Before the Greater Christchurch Partnership Hearings Panel
at Christchurch

*under:* the Resource Management Act 1991, Land Transport Management Act 2003 and Local Government Act 2002

*in the matter of:* Submissions in relation to the draft Our Space 2018-2048: Greater Christchurch Settlement Pattern Update

*Whakahāngai O Te Hōrapa Nohoanga*

*and:* **Christchurch International Airport Limited**
Submitter 039

# Statement of Evidence of Matthew William Bonis

Dated: 15 February 2019

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**STATEMENT OF EVIDENCE OF MATTHEW WILLIAM BONIS**

**INTRODUCTION**

1 My full name is Matthew William Bonis.

2 I am an Associate at Planz Consultants in Christchurch. I have held this position since 2009.

3 I hold a Bachelor of Regional Planning degree, and have been employed in the practise of Planning and Resource Management for 23 years. I am a full member of the New Zealand Planning Institute.

4 I am providing planning evidence on behalf of Christchurch International Airport Limited (*CIAL*) (submitter number 039) in relation to CIAL's submission on the draft Our Space 2018-2048: Greater Christchurch Settlement Pattern Update (*Our Space*).

5 I am familiar with the submission made by CIAL on 29 November 2018 and the planning issues discussed in that submission.

6 Although this is not an Environment Court hearing, I note that in preparing my evidence I have reviewed the code of conduct for expert witnesses contained in part 7 of the Environment Court Practice Note 2014. I have complied with it in preparing my evidence. I confirm that the issues addressed in this statement of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

7 I have identified my evidence where I have relied on the evidence of the following in making my conclusions:

7.1 Mr Greg Akehurst, Market Economics – Economics;

7.2 Mr Tony Penny – Transport; and

7.3 Mr Rhys Boswell – CIAL, Operations and landholdings.

**SCOPE OF EVIDENCE**

8 My evidence will deal with the following:

8.1 Evidence common to both CIAL (*039*) and LPC (*067*) – the purpose and structure of *Our Space* as relating its application to the airport (and Port) and its role in the planning hierarchy;

8.2 An introduction to the planning issues relevant to CIAL;

8.3 Points raised in CIAL's submission on the draft Our Space 2018-2048 document, including:

(a) Christchurch International Airport's status as regionally important and strategic infrastructure;

(b) Airport noise contours;

(c) Recognising the airport as a Key Transport and Economic Node;

(d) The role of land at the airport to meet identified commercial space needs in the north-west of Christchurch in the medium to long term;

(e) Provision for future industrial use and development on the land between the main airport runway and Ryans Road;

(f) Freight routes and the route between the airport and city centre as a rapid transit corridor;

(g) Hazards associated with flooding and bird strike.

8.4 Response to issues raised by other submitters and the officer's report dated 8 February 2019.

**EXECUTIVE SUMMARY**

9 The *Our Space* document is critical in terms of determining and facilitating long term land use and infrastructure decisions for Greater Christchurch.

10 The importance of *Our Space* in setting direction, and its statutory implementation in relevant RMA 1991 and LGA 2002 plans and policies is significant.

11 The Airport has undertaken strategic planning for development of its land over a long term planning horizon (50 years), which extends beyond that ascribed to the NPS-Capacity long term (30 year horizon).

12 The economic significance of Christchurch International Airport to New Zealand, the Canterbury region and Christchurch City (and the surrounding Waimakariri and Selwyn Districts) has been confirmed in numerous Court hearings, and has been described in the evidence of **Mr Akehurst** and **Mr Boswell**.

13 That economic significance is important not only in terms of future economic and employment growth for Greater Christchurch, but also the interdependencies between it and the supporting transport networks.

14 Higher order statutory documents, such the Canterbury Regional Policy Statement (2013), and respective District Plans not only set a

statutory framework around land use development, but also recognition of the Airport within that context, and as recognised strategic infrastructure.

15 I support the drafting in Our Space in terms of its direction, and its recognition of the Airport as Strategic Infrastructure, and associated with the 50dB Ldn Air Noise Contours.

16 However, based on the evidence of **Mr Akehurst**, **Mr Boswell** and **Mr Penny** I consider that there are amendments to improve the Update in terms of:

16.1 clearly identifying and protecting the Airport as strategic infrastructure;

16.2 better recognising freight routes (which extends beyond just the issues raised by CIAL), and better integrating transport provision and infrastructure into the Update;

16.3 Recognising the role and function of the Airport as a Key Transport and Employment node, specifically in relation to the economic and employment growth associated with the Airport and the requirements of NPS-Capacity PC13(a) as this relates to identifying intensification opportunities in urban environments.

