence with the ORC list of solid fuel burners. However, as discussed above, that list is more permissive than national standards, and only applies to areas listed in Schedule 1.2 of the Air Plan. Another option is to insert a rule that controls emissions from solid fuel burners. However, such a rule in the District Plan is likely to be ultra vires, and would be difficult to enforce by the District Council, given that the technology required to measure emissions is not available. In addition, it would be more efficient to inform landowners of appropriate solid fuel burners prior to purchase and installation so that the additional cost of changing heating sources at a later date can be avoided.

Given these findings, it is recommended that a rule is inserted in the District Plan as follows:

Zone Standard in Section 9.2.5.2 of the Plan

*x Solid fuel burners – Riverside Stage 6.*

*There shall be no solid fuel burners within Riverside Stage 6.*

This rule means that the use of a solid fuel burner within Riverside Stage 6 requires a non-complying activity resource consent. This rule is consistent with rules for Millbrook and Waterfall Park. Given the need to comply with national standards, and the likelihood of both national and regional standards becoming more restrictive into the future, this rule is considered appropriate.

In order to ensure that the standard is applied consistently, and achieved by all landowners, it is also recommended that the methods of implementation, and Zone Standard 15.2.6.3(i)(h)((c), requiring consent notice on each title, are retained.

#### **4.6.3 Recommendation**

That the submission of Alyson Schuler [26/23/1] is supported and the Plan provisions are amended as follows;

Insert the following additional Zone Standard in Section 9 of the Plan

*x Solid fuel burners – Riverside Stage 6.*

*There shall be no solid fuel burners within Riverside Stage 6.*

That no other changes are made to the District Plan.

#### **4.6.4 Reasons**

The submitter requested further consideration of provisions for solid fuel burners. The above discussion has identified the current national and regional standards for home heating appliances, and identified through that discussion that there is a need to address this issue at the District Council level. To ensure compliance, it is recommended that a rule is inserted in the District Plan, in addition to the existing provisions requiring consent notices on resultant certificate of titles. This does not impose additional consent requirements on landowners, but ensures that the requirements are clearly understood and enforceable.

### **4.7 MINOR AMENDMENTS TO THE DISTRICT PLAN PROVISIONS TO CORRECT ANY ERRORS**

**Alyson Schuler** [26/23/2] submits that any errors found within the plan provisions as notified should be corrected.

#### **4.7.1 Explanation**

Alyson Schuler submits that it should be ensured that all amendments to the District Plan have been reported correctly, and that any errors should be corrected.

#### **4.7.2 Discussion**

Through inspection of the amendments to the District Plan as notified, there are some minor errors that need correction. These are identified as follows:

Site Standard 9.2.5.1 (iii):

The heading to this Standard reads *Setback from Roads*.

However, as part of the Variation, a new standard applying specifically to Riverside Stage 6 has been inserted as 9.2.5.1(iii)(d), which relates to setbacks from roads, but also setbacks from reserves and access lanes. For completeness, the heading to this Site Standard should therefore be amended so that it reads:

*(iii) Setback from Roads, Reserves and Access Lanes*

The submission of Transit New Zealand identifies that Zone Standard 15.2.6.3(i)(h) refers to covenants, when it should in fact refer to consent notice. As a consequential change, this reference should also be amended within Implementation Methods, so that implementation method (ii)(a) reads:

*(a) ~~Private covenants~~ Consent notices for design guidelines, insulation and solid fuel burners.*

As notified, the issues, objectives and assessment matters for Riverside have not been numbered adequately. This makes referencing to the provisions difficult. It is therefore recommended that the

provisions for Riverside are numbered in a manner consistent with existing provisions of the District Plan.

Zone Standard 9.2.5.2(ix) refers to the Structure Plan inserted into the District Plan as part of the Variation. It is important that this clearly states the location of the Structure Plan. Therefore, it is recommended that this read:

*All subdivision, use and development within Riverside Stage 6 shall be generally in accordance with the Riverside Stage 6 Structure Plan identified on the last page of this section. Reserves, including neighbourhood parks, and areas of open space and rear lanes may be subject to changes in location, form and size through the Outline Development Master Plan process.*

#### **4.7.3 Recommendation**

That the submission of Alyson Schuler [26/23/2] is accepted, and the plan provisions amended as follows:

Amend Site Standard 9.2.5.1(iii) to read:  
*Setbacks from Roads, Reserves and Access Lanes*

Amend method of implementation (ii)(a) to read:  
*(a) ~~Private covenants~~ Consent notices for design guidelines, insulation and solid fuel burners.*

Amend provisions for Riverside Stage 6 by inserting numbering consistent with existing provisions of the Plan.

That Zone Standard 9.2.5.2(ix) is amended slightly to read:

*All subdivision, use and development within Riverside Stage 6 shall be generally in accordance with the Riverside Stage 6 Structure Plan identified on the last page of this section. Reserves, including neighbourhood parks, and areas of open space and rear lanes may be subject to changes in location, form and size through the Outline Development Master Plan process.*

#### **4.7.4 Reasons**

The suggested changes correct minor errors, and ensure that the provisions are user friendly.

### **4.8 MANAGEMENT OF TRAFFIC EFFECTS- REVERSE SENSITIVITY ISSUES**

**Transit New Zealand** [26/28/1] submits that an additional Policy should be inserted for Riverside Stage 6 as follows:

11. *To ensure that new residential development incorporates best practice noise attenuation techniques so as to avoid noise from State Highway 6.*

**Riverside Rural Residential Limited (RRL)** [101/26/28/1] support the submission of Transit New Zealand in part, seeking that instead of inserting a new policy to address this matter, Policy 8 as notified is amended as follows. (underlining denotes additional text)

8. *To provide an attractive buffer between residential development and State Highway 6 and to manage any potential reverse sensitivity effects within the interface area.*

**Transit New Zealand** [26/28/2] submit that Site Standard 9.2.5.1(iii)(d) should be amended by deleting the word 'reserve' from the first bullet point statement.

**Riverside Residential Limited (RRL)** [101/26/28/2] support the submission of Transit New Zealand.

**Transit New Zealand** [26/28/3] submits that Standard [assessment matter] 9.3.2(iii) Building Form, should be amended to contain the following:

*Building standards that remedy or mitigate noise and vibration effects from traffic use of State Highway 6.*

**Riverside Residential Limited (RRL)** [101/26/28/3] supports the submission of Transit New Zealand, but suggests the following wording for the assessment matter: (underlining denotes additional text)

*Building standards that remedy or mitigate noise and vibration effects from traffic use of State Highway 6 on any habitable rooms within 80 metres of the State Highway 6 carriageway.*

**Transit New Zealand** [26/28/4] submits that Rule 15.2.6.3(h) be further amended as follows (underlining denotes additional text, strikethrough denotes deleted text):

*Any subdivision of the Riverside Stage 6 Site at Albert Town shall include a ~~covenant~~ consent notice on each resultant certificate of title (...)*

*(d) Building standards that remedy or mitigate noise and vibration effects from traffic use of State Highway 6 compliant with AS/NZS2107: 2000.*

*(e) a 'no complaints' provision in regard to dwellings within 80 metres of the State Highway 6 carriageway.*

**Riverside Residential Limited** [101/26/28/4] partially supports the submission of Transit New Zealand. They support the replacement of 'covenant' with 'consent notice', but request that the additional clause to be added to 15.2.6.3(i)(h) be worded as follows:

*(d) for any habitable room within 80m of the State Highway 6 carriageway either:*

*- adherence to building standard AS/NZS2107:2000; or*

*- adherence to the requirements set out in the Noise Construction Schedule*

**Transit New Zealand** [26/28/5] supports Assessment Matter 9.3.2(iii) Roading, Pedestrian and Cyclist Activity.

#### **4.8.1 Explanation**

Transit New Zealand is concerned that without the amendments suggested in their submission, the policies will not address the effects of the State Highway on residential development and potentially the effects of residential development on the functioning of the State Highway. Riverside Residential support the need to address this matter, but suggests alternative wording of the amendments.

The land adjoining State Highway 6 is not a reserve, but is instead part of the legal road, and therefore reference to 'reserve' in Site Standard 9.2.5.1(iii)(d) should be deleted.

Transit considers that any dwelling within 80 metres of the edge of seal of the State Highway is potentially at risk from noise effects from the use of the highway. These effects can be avoided or remedied by applying building standards that can be applied at the time of construction.

Transit submits that Rule 15.2.6.3(i)(h) contains a discrepancy regarding the context of the term covenant. Transit considers that the State Highway 6/Aubrey Road intersection is likely to attract more vehicle movements than anticipated in the TDG report accompanying the Section 32 analysis. Transit also considers that the current intersection improvements are inadequate in regard to the future development intensities that the Variation will allow.

Riverside Residential Limited submit that replacement of 'covenant' with 'consent notice' from Rule 15.2.6.3(h) better reflects the purpose of these requirements. RRL partially supports the inclusion of the new Rule 15.2.6.3(i)(h)(d), but requests rewording so that the noise insulation schedule (attached to their further submission) will be required to be included as part of the Outline Development Master Plan as it alleviates the need for an acoustic engineer to carry out an assessment of all new residential dwellings within this interface area.

RRL opposes Transit's suggested Rule 15.2.6.3(i)(h)(e), and considers that inclusion of such a rule within the District Plan is inappropriate in terms of achieving the purpose of the Act.



## 4.8.2 Discussion

Transit New Zealand is responsible for managing the State Highway network, and aims to work with local authorities to ensure future land use will not impinge on the functioning of the State Highway network. Given that Riverside Stage 6 borders State Highway 6, there is a need to ensure that reverse sensitivity issues are avoided, so that the functioning of the State Highway can continue, while a high amenity neighborhood can be established and maintained into the future.

The Council included a range of mechanisms within the plan provisions as notified in order to manage reverse sensitivity issues. These included designing the structure plan so that a visual buffer is created between the state highway and residential properties, allowing only large sections adjacent to the State Highway, and requiring a 10 metre building setback from the boundary of the properties adjacent to the State Highway. In addition, a rule has been inserted in Section 15 of the Plan requiring that at the time of subdivision, each title within Riverside Stage 6 must include a covenant that requires adherence to insulation requirements.

Transit has requested amendments to the provisions for Riverside Stage 6 in order to strengthen their effect. RRL has submitted in support, but suggests alternative wording. The following discussion addresses each point of submission in turn.