## EVIDENCE COMMON TO BOTH CIAL (039) AND LPC (067) – THE PURPOSE AND STRUCTURE OF *OUR SPACE*

17 The purpose of *Our Space* is not as clear as it could be.

18 Our Space seeks to combine the role of a Growth Strategy as prepared under the Local Government Act 2002 (*LGA2002*) with the requirements of the National Policy Statement – Urban Development Capacity (*NPS-Capacity)* under the Resource Management Act 1991 (*RMA1991*).[1] This is a laudable aim; however, it remains unclear the extent to which *Our Space* will drive subsequent statutory processes, and in the absence of robust analysis what this means in terms of growth patterns and infrastructure provision.

19 Figure 6 of *Our Space* outlines the role and function of the Settlement Pattern Update in the hierarchy of statutory and non-statutory plans and policy statements.

20 It appears from Figure 6 and the text of section 2.5 of Our Space that the intention of Our Space is that it will feed into subsequent revisions of the Canterbury Regional Policy Statement and the

[1] Especially Policy PA1 and PC1.

Christchurch, Waimakariri and Selwyn District Plans.[2] The text of section 2.5 also notes that:

*"the implementation of some of the planning responses proposed in this Update will also require changes to resource management documents, including to the Canterbury Regional Policy Statement and district plans for Christchurch City, Selwyn and Waimakariri."*

It would be beneficial if the Our Space document provided more clarity as to the extent and scope of these potential changes.

21 In terms of context, the Resource Management Act 1991 (*RMA*) requires that councils must have regard to management plans and strategies prepared under other Acts to the extent that their content has bearing on the resource management issues of the region (s61(2)(a)(i) and s74(2)(b)).

22 The intent of *Our Space* is that it will influence changes to Chapter 6 of the CRPS, relevant District Plans and Long Term Plans prepared under the LGA. It is difficult to gauge both the scope of changes that may be imposed, and importantly in terms of the freight transport network, the importance of any gaps in *Our Space*.

23 I understand, through my involvement in District Plan changes for Taupo District, that the relevance of Growth Strategies to RMA instruments can be substantial.

24 I understand there is a body of case law which suggest that considerable weight should be given to relevant non-RMA plans and strategies.[3] I am also aware based on my own experience assisting councils to prepare growth strategies that the fundamental role of such documents is to enact a land use and infrastructure strategic plan to be implemented by the respective statutory plans under the RMA1991 and LGA2002.

25 The purpose of outlining these concerns, which no doubt is well known to the Commissioners (and also those drafting *Our Space*) is to ensure that the statutory weight behind the Growth Strategy is not underestimated. For CIAL and LPC this is significant for two reasons:

25.1 Both rely on clear statements and recognition in higher-order plans and policy documents as to the importance of the Port and Airport assets as strategic infrastructure, the avoidance of reverse sensitivity effects, and the role of CIAL and LPC in terms of employment and GDP growth to the region; and

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[2] Draft Our Space 2018-2048: Greater Christchurch Settlement Pattern Update (*Our Space*), Figure 6.

[3] For example, *Mapara Valley Preservation Society Inc v Taupō District Council* (A083/07) and *Sade Developments No.2 Limited v Taupō District Council* (A083/09), dealing with the Taupo District growth strategy.

25.2 Several of these matters are absent in the draft Our Space document, specifically the role and function of freight routes as a key part of the strategic network, and the economic role of Christchurch International Airport and landholdings as a Key Transport and Employment Node.

26 The Panel is respectfully asked to keep in mind when considering submissions on *Our Space* that:

26.1 Officer's report recommendations on submissions deferring decisions to any subsequent CRPS review could preclude fair process and transparency in future planning processes; and

26.2 there should be a robust policy and assessment platform to support the final role and function of the *Our Space*.

**INTRODUCTION TO CHRISTCHURCH INTERNATIONAL AIRPORT**

27 There is little to be added to the evidence of **Mr Boswell** and **Mr Akehurst** in terms of the economic and social wellbeing importance of the Airport. These matters, including multiplier benefits to Regional GDP and operational characteristics have been well canvassed. They are relevant in terms of the KTEN notation sought in the *Our Space* Document, and the need for better recognition and integration of freight routes and the transport network connecting the Airport to the city.

28 The plan hierarchy– as this integrates in with CIAL's submission points, is as follows:

28.1 **The Urban Development Strategy (2007)** *Our Space* identifies the Airport (and Port) as strategic regional infrastructure to be protected and enhanced.[4] It also identifies that the noise contours are a constraint to development[5].

28.2 Christchurch International Airport is identified in the **Canterbury Regional Policy Statement (2013)** *(CRPS)* as *Regionally Strategic Infrastructure* and *Critical Infrastructure*. Relevant provisions[6] seek to ensure that development does not adversely affect the efficient operation, use, and development and future planning of strategic infrastructure, including the *avoidance* of sensitive activities (subject to limited exemptions) within the 50dB Ldn Air Noise Contour.