### ***Policy provision***

Transit [26/28/1] submits that a new policy should be inserted that reads:

*To ensure that new residential development incorporates best practice noise attenuation techniques so as to avoid noise from state highway 6.*

Ensuring that new residential development adopts best practice noise attenuation techniques is considered appropriate, given that it carries strength, and is flexible in that the policy recognises that as best practice techniques change, so too can the design of buildings within Riverside Stage 6. However, avoiding noise from State Highway 6 is not possible, given that it will always generate noise. Instead, efforts can be made to remedy or mitigate the *effects* of the noise.

RRL suggest that instead of inserting a new policy, Policy 8 should be amended to read:

*To provide an attractive buffer between residential development and State Highway 6 and to manage any potential reverse sensitivity effects within the interface area.*

The use of the term 'attractive buffer' within Policy 8 infers that it relates to ensuring visual amenity values are protected, rather than managing noise effects. Additionally, the size of this buffer has not been derived based on noise effects. For these reasons, it is considered better to insert a new policy relating specifically to the management of noise effects from the State Highway, which reflects the 8<sup>th</sup> bullet point of the objectives, which reads:

*Manages the effects of State Highway 6 on Albert Town.*

It is believed that the wording suggested by RRL has less strength than that suggested by Transit, and it may therefore be less effective in ensuring that the effects of the State Highway on the living environment of dwellings within Riverside Stage 6 are mitigated.

It is suggested that, in order to incorporate the suggestions of both Transit and RRL, a new policy should be inserted that reads:

*To ensure that new residential development incorporates best practice noise attenuation techniques in order to manage the effects of noise from the state highway on residential amenity.*

### ***Site Standard 9.2.5.1(iii)***

Submission [26/28/2] by Transit requests the deletion of the word 'reserve'. This suggestion is supported by RRL. This corrects an error, and is therefore appropriate. It is noted that 'the' should also be deleted so that the site standard reads:

(a) any building within the Sub-Zone 'C' area shall be set back 10m from the boundary adjoining the State Highway 6 reserve.

### **Assessment Matters**

Transit's submission [26/28/3] suggests that assessment matter 9.3.2(iii) Building Form should be amended to contain the following:

*Building standards that remedy or mitigate noise and vibration effects from traffic use of State Highway 6.*

RRL supports this submission, but suggests the following alternative wording:

*Building standards that remedy or mitigate noise and vibration effects from traffic use of State Highway 6 on any habitable rooms within 80 metres of the State Highway 6 carriageway.*

The need to reflect new policy 11 within the assessment matters is recognised. This assessment matter will ensure that when assessing the resource consent for an Outline Development Plan for Riverside Stage 6 the Council can, as part of that assessment, establish whether mechanisms to ensure adequate building standards will be applied to those dwellings potentially affected by the State Highway.

In its Draft Reverse Sensitivity Guidelines (May 2006), Transit identifies that development restrictions are not required beyond 80 metres from the State Highway. This is reflected in paragraph 4 of Transit's submission, where Transit identifies that 'Transit considers any dwelling within 80 metres of the edge of seal of the State Highway is potentially at risk of noise effects from the use of the highway'. The suggestion of RRL that the assessment matter specify 80 metres is therefore consistent with Transit New Zealand's policy documents, and considered appropriate.

The suggestion that the assessment matter only consider the use of building standards for habitable rooms is also considered appropriate. Habitable rooms are defined in the Building Code (Schedule 1 to the Building Regulations 1992) to mean:

*A space used for activities normally associated with domestic living, but excludes any bathroom, laundry, water closet, pantry, walk in wardrobe, corridor, hallway, lobby, clothes drying room, or other space of a specialised nature occupied neither frequently nor for extended periods.*

The need to manage effects on habitable rooms is reflected in Appendix 6 to the Transit New Zealand Planning and Policy Manual (1991), which identifies that it is only those rooms such as bedrooms and living areas that are noise sensitive and therefore need to be insulated. This is also consistent with provisions within the Queenstown Lakes District Plan for dwellings within close proximity to the Queenstown airport. In this instance, Rule 7.5.5.2(v) relates to those parts of a building used for residential or visitor accommodation activities, and specifically excludes non-critical listening environments from the insulation standards.

Given the above discussion, it is suggested that the wording of the assessment matter should be amended to read:

*The adoption of building standards to remedy or mitigate the effects of noise from traffic use of State Highway 6 on any habitable rooms within 80 metres of the State Highway 6 carriageway.*

### **Zone Standard 15.2.6.3(i) (h)- noise insulation**

Transit requests that the reference to 'covenant' is replaced with 'consent notice' in Rule 15.2.6.3(i)(h). RRL support this amendment.

Consent notices are a form of covenant between the council and the landowner, and can only be imposed through a subdivision consent. They relate to conditions that must be complied with on a continuing basis by the subdividing owner and subsequent owners after the deposit of the survey plan.

Because a consent notice is an agreement between the council and the landowner, the council would enforce any non-compliance.

A covenant would be used where the Council wanted to limit or restrict the use of land, as identified through the assessment of a land-use consent application. Types of restrictions that may be imposed through covenants include minimum size of dwelling, protection of native bush, duration of the construction period, and approval of plans by the developer.

Given that Rule 15.2.6.3(i)(h) refers to 'any subdivision of Riverside Stage 6', reference to the term consent notice is correct, and therefore the suggested amendment is appropriate.

Transit also request that an additional bullet point is added that reads:

*(d) Building standards that remedy or mitigate noise and vibration effects from traffic use of State Highway 6 compliant with AS/NZS2107/2000.*

This would mean that each certificate of title within Riverside Stage 6 would include a consent notice requiring compliance with the building standard AS/NZS2102/2000. RRL suggest an alternative as follows:

*(d) for any habitable room within 80m of the State Highway 6 carriageway either:  
- adherence to building standard AS/NZS2107:2000; or  
- adherence to the requirements set out in the Noise Construction Schedule.*

As discussed above, it is only those living spaces at risk from noise that should be required to achieve noise insulation standards. Therefore, RRL's suggestion that consent notices are only required for those habitable rooms within 80 metres of the State Highway is supported.

RRL's suggestion of a requirement that either AS/NZS2107/2000 or the requirements of the noise construction schedule are adhered to is consistent with suggested rules in Transit's Draft Reverse Sensitivity Guidelines (updated 21 September 2006).

AS/NZS2107/2000 is entitled '*Recommended design sound levels and reverberation times for building interiors*'. It identifies internal sound levels for different areas of occupancy, and can be found on the Standards New Zealand website. The concern with providing a rule that specifies adherence to this standard is that:

- (a) if the standard is updated, a plan change is required to amend reference to the standard, otherwise dwellings must comply with a standard that has been revoked or is outdated;
- (b) landowners may find it difficult to access the standard, and understand its meaning;
- (c) the standard identifies noise levels that must be achieved, rather than specifying construction methods. Therefore, without a check by an acoustic engineer, it is questionable as to whether the noise standards will actually be achieved.

While it is acknowledged that a benefit of this approach is that it allows some flexibility in construction materials, it is considered problematic in that if there is no check prior to construction by an acoustic engineer, a dwelling may be completed before it is realised that the standards have not been met. Correcting this problem would be very costly.

Consequently, it is suggested that if an option is provided for adherence to the noise insulation standard, that this is accompanied by a provision that requires approval by an acoustic engineer prior to construction. This approach is consistent with the approach adopted in Rule 7.5.5.2(v) of the Plan, and with Transit New Zealand's Draft Reverse Sensitivity Guidelines.

It is also recommended that the construction noise schedule is included within the District Plan, so that it is easily referenced. This is also consistent with the approach adopted in Rule 7.5.5.2(v).

Therefore, it is recommended that Zone Standard 15.2.6.3(i) (h) is amended to read:

*(h) Riverside Stage 6 – Albert Town  
Any subdivision of the Riverside Stage 6 site at Albert Town shall include a consent notice on each resultant certificate of title that requires:*

- (a) adherence to the built form guidelines;*

- (b) adherence to insulation requirements;
- (c) restrictions on the use of solid fuel burners; and
- (d) for any habitable room within 80m of the State Highway 6 carriageway either:
  - adherence to building standard AS/NZS2107:2000, and provision of a certificate from a recognised acoustic engineer stating that the proposed construction will achieve the internal design noise level; or
  - adherence to the requirements set out in the Noise Construction Schedule, Table 1 in part 15.2.6.3(iii)(h)

### **Zone Standard 15.2.6.3 (h)-No complaints provision**

Finally, Transit requests the inclusion of a consent notice that imposes a no complaints restriction on buildings within 80 metres of the State Highway. RRL opposes this suggestion, submitting that the inclusion of such a rule in the District Plan is not appropriate in terms of achieving the purpose of the RMA.

Transit's submission is consistent with their Draft Reverse Sensitivity Guidelines, which suggests that activities may establish close to the State Highway, provided they can meet the required standards and an agreement requiring the registration of a no complaints instrument is in place. (page 11). However, the Transit policy documents also recognise Transit's general duty to avoid, remedy or mitigate adverse effects of state highways. This is encapsulated in the Planning and Policy Manual Supplement (September 2005), which states in the introduction on page 2 that part of Transit's broad focus requires:

*avoidance, to the extent reasonable in the circumstances, of adverse social and environmental impacts.*

Transit therefore has a responsibility to manage the effects of activities on the State Highway. It is believed that if persons building within 80 metres of the State Highway meet noise insulation standards, those persons should have the ability to complain if noise generated by the State Highway increases. If that does occur, Transit has a responsibility to, as far as possible, mitigate that noise.

The danger is that if people are restricted by a no complaints provision, noise from the State Highway could increase significantly. For example, increased heavy traffic, and whereas usually measures would be taken to reduce that noise through use of different seal, or restrictions on engine braking, if such an approach was not taken, residents could be caught in a situation where they are adversely affected, but are powerless to act.

It is therefore recommended that Transit's suggestion to impose a no complaints restriction is declined.

### **General comments**

It is also noted that in their submission, Transit New Zealand suggest that the State Highway/Aubrey Road intersection is likely to attract more vehicle movements than anticipated in the Traffic Design Group report that accompanies the Section 32 analysis. They also consider that the current intersection improvements are inadequate in regard to the future development intensities that the proposed variation will allow. However, while Transit raises these issues, it does not seek any decision in respect of them.

It is noted that the subdivision of Riverside Stage 6 will be a controlled activity (subject to meeting site and zone standards), and will be subject to the rules contained in Part 15 of the Queenstown Lakes District Plan. Of relevance, Rule 15.2.8 Property Access reserves Council's control over a number of matters, including of relevance:

*Any requirements for widening, formation or upgrading existing roads.*

Given these provisions, the upgrades required to intersections will be assessed at the time of subdivision consent. This is appropriate, given that it is not until this stage in the process that the exact number of allotments will be determined.