[4] Urban Development Strategy (2007). 'Encouraging Prosperous Economies' [15, 16]

[5] Urban Development Strategy (2007). 'Encouraging Prosperous Economies' [24]

[6] CRPS **Objective 6.2.1** and **Policy 6.3.5(4)**

28.3 Relevant case law has recognised the significant physical and economic resource of the Airport is recognised in national, regional and local terms.[7]

28.4 Christchurch International Airport is identified in the **Christchurch District Plan (2017)** as *Strategic Infrastructure*, being*:*

> *"those necessary infrastructure facilities, services and installations which are of greater than local importance. It includes infrastructure that is nationally significant".*

28.5 The operational aircraft and engine testing noise contours associated with the Airport have a dual function (for aircraft contours as set out in the foundation document NZS6805:1992) to both manage the generation of noise, and to prevent sensitive activities from establishing with the forecast contours so as to prevent nuisance, annoyance and potential restraint on Airport operations.

28.6 The 50dB Ldn Air Noise Contour has had a presence in the Christchurch planning context since 1958. Most recently through:

- Chapter 6 (2013) to the CRPS as introduced through Appendix 1 to the Land Use Recovery Plan;
- Amendments to the now superseded Christchurch City Plan in 2016 through Appendix 2, Attachment 5 in the Land Use Recovery Plan (*LURP*);
- Inclusion in the operative Christchurch City (2017)[8], Waimakariri and Selwyn District Plans.

28.7 The Airport and its associated land holdings are identified in the Christchurch District Plan as **Special Purpose (Airport) zone**, as well as through a designation for airport purposes. The zone splits the Airport into an operational precinct (runways and taxiways), and a development precinct (many similarities to a more confined Industrial General zone).

28.8 The Special Purpose (Airport) zone is encapsulated within the 'existing urban area' boundary in CRPS-Map A. I note on this point that the Officers' report erroneously refers to submissions from CIAL as '*expanding the urban boundary*'[9].

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[7] *Christchurch International Airport Limited* vs *Christchurch City Council* AP78/1996. Decision of Chisholm J (page 3).

[8] Including Strategic Objective 3.3.2 which seeks to the *avoidance* of sensitive activities (subject to limited exemptions) within the 50dBA Ldn contour.

[9] Draft *Our Space 2018-2048: Greater Christchurch Settlement Pattern Update Whakahangai O Te Horapa Nohoanga – Officers' Report* 8 February 2019 (*Our Space – Officers' Report*), page 47.

29 The implications for *Our Space* from the above are as follows:

29.1 As discussed by **Mr Boswell**, the Airport is a substantial employer in the Greater Christchurch area, and would be second only to the Central Business District in terms of a distinct economic entity. Employment numbers exceed Westfield Riccarton (employment count 4,325 (2016))[10], or Northlands (employment count 2,809 (2016)[11] both in terms of diversity and totals. The multiplier economic benefits generated from the Airport are substantial, as **Mr Akehurst** discusses.

29.2 The employment types associated with the Airport are substantially driven by operational and logistics operations. There is, as can be expected, ancillary activity types (commercial, wholesale, professional services).

29.3 The Airport is recognised in the higher order statutory documents as 'strategic infrastructure' which recognises its regional significance in terms of infrastructure operations.

29.4 The recognition as 'strategic infrastructure' is critical to Airport operations, but does not convey the broader economic importance of the Airport and landholdings in terms of the role it plays in connecting with the region (via road transport links), nation and world (via air links) and fostering trade and the movement of goods and people.

29.5 The purpose of *Our Space* is to address significant sub-regional issues, and will subsequently inform changes to the CRPS, DPs and other processes under the LGA2002 / LTMA2003[12]. Accordingly, it is appropriate that matters associated with identification of key transport routes and the broader economic role and function of the Airport are duly recognised.

[10] https://ccc.govt.nz/assets/Documents/Culture-Community/Stats-and-facts-on-Christchurch/Community-Ward-Profiles/Commercial-Centre-Factsheets/Riccarton.pdfhttps://ccc.govt.nz/assets/Documents/Culture-Community/Stats-and-facts-on-Christchurch/Community-Ward-Profiles/Commercial-Centre-Factsheets/Riccarton.pdf

[11] https://ccc.govt.nz/assets/Documents/Culture-Community/Stats-and-facts-on-Christchurch/Community-Ward-Profiles/Commercial-Centre-Factsheets/Papanui-Northlands.pdf

[12] *Our Space – Officers' Report,* page 1

## ISSUES RAISED IN CIAL SUBMISSIONS TO THE DRAFT OUR SPACE 2018-2048: GREATER CHRISTCHURCH SETTLEMENT PATTERN UPDATE

### Christchurch International Airport as regionally significant and strategic infrastructure

30 Our Space records that the UDS identifies Christchurch International Airport as Strategic Regional infrastructure,[13] which is to be protected. Such explicit recognition of the Airport as strategic regional infrastructure recognises the importance of the Airport across higher-level planning and strategy documents.