#### 4.8.3 Recommendation

That the submission of **Transit New Zealand Limited** [26/28/1] and the further submission of **Riverside Residential Limited** [101/26/28/1] are accepted in part. That part accepted is the inclusion of new Policy 11. That part rejected is the specific wording proposed by each submitter. It is recommended that a new policy is inserted that reads:

11. To ensure that new residential development incorporates best practice noise attenuation techniques in order to manage the effects of noise from the State Highway on residential amenity.

That the submission of **Transit New Zealand** [26/28/2] and the further submission of **Riverside Residential Limited** [101/26/28/2] are accepted and the first bullet point of Site Standard 9.2.5.1(iii) is amended as follows:

*Any building within the Subzone 'C' area shall be set back 10 metres from the boundary adjoining the State Highway 6 reserve.*

That the submission of **Transit New Zealand** [26/28/3] and the further submission of **Riverside Residential Limited** [101/26/28/3] are accepted in part. That part accepted is the addition of an assessment matter. That part rejected is the precise wording of the assessment matter. It is recommended that a new assessment matter is inserted that reads:

The adoption of building standards to remedy or mitigate the effects of noise from traffic use of State Highway 6 on any habitable rooms within 80 metres of the State Highway 6 carriageway.

That the submission of **Transit New Zealand** [26/28/4] and the further submission of **Riverside Residential Limited** [101/26/28/4] are accepted in part and:

- (a) Rule 15.2.6.3 is amended by replacing covenant with consent notice.
- (b) Rule 15.2.6.3 is amended by inserting the following additional clause:
  - (d) for any habitable room within 80m of the State Highway 6 carriageway either:
    - adherence to building standard AS/NZS2107:2000, and provision of a certificate from a recognised acoustic engineer stating that the proposed construction will achieve the internal design noise level; or
    - adherence to the requirements set out in the Noise Construction Schedule, Table 1 in part 15.2.6.3(iii)(h)

Those parts of Transit's submission and Riverside Residential's further submission that are accepted are the replacement of 'covenant' with 'consent notice', and the insertion of an additional clause (d). That part not accepted is the specific wording of clause (d), and the inclusion of clause (e) a no complaints provision.

That the submission of **Transit New Zealand** [26/28/5] is accepted.

#### 4.8.4 Reasons

Given the location of Riverside Stage 6 alongside the State Highway, it is important that the potential for reverse sensitivity issues into the future is avoided. The amendments to the provisions strengthen the Council's ability to ensure that noise insulation standards are achieved that ensure amenity values of residents within close proximity to the State Highway are maintained, and the State Highway can continue to function effectively into the future.

#### 4.9 TRAFFIC MANAGEMENT ISSUES- ACCESS BETWEEN RIVERSIDE STAGE 6 AND THE STATE HIGHWAY

**David Vass** [26/32/1] submits that vehicle access to State Highway 6 from Riverside Stage 6 should be allowed, and the access to Aubrey Road should be disallowed.

**Transit New Zealand** [102/26/32/1] opposes the submission of David Vass.

#### 4.9.1 Explanation

David Vass submits that a lack of access from Riverside Stage 6 to the State Highway will lead to increased traffic volumes, both in Riverside Stage 6 and existing parts of Albert Town, which is undesirable from both safety and quality of life perspectives. It is submitted that an access onto the State Highway may negate the need for the road cutting through the escarpment reserve onto Aubrey Road. The increased traffic on the new and existing areas of Albert Town is inconsistent with the objectives and policies of the Variation. Finally, it is submitted that an extension of the 70km/hr speed limit should make an access onto the State Highway from Riverside safe. It is also noted that similar access to the State Highway exists in an adjacent development.

Transit New Zealand submits that any additional accesses to the State Highway will compromise its safety and efficiency.

#### 4.9.2 Discussion

As discussed in Section 4.8 above, Transit New Zealand is responsible for the management of the State Highway network. This is reflected in the Policy and Planning Manual Supplement (September 2005), which identifies the following as an anticipated outcome for the transport network:

*'reduced side friction and improved safety due to fewer, well spaced direct vehicle accesses to state highways;'*

The Manual also identifies that:

*New and existing direct access onto state highways from private property and local side roads represents a significant threat to the long term sustainability of the state highway network, particularly in areas facing development pressures.*

Consequently, Transit discourages direct traffic access to the State Highway. This stance has been reflected in early discussions regarding Riverside Stage 6. Through recognizing the need to achieve Transit's objectives, the structure plan for the Variation has been designed so that no additional access points onto the State Highway are provided. This approach has been supported by traffic assessments, and is therefore considered appropriate.

#### 4.9.3 Recommendation

That the submission of **David Vass** [26/32/1] is rejected, and the further submission of **Transit New Zealand** [102/26/32/1] is supported, and that no changes are made to the structure plan for Riverside Stage 6.

#### 4.9.4 Reasons

To ensure the continued functioning of the State Highway, additional accesses are discouraged by Transit New Zealand. The structure plan for Riverside Stage 6 has been designed to reflect Transit's objectives. Traffic assessments have demonstrated that the proposed road network is appropriate, and that traffic effects can be managed effectively into the future.

## APPENDIX 1: RECOMMENDED AMENDMENTS TO THE DISTRICT PLAN PROVISIONS FOR RIVERSIDE AS NOTIFIED

### Changes to District Plan for Riverside Stage 6

The changes recommended within this planner's report are depicted by underlining for additions, and as ~~strikethrough~~ for deletions.

Individual Township Issues

#### 9.1.3.3 Albert Town

Issues:

Riverside Stage 6

Township character and amenity values

- Public open spaces and the public realm
- Land use efficiency and the ability to accommodate growth
- Accessibility and movement network
- Landscape and environmental features
- Integrated planning and stormwater management
- Cost-effective and resource efficient development
- The need to provide for an integrated and diverse community

#### 9.1.4 Objectives and Policies – Townships

##### Objectives- Riverside Stage 6

1. Comprehensive development within Riverside Stage 6 that:
  - a. complements the character of Albert Town
  - b. provides an interconnected network of streets and walkways that facilitates a safe, efficient and pleasant walking, cycling and driving environment
  - c. provides for a variety of lot sizes and densities
  - d. promotes the efficient and sustainable use of land
  - e. protects and enhances significant landscape and environmental features
  - f. facilitates an integrated approach to the design of open space and urban water management
  - g. creates cost-effective and resource-efficient development
  - h. manages the effects of State Highway 6 on Albert Town.
  - i. provides a high quality living environment

##### Policies- Riverside Stage 6

1. ***To facilitate a site responsive approach to residential development on the Riverside Stage 6 site that recognises and is consistent with the existing character of Albert Town.***
2. ***To create active interfaces between streets and land uses, with building frontages to streets that improve amenity and safety through increased surveillance and activity.***
3. ***To facilitate an efficient and sustainable approach to urban development by maximising land use efficiency and minimising energy use.***
4. ***To provide a safe and visually attractive urban environment that provides a variety of housing types and densities to meet the diverse needs of the community.***
5. ***To provide a movement network which incorporates a highly interconnected street network that clearly distinguishes between arterial routes and local streets, establishes good internal and external access for residents, provides safe and efficient pedestrian and cycle linkages and supports public transport.***

6. *To provide for safe, attractive and useable community and outdoor spaces.*
7. *To protect and enhance the landscape and environmental features of the site.*
8. *To provide an attractive buffer between residential development and State Highway 6.*
9. *To provide cost-effective housing options, including the provision of duplex housing within sub-zone A.*
10. *To ensure that new residential development incorporates best practice stormwater management techniques.*
11. *To ensure that new residential development incorporates best practice noise attenuation techniques in order to manage the effects of noise from the State Highway on residential amenity.*

### **Implementation Methods**

The objectives and associated policies will be implemented through a number of methods including:

- (i) District Plan
  - (a) The identification of Township Zones and associated objectives, policies and rules
  - (b) Inclusion of a Structure Plan to guide the planned expansion of Albert Town at the Riverside Stage 6 site.
  
- (ii) Other Methods-
 

Riverside Stage 6 at Albert Town:

  - (a) ~~Private covenants~~ Consent notices for design guidelines, insulation and solid fuel burners.
  - (b) Stakeholders Deed

### ***Explanation and Principal reasons for adoption***

No changes proposed.

### ***Environmental Results Anticipated***

No changes proposed.

## **9.2 Townships Zone Rules**

### **Controlled Activity- Riverside Stage 6**

#### 9.2.3.2(iv)

Within the Riverside Stage 6 site, an Outline Development Master Plan of the site lodged with the Council pursuant to Rule 9.2.5.2 (viii) in respect of:

- a. Consistency with the Riverside Stage 6 Structure Plan.
- b. The maintenance of view shafts.
- c. Subdivision design, lot configuration, densities and allotment sizes, including the provision for duplex development and smaller lot sizes within Sub-Zone A through comprehensive subdivision design.
- d. Provision of an interconnected roading pattern.
- e. The provision of a buffer area and mitigation measures to minimise noise and visual impacts from State Highway 6.



- f. Landscaping.
- g. The provision of Design Guidelines to apply to all buildings erected within the area subject to the Outline Development Master Plan.
- h. Consistency with the relevant objective and policies within the Township Zone.

## 9.2.5 Standards

### 9.2.5.1 Site Standards

#### i Site Density

The minimum net allotment size for each residential unit shall be 800m<sup>2</sup> **except:**

- (b) Within Subzone 'A' of the Riverside Stage 6 site at Albert Town, the minimum net allotment size per residential unit shall be 400m<sup>2</sup>;

Or

Two residential units or a duplex (being two residential units sharing a common wall) may be erected on the site.

The lots to which this rule applies shall be depicted in the Outline Development Master Plan, approved pursuant to Rule 9.2.5.2(viii).

- (c) Within Riverside Stage 6, Subzone 'B', there shall be one residential unit per allotment.