31 As identified above, there is considerable statutory recognition of CIA as Regionally Significant Infrastructure[14] or Strategic Infrastructure.[15] Those statutory provisions recognise the dual purpose of such a notation which is to:

31.1 Provide for the efficient, use, development and operation of such infrastructure; and

31.2 Constrain development that would otherwise affect the appropriate upgrading and safety of existing strategic infrastructure, including by avoiding noise sensitive activities within the 50dB Ldn airport noise contour.

32 As outlined by **Mr Akehurst** and **Mr Boswell**, the Airport plays an essential role as an infrastructure, employment and logistics hub. There are substantial economic and social regional and national benefits associated with the efficient operation and growth of the Airport. The significant physical and economic resource of the Airport is recognised in national, regional and local terms.[16]

33 As I shall identify below, it is impossible to internalise all impacts of Airport operations (or within the designation), hence impediments to development, such as through noise contours or land use constraints associated with Airport protection (Approach Slopes, Runway End Protection) are appropriately identified in the Regional Policy Statement and District Plans.

34 I consider that the identification of CIA as Regionally Significant Infrastructure to be protected in Our Space is appropriate and should be supported. I note this submission point is not addressed in the Officers' report alongside the response to CIAL's other

[13] *Our Space*, page 5 Figure 3.

[14] CRPS Objective 5.2.2, Policy 5.3.9

[15] CRPS Objective 6.2.1, Policy 6.3.5

[16] *Christchurch International Airport Limited* vs *Christchurch City Council* AP78/1996. Decision of Chisholm J (page 3).

submissions.[17] I have assumed that is because this matter is not challenged.

35 The need for protection will continue to reinforce and support the approach in the respective Policy Statement and District Plans to maintain the current *avoidance* constraint approach imposed on noise sensitive activities.

**Airport noise contours**

36 A brief background to the formation and imposition of the current noise contours in CRPS-Map A and the respective District Plans is unavoidable. But to be succinct, I note the following:

36.1 The Airport has historically been protected for many decades by provisions in District Plans. Initially, by way of Green Belt and retaining a Rural zoning proximate to the Airport.

36.2 In 1995, when the Christchurch City Plan was made operative it included the first set of 50dBA operational noise contours prepared by Marshall Day Acoustics in accordance with the methods outlined in NZS6805:1992. Objectives and policies were also included which referred to protection of the airport as a strategic asset.

36.3 NZS 6805:1992 "Airport Noise Management and Land Use Planning", provides for a two-prong approach to managing the effects of airport operational noise on sensitive uses. The approach is to provide for noise management controls on the operator (in this instance Christchurch International Airport); and land use planning controls on the other, these being implemented by the local authority (in this instance the Canterbury Regional Council, and associated District Councils).

36.4 Importantly, NZS6805:1992 provides at clause 1.4.3.8 that the local authority may show "*the contours in a position further from or closer to the airport, if it considers it more reasonable to do so in the special circumstances of the case"*.

36.5 The Canterbury Regional Policy Statement (2013), Selwyn District, Christchurch City and Waimakariri District have all adopted the 50 dB Ldn noise contour as the location of the Outer Control Boundary to manage land uses that may affect, and be negatively affected by, noise from airport operations within their respective District plans.

36.6 From the late 1990's (and in fact as of late last year) the 50dB Ldn air noise contour has come under attack by

[17] *Our Space – Officers' Report*, page 46.

individuals who sought to subdivide rurally zoned properties. The most notable of these cases was *Gargiulo v CCC*.[18]

36.7 In 2007, Environment Canterbury notified Plan Change 1 to its operative Regional Policy Statement. As a consequence (and compressing 3 years of plan preparation), Variation 4 (2008) to Plan Change 1 introduced revised Air Noise Contours (including the 50dB Ldn, 55dB Ldn and 65dB Ldn/95dB LAE) developed via an expert panel conferencing ordered by the Court in the *Foster* appeal on the Selwyn District Plan Review (January 2008, *DJ & AP Foster* vs *Selwyn District Council* C138/07 – (the *Foster Appeal*)).

36.8 Plan Change 1, inclusive of Variation 4 was overtaken by the Canterbury Earthquake sequence. Again, compressing a period of time, the Minister for Earthquake Recovery used his powers to direct changes to the CRPS and Christchurch City Plan. These changes identified Christchurch International Airport as Strategic Infrastructure, incorporated the contours developed by the expert panel in the Foster appeal, and confirmed that sensitive noise activities were to be *avoided* within the 50dB Ldn air noise contours.

36.9 The *Foster* contours were then included in the LURP amendments to the CRPS and City Plan. These were also inserted into the Replacement (now operative) Christchurch District Plan, and Selwyn and Waimakariri District Plans.

36.10 Noise Sensitive Activities are defined in the CRPS(2013) as:

- *Residential activities other than those in conjunction with rural activities that comply with the rules in the relevant district plan as at 23 August 2008;*
- *Education activities including pre-school places or premises, but not including flight training, trade training or other industry related training facilities located within the Special Purpose (Airport) Zone in the Christchurch District Plan;*
- *Travellers' accommodation except that which is designed, constructed and operated to a standard that mitigates the effects of noise on occupants;*
- *Hospitals, healthcare facilities and any elderly persons housing or complex.*

37 The Planning rationale for the use of noise contours to manage noise impacts, and avoid noise sensitive activities is well traversed. In summary these include:

37.1 Reverse sensitivity and amenity effects, noting that the contours represent a 'future noise state';

[18] (2001) AP32/00.

37.2 Non-statutory guidance provided by NZS6805:1992;

37.3 Statutory recognition of the need for the efficient and effective operation of the Airport as Strategic Infrastructure, which predicates a planning approach (where there is choice) to avoid the potential for sensitive activities which may in future constrain or restrict operations. Examples of this include Wellington Airport where a curfew exists.

38 *Our Space* identifies that the Airport Noise Contours create limitations on where new development can be located.[19] Figure 16, which is presumed to be the replacement Map A for the CRPS, also spatially identifies the 50dBA Ldn contours as a constraint to new greenfield residential expansion.

39 The text in *Our Space* could be clearer as to the role of Figure 16, including whether it is intended as an update or replacement to Map A in the CRPS.

40 Regardless, it is appropriate to include the 50dB Ldn Air Noise Contour in *Our Space* and, in particular, Figure 16.

41 **Mr Akehurst** has outlined the economic costs associated with the existing contours are effectively a sunk cost, and that the community disbenefits are modest. He has identified that there may be individual costs (not being able to subdivide, limitations on rural residential choice), but that these are not material in terms of developing the Update to the Growth Strategy. In light of this, I consider that the benefits of including the contours in planning documents, including in *Our Space* outweigh the costs.

42 Lastly, CIAL advised in its submissions that it would update the Panel on progress in re-modelling its noise contours. This has been done in **Mr Boswell's** evidence.

43 The statutory process associated with revising the noise contours is as follows:

43.1 The current contours in the RPS are the Expert Panel contours which were modelled in 2008 (the *Foster* contours).

43.2 The timeframe that the Expert Panel recommended for relooking at the contours is 10 years i.e. 2018.

43.3 This is consistent with NZS6805:1992 which indicates that contours should be remodelled around every 10 years.

[19] *Our Space. Page 16*

43.4 Representatives for CIAL gave assurances to the Christchurch District Plan Independent Hearings Panel that the contours would be reconsidered by CIAL in about 2018.

43.5 This is consistent with the requirements in CRPS Policy 6.3.11(3), and associated Method (4) and (5).

44 The CRPS requires that any revision of the noise contours should take into account an assessment of projected future airport business growth and operation, including but not limited to aircraft movements, flight tracks, fleet mix and runway utilisation[20], as well as sensitivity and scenario testing.

45 In addition, there is a requirement for an Independent Panel of Airport Noise Experts to undertake a peer review of inputs, assumptions and outcomes of the remodelling, and provide a summary report to the Canterbury Regional Council[21]. At that stage the Regional Council is to make any report publicly available.

46 It is premature to identify any remodelled contours at this time. **Mr Boswell** has explained that CIAL understands that it is highly unlikely the remodelled contours will be larger than the current Expert Panel contours shown on Map A in *Our Space*.

47 I understand, as set out in **Mr Boswell's** evidence, that CIAL has been advised by its experts that the finalised contours will be produced in approximately 6 months' time.

48 Such a process is likely to be completed by the third quarter 2019. This likely coincides with the first signalled Phase of Changes to the CRPS Chapter 6 – Action 8[22].

49 The Officers' Report notes that this matter can be addressed '*as part of subsequent RMA processes*'.[23] I agree with that view.

**Christchurch International Airport as a Key Transport and Economic Node**

50 *Our Space* identifies Key Activity Centres (*KACs*), as the commercial building blocks and network for urban form. That is, they act as the commercial nodes for specific communities. They also incorporate mixed-use and transport orientated development, support increased

[20] CRPS Policy 6.3.11 Method 4.

[21] CRPS Policy 6.3.11 Method 4.

[21] CRPS Policy 6.3.11 Method 5.

[22] *Our Space.* Page 34.

[23] Our Space – Officers' Report, page 46.

densities and a diversity of housing and provide access to community facilities.[24]

51 The purpose of identifying such commercial / mixed use nodes in *Our Space* is that it reinforces their important role and function in terms of urban growth and form, employment, increased residential densities and transport integration. This is a key component a future development strategy pursuant Policies PC12 to PC14 of the NPS-Capacity[25].

52 I consider that business nodes that also generate significant levels of employment and activity and are equally as important as KACs in terms of recognition in a Future Development Strategy / *Our Space.* Policy 13(a) of the NPS-Capacity is not confined to residential intensification.

53 Hubs such as the Airport provide employment flexibility, choice, and increased employment densities. They also provide space for the agglomeration of land uses such as logistics, freight and other specialist industrial and business activities This kind of hub also requires effective and efficient connections to the strategic transport network and other supporting infrastructure.