#### ii Building Coverage

The maximum building coverage for all activities on any site shall be 35% **except** for buildings within **Commercial Precincts** or **Visitor Accommodation Sub-Zones**. Within the **Riverside Stage 6 site** at Albert Town the maximum building coverage for all activities on any site shall be:

- a. Lots within Subzone 'A' - 40%
- b. Lots within Subzone 'B' - 35%
- c. Lots within Subzone 'C' - 35%

#### iii Setback from Roads, Reserves and Access Lanes

The minimum setback of any building from road boundaries shall be 4.5m **except:**

- (d) Within the Riverside Stage 6 site at Albert Town:
  - a. any building within the Subzone 'C' area shall be set back 10m from the boundary adjoining ~~the~~ State Highway 6 reserve;
  - b. within Subzone 'A', where a site is adjacent to a public reserve, there shall be a minimum setback of 2 metres for any building from the reserve boundary.
  - c. within Subzone 'A', there shall be a minimum setback of 2m from road boundaries (excluding secondary rear access lanes).
  - d. within Subzone 'A', where the site has access to a secondary rear access lane, all residential dwellings shall be set back at least 2 metres from the rear lane boundary, and there shall be no setback requirements from this rear lane for garages and accessory buildings.
  - e. where sites have access to a secondary rear access lane, all residential dwellings shall front the primary public road.

#### v Access

Each residential unit shall have legal access to a formed road. Except:

Within the Riverside Stage 6 site at Albert Town, where access to a secondary rear lane is available, all garaging and vehicle access to the site must be provided via this rear lane.

### **xiii Fence Heights**

Within the Riverside Stage 6 site at Albert Town, no solid fence constructed or otherwise erected within the Road Setback shall exceed 1.2m in height above ground level.

### **9.2.5.2 Zone Standards**

#### **viii Riverside Stage 6 - Outline Development Master Plan**

No subdivision or development shall take place within Subzones 'A', 'B' or 'C' identified on the Riverside Stage 6 Structure Plan unless in accordance with an Outline Development Master Plan that has been lodged and approved by Council pursuant to Controlled Activity Rule 9.2.3.2(iv).

#### **ix Subdivision, use and development - Riverside Stage 6**

All subdivision, use and development within Riverside Stage 6 shall be generally in accordance with the Riverside Stage 6 Structure Plan identified on the last page of this section. Reserves, including neighbourhood parks, and areas of open space and rear lanes may be subject to changes in location, form and size through the Outline Development Master Plan process.

#### **x Solid fuel burners – Riverside Stage 6.**

There shall be no solid fuel burners within Riverside Stage 6.

### **9.3.2 Assessment Matters**

- iii Controlled Activity - Outline Development Master Plan for Riverside Stage 6.  
Conditions may be imposed to ensure that:
  - (a) Subdivision design and configuration:
    - (i) Methods are identified to integrate the development with the existing pattern and character of development at Albert Town.
    - (ii) Lots are orientated to achieve maximum solar gain, and where possible lots are provided that are deep and align north-south with streets aligned east-west.
    - (iii) Methods are incorporated to encourage coordinated building styles, materials and external elements.
    - (iv) A permeable layout with strongly defined active street frontages is achieved.
  - (b) Development Density
    - (i) There is a mix of allotment sizes throughout the development.
    - (ii) Wherever possible, smaller lots are located alongside parks and reserves.
    - (iii) Duplex development within 50-55% of sub-zone A is encouraged within the Outline Development Master Plan.
  - (c) Roading, Pedestrian and Cyclist Connectivity:
    - (i) Secondary rear access lanes for lots fronting the central main street are provided where possible.
    - (ii) Alignment, design and treatment of roading promotes safe vehicle speeds.

- (iii) Where possible and cost effective, incorporate techniques where roads and public spaces can provide “green engineering” solutions for drainage.
- (iv) Street planting and beautification techniques are identified.
- (v) The ‘Albert Town Loop Walkway’ is continued through the escarpment area linking with existing walking links to Mt Iron.
- (vi) Easy to walk pedestrian linkages are provided throughout the road network and via dedicated walkways from residential lots to neighbourhood parks and the escarpment reserve areas.
- (vii) Cycleways are provided throughout the site.

(d) Reserve Areas

- (i) An appropriate number of neighbourhood parks to be used for children’s play areas, recreational spaces and/or community purposes to be interspersed throughout the development.
- (ii) Provision is made for planting of trees within neighbourhood parks.
- (iii) The western escarpment and wetland areas are created as public reserve areas.
- (iv) Appropriate methods to supplement and/or protect native vegetation within the western escarpment and ecological values within the wetland area are adopted.

(e) Landscaping

- (i) Appropriate design responses to managing the interface between the site and State Highway 6 are adopted.

(f) Built Form

- (i) Appropriate building style and external appearance guidelines are provided, and methods for their implementation identified, such as via developer design approval processes, the use of a pattern book and/ or the use of covenants or encumbrances.
- (ii) Residential design guidelines are adopted that are to be employed on those lots identified to enable higher density development.
- (iii) The adoption of building standards to remedy or mitigate the effects of noise from traffic use of State Highway 6 on any habitable rooms within 80 metres of the State Highway 6 carriageway.

(g) Parking and Garaging

- (i) Provision is made to require all driveways to include sufficient space for vehicles to stand completely clear of the road and footpath.