54 The recognition of economic and transport hubs such as the Airport should extend beyond simply a notation on Figure 14 or Figure 18. These areas should be identified on the basis of the projected employment levels over time to ensure development infrastructure is provided to realise business and employment growth.

55 Identification in *Our Space* will also provide important recognition of the role and function of such employment areas in terms of urban form and such growth.

56 Whilst, this evidence relates to Christchurch International Airport, it is noted that the KTEN notation that CIAL seeks could equally apply to other significant employment and logistics / transport hubs such as the Inland Ports at Izone - Rolleston, employment nodes at Southbrook Waimakariri, and Lyttelton Port including its expansion under the Port Recovery Plan.

57 The suggested KTEN notation is not to allow the Airport to masquerade as a KAC, nor is it suggesting a place within the Greater Christchurch commercial centre network. I agree that land at the Airport should not compete with the role and function of KAC's in terms of both agglomeration of commercial activity, and integration of infrastructure with higher density residential living.

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[24] *Our Space,* Figure 3

[25] NPS-Capacity PC13 requires any future development strategy shall:

*(a) identify the broad location, timing and sequencing of future development capacity over the long term in future urban environments and <u>intensification opportunities</u> within existing urban environments*

Limitations are appropriate where the environmental, economic and social wellbeing of the Christchurch community as a whole is not enhanced.

58 **Mr Boswell**, has identified that Airport operations and activity generate significant employment (approximately 6,000 people employed at the Airport campus) as well as being a key transport hub for thousands of people (some 25,000 to 35,000 people per day), and a substantial volume of freight.

59 Not identifying the Airport as a key hub for employment and transport for Greater Christchurch is an omission in Our Space.

60 As identified in the BERL 2017 report:[26]

*In the year to June 2017, the total economic impact of Christchurch International Airport on the Canterbury Region was an estimated $2.6 billion in GDP, which gave rise to the employment of approximately 23,930 FTEs. This is approximately 7.6 percent of the total GDP generated in the regional economy and 8.5 percent of regional employment.*

61 As also noted in the BERL Report, the types and scale of businesses employed at the Airport are atypical to those in more traditional industrial areas of Greater Christchurch:

*"These businesses include engineering, logistics and distribution, retail trade, business services, recreation services, and government agencies. Of these businesses, 10 percent employ more than 100 FTEs, a further 20 percent employ between 20 and 100 FTEs, and the remaining 70 percent employ less than 20 FTEs".*

62 The scale and industrial opportunities mean that the Airport as an economic entity is able to develop infrastructure and attract highly specialised talent that drives economics development. Examples include logistics, Antarctic operations, and Engine maintenance and development (Pratt and Whitney).

63 The recognition of the Airport as Strategic Infrastructure in *Our Space* is critical, but this does not extend to incorporate the important employment and economic implications discussed above.

64 The Officers' Report recommends rejecting CIAL's submission seeking a KETN notification on the following grounds:[27]

> *"Officers do not consider it appropriate to promote the airport as a location for a broad range of commercial uses; the primary objective of the Airport Zone is the efficient use and development of the land, infrastructure and operational facilities of the airport. Such use and development must also be undertaken in a way that is consistent with the overall urban form of Christchurch*

[26] BERL. Christchurch International Airport. December 2017.

[27] *Our Space – Officers' Report*, page 47.

*City, including the centres based commercial strategy. Commercial and industrial zones provide for this wider range of employment sectors. While officers agree that the airport provides significant employment, it is not considered necessary or appropriate to introduce a specific new designation".*

65 The reasons for rejection conflate the commercial purpose of a KAC with what is actually being sought. As identified, there is a substantial growth related purpose supporting a KTEN notation for the Airport in order to give it appropriate recognition and to ensure sufficient infrastructure provision and planning to support this hub in the long term. The Airport also represents some 120ha of developable land associated with the long term (30 year) timeframe for the NPS-Capacity. The Airport area is also identified as 'Market Feasible' with a feasibility index of 62 (out of 76).[28]

66 Accordingly, it is considered appropriate that a Growth Strategy that seeks to afford a level of significance to Key Activity Centres, should also extend to Key Transport and Employment Nodes in the District.

67 Identifying Christchurch Airport as a KTEN, would reflect the important transport connections, economic and employment implications accordingly.

68 I recommended that Our Space be amended as follows:

68.1 Insert the following into Figure 3 on page 5:

**Economic and employment needs are met in a manner that supports a quality compact urban area, makes use of existing business land, the KAC network of centres, and KTENs such as Christchurch International Airport.**

68.2 Page 21:

'*Suburbs and Outer Urban Areas: Industrial developments are mainly taken up along core freight routes to Lyttelton Port,* ***the KTEN at*** *Christchurch Airport and* ***adjoining core freight routes connecting to*** *the* ~~*rest of the*~~ ***wider*** *South Island'.*

68.3 Page 19, Section 5.1:

*'While industrial space requirements are already well catered for in Greater Christchurch, new commercial space is required to support the needs of our growing population. The Partnership proposes to continue to focus commercial developments predominately in the Central City, reinforcing it as the principal commercial hub of the Canterbury region, while also supporting developments in key activity centres, town centres and neighbourhood centres as part of*

[28] Business Development Capacity Assessment, Appendix 12. [**It is unclear as to the Author or purpose of this Feasibility Index, nor whether all relevant variables have been considered**].

*supporting thriving local communities. Opportunities to facilitate redevelopment of brownfield land will continue to be investigated.*

***Making the best use of business land requires careful integration with infrastructure to reduce congestion in transport networks and infrastructure networks. This will increase business growth and employment opportunities in Greater Christchurch, ensure freight and the movement of goods can be undertaken efficiently and reduce disparities in access between different communities. A Key Transport and Employment Node (KTEN) for Christchurch International Airport recognises the substantial transport, business (industrial, logistics and Airport activity) agglomeration and employment densities at this business node.***

68.4 Page 25, Figure 16: Ascribe a KTEN notation for the Airport.

**Medium to long term Commercial space needs in north-west Christchurch**

69 Section 3.3 of *Our Space* identifies a 10 ha long term (30 year) shortfall of commercial land supply in the North West of Christchurch City. This shortfall is a component of the 119ha estimated City wide deficit (between a total supply of 129ha and total demand 246ha) over the longer term,[29] of which 127ha is forecast for retail demand.[30]

70 Table 37 of the Business Feasibility Analysis further breaks the north west demand down. The table identifies a surplus of supply in the short (3 year) and medium (10 year) timeframes. For the long term (30 year) analysis a deficit of 10.48ha is identified based on a 30 ha supply, and demand generated by office (16ha), commercial services (8ha) and retail (16ha).

71 The Business Feasibility Analysis identifies that as much of the shortfall is in the central quadrant, this should be the location where much of the supply is generated. The Feasibility Report also supports additional demand be focussed in centres to serve residential growth areas, including KACs. There is no dispute with such an approach, or the agglomeration and transport benefits that would accrue.

72 I understand some 50% of the retail demand figure identified in the Feasibility Analysis relates to Large Format Retail demand (retail stores with a floor area exceeding 500m$^2$ GFA).

73 Large format retail is not always able to be easily configured within the existing centre network due to fragmented sites, carparking demand and amenity considerations. The Christchurch District Plan

[29] *Our Space. Business Feasibility Study. Page 9.*

[30] *Our Space. Business Feasibility Study. Page 94 – Table 36*

identifies a specific large format zone (Commercial Retail Park Zone) and gives recognition to Large Format Centres to provide for these activities and acknowledges they may not be connected to a specific residential catchment. This is a common approach throughout New Zealand.

74 The Christchurch District Plan describes Large Format Centres as:

- *Standalone retail centre, comprising stores with large footprints, yard-based suppliers, trade suppliers including building improvement centres, and other vehicle oriented activities.*
- *Provision of other commercial activities and residential and community uses is limited. This includes limiting offices to an ancillary function, and at Tower Junction, providing for a limited amount of commercial services.*
- *Serves large geographical areas of the city.*

  *Not necessarily connected to a residential catchment.*
- *Primarily accessed by car with limited public transport services.*

75 Importantly, the plan imposes limitations (floor size, restrictions on Supermarkets and Department Stores) so that large format centres are compatible but do not compete with the commercial centre network.

76 **Mr Boswell** has identified that there are a number of attributes associated with the Christchurch International Airport which may make large format retail or commercial activities appropriate in this location. Equally, there may be other locations within the North West quadrant which are equally or better placed to cater for such demand in a manner equally benign to the commercial centres network.

77 The Officers' Report states that no change is required to *Our Space* in relation to this aspect of CIAL's submission.[31]

78 The Officers' Report recommendation is supported provided that my understanding is correct that *Our Space* does not preclude consideration of the Airport for compatible Large Format Retail use in the longer term, subject to the relevant statutory considerations. The details of such a proposal would then be considered through future RMA processes as / when relevant.

**Industrial development capacity on land near the airport**

79 Section 3.3 of *Our Space* identifies that:

[31] Our Space – Officers' Report, page 47.

*"The Christchurch City, Selwyn and Waimakariri district plans already make generous provision for meeting the long term needs for industrial land".*

80 The CIAL submission identifies that the Airport is a unique 'industrial market', and as identified by **Mr Boswell** the uptake of airport land for freight and warehousing has been substantial. CIAL has sought through submissions that *Our Space* provides for future industrial land use in the area between the main runway and Ryans Road.

81 I understand from **Mr Boswell's** evidence, and also that of **Mr Akehurst** that continued growth in demand for land to cater to Airport-related industrial sectors (such as logistics, warehousing, manufacturing) is projected.