**15.2 Subdivision, Development and Financial Contributions Rules**

**15.2.6.3 Zone Subdivision Standards – Lot Sizes and Dimensions**

**i Lot Sizes**

- (a) No lots to be created by subdivision, including balance lots, shall have a net area less than the minimum specified for each zone in the Tables below,

Zone	Lot Areas
The Townships:	
Albert Town	<ul style="list-style-type: none"> <li>• 800m<sup>2</sup></li> </ul>
Riverside Stage 6 Subzone A	<ul style="list-style-type: none"> <li>• 50-55% of lots will be developed to a minimum area of <b>400m<sup>2</sup></b></li> <li>• Average lot size: 600m<sup>2</sup></li> <li>• Maximum lot size: 800m<sup>2</sup></li> </ul>
Riverside Stage 6 Subzone B	<ul style="list-style-type: none"> <li>• Average lot size: 800m<sup>2</sup> (minimum 700m<sup>2</sup>, maximum 1000m<sup>2</sup>)</li> </ul>
Riverside Stage 6 Subzone C	<ul style="list-style-type: none"> <li>• Minimum 1,000m<sup>2</sup>, maximum 2000m<sup>2</sup></li> </ul>

(h) Riverside Stage 6 – Albert Town

Any subdivision of the Riverside Stage 6 site at Albert Town shall include a ~~covenant~~ consent notice on each resultant certificate of title that requires:

- a) adherence to the built form guidelines,
- b) adherence to insulation requirements; and
- c) restrictions on the use of solid fuel burners;
- (d) for any habitable room within 80m of the State Highway 6 carriageway either:
  - adherence to building standard AS/NZS2107:2000, and provision of a certificate from a recognised acoustic engineer stating that the proposed construction will achieve the internal design noise level; or
  - adherence to the requirements set out in the Noise Construction Schedule, Table 1 in part 15.2.6.3(iii)(h)

as contained within the Riverside Stage 6 Outline Development Master Plan approved pursuant to Rule 9.2.5.2 (viii).

For the purpose of providing secondary rear access lanes, the minimum width of any secondary rear access lane shall be 5m (min) and 6m (max).

Any subdivision of the Riverside Stage 6 site at Albert Town shall include a covenant on each resultant certificate of title within Subzone 'C' that prevents the further subdivision of these allotments.

Table 1: Noise insulation construction schedule

Building element	Minimum construction requirement	
External walls of habitable rooms	Stud walls:	20mm timber or 9mm compressed fibre cement sheet over timber frame (100mm x 50mm)*
	Exterior cladding	
	Cavity infill:	Fibrous acoustic blanket (batts or similar of a minimum mass of 9kg/m <sup>3</sup> ) required in cavity for all external walls. Minimum 90mm wall cavity.
	Interior lining:	One layer of 12mm gypsum plasterboard. Where exterior walls have continuous cladding with a mass of greater than 25kg/m <sup>2</sup> (e.g. brick veneer or minimum 25mm stucco plaster), internal wall linings need to be no thicker than 10mm gypsum plaster board.
	Combined superficial density:	Minimum of not less than 25kg/m <sup>2</sup> being the combined mass of external and internal linings excluding structural elements (e.g. window frames or wall studs) with no less than 10kg/m <sup>2</sup> on each side of structural elements.
	Mass walls	190mm concrete block, strapped and lined internally with

		10mm gypsum plaster board, or 150mm concrete wall.
Glazed Areas of Habitable Rooms	Glazed areas up to 10% of floor area:	6mm glazing single float
	Glazed areas between 10% and 35% of floor area: Glazed areas greater than 35% of floor area:	6mm laminated glazing  Require a specialist acoustic report to show conformance with the insulation rule.
	Frames to be aluminium with compression seals	
Skillion Roof	Cladding:	0.5mm profiled steel or 6mm corrugated fibre cement, or membrane over 15mm thick ply, or concrete or clay tiles.
	Sarking:	17mm plywood (no gaps)
	Frame:	Minimum 100mm gap with fibrous acoustic blanket (batts or similar of a mass of 9kg/m <sup>3</sup> )
	Ceiling:	Two layers of 10mm gypsum plaster board (no through ceiling lighting penetrations unless correctly acoustically rated). Fibrous acoustic blanket (batts or similar of a minimum mass of 9kg/m <sup>3</sup> )
	Combined superficial density:	Combined mass of cladding and lining of not less than 25kg/m <sup>2</sup> with no less than 10kg.m <sup>2</sup> on each side of structural elements.
Pitched Roof (all roofs other than skillion roofs)	Cladding:	0.5mm profiled steel or tiles, or membrane over 15mm thick ply.
	Frame:	Timber truss with 100mm fibrous acoustic blanket (batts or similar of a minimum mass of 9kg/m <sup>3</sup> ) required for all ceilings.
	Ceiling:	12mm gypsum plaster board.
	Combined superficial density:	Combined mass with cladding and lining of not less than 25kg/m <sup>2</sup>
Floor areas open to outside	Cladding:	Under-floor areas of non-concrete slab type floors exposed to external sound will require a cladding layer lining the underside of floor joists of not less than 12mm ply.
	Combined superficial density:	Floors to attain a combined mass not less than 25kg/m <sup>2</sup> for the floor layer and any external cladding (excluding floor joists or bearers)
External Door to Habitable Rooms	Solid core door (min 25kg/m <sup>2</sup> ) with compression seals (where the door is exposed to exterior noise).	

Notes:

- \* The table refers to common specifications for timber size. Nominal specifications may in some cases be slightly less than the common specifications stated in the schedule for timber size.
- In determining insulation performance of roof/ceiling arrangements, roof spaces are assumed to have no more than the casual ventilation typical of the joining capping and guttering detail used in normal construction.

## APPENDIX 2: STRUCTURE PLAN FOR RIVERSIDE STAGE 6

**APPENDIX 3: ZONE PLAN FOR RIVERSIDE STAGE 6**