82 **Mr Boswell** has also explained that there are economic and functional reasons for specialist industrial activities associated with freight and logistics to be located near to the Airport. Associated demand is expected to increase across the 30-year planning horizon of Our Space.

83 The decision for the Panel is a difficult one. Against a Greater Christchurch wide surplus of Industrial land supply, the more micro analysis by **Mr Akehurst** identifies locational benefits and Industrial land demands that are better met through land supply at the Airport. **Mr Boswell's** evidence is that the take up of land at Dakota Park at the Airport to provide for these activities will be extinguished within the next 30 years – being the long term timeframes of the NPS-Capacity (Policy PA1)) and that those specific types of industrial activity will not locate in the city or in other areas away from the airport due to their functional need for access to the runway.

84 **Mr Penny** has identified that a level of transport servicing exists that could support the expanded area.

85 I understand that:

85.1 that the EFM projections for Employment Count (EC) and Modified Employment Count (MEC) account for growth in the logistics, manufacturing and transport sectors (which are driving increased demand at Dakota Park) – and the land demands for such are allocated within the identified business land surplus in *Our Space*;

85.2 Mr Akehurst has also identified that additional land demands for such at the Airport would be beyond the medium term (10+ years);

85.3 An oversupply of Industrial land can lead to dispersal of industrial activity, supply distortion, and infrastructure inefficiencies.

86 I also understand that the NPS-Capacity requires careful consideration of the demand for '*different types and locations of business land*' (PB1), '*Providing for choices that will meet the needs of people and communities and future generations for a range of … working environments and places to locate businesses*' (PA3(a)); and '*the benefits and costs of urban development at a national, inter-regional, regional and district scale, as well as the local effects*' (PA4)(b); as well as carefully considering the efficient use of existing urban land (PA3(b)).

87 I consider that given the evidence of **Mr Akehurst**, **Mr Boswell** and **Mr Penny**, it would be appropriate to extend the infrastructure boundary only on Figure 16 to include Ryans Road. This signals the potential long term need for airport-specific industrial land use in this area, and allows a careful consideration of the rationalisation or application of future development area / zoning as subject to the monitoring requirements of NPS-Capacity OB1 and supporting Policies PB1 – PB4.

88 Importantly such an approach does not result in the adverse impacts identified in [85.3] above.

89 The specific merits and details of industrial land use in this area would be addressed via refresh of *Our Space* and specific RMA processes.

**Identification of key freight routes and a rapid transit corridor for the route between the airport and city centre**

*Freight routes*

90 The Our Space document does not adequately provide for the role of the transport network as it relates to freight or the movement of goods.

91 In my view, this is a shortcoming of the current drafting and the freight network should be more fully reflected in Our Space in light of its importance to the local and regional economy .

92 The role of Our Space is to promote integration of transport and infrastructure, and recognition and acknowledgment of the key freight movements and routes around the Greater Christchurch area is therefore crucial.

93 Our Space contains general statements as to the need to integrate land use and transport.[32] However, the focus in relation to the transport network is redevelopment opportunities along 'core

[32] *Our Space Section 4.1 Integrating Land Use and Transport Planning to shape desired urban form, Section 5.6 Transport and Other Transport.*

transport corridors', a significantly enhanced public transport system, and cycleways.[33]

94 There are no freight routes explicitly identified in *Our Space* or Figure 18 'Greater Christchurch Transport Network'. Freight is mentioned only once, at page 27 as follows:

> *"Christchurch is a major freight hub for the South Island with two inland ports, the Port of Lyttleton and Christchurch International Airport, acting as major gateways for produce and people. An important part of managing the transport network is to ensure that freight can be moved efficiently to and through Greater Christchurch and this will require effective management of congestion on the main freight routes".*

95 There are references in Our Space as to the alignment and catalyst implications of rapid transport and public transport in terms of unlocking residential densification opportunities. Presumably, this is factored into the Futures modelling for residential density[34].The limiting implications of the transport network (congestion and efficiency) on feasible business development are explicitly identified in the Business Development Capacity Assessment:[35]

> *"The assessment also flags that further business development along with the projected significant additional population growth in Greater Christchurch is likely to lead to reductions in the level of service and capacity of transport infrastructure,* ***with increasing delays and congestion on the network, and which may have a constraining impact on economic growth if not carefully managed****. This is matter of importance to broader land use patterns, including residential growth and will need careful consideration as part of the Future Development Strategy and broader Settlement Pattern Review".* (my emphasis).

96 As the NPS-Capacity states that provision of 'feasible development' is a function of integrated development infrastructure,[36] a comprehensive identification of key freight routes across Greater Christchurch would be appropriate in *Our Space*. key freight routes should be explicitly identified, protected and acknowledged in conjunction with Figure 18 and the future development areas in Figure 16.

97 This gap in Our Space appears to be recognised in the Officers' Report, although no amended wording is proposed.[37]

98 I recommend the following amendments to *Our Space*:

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[33] *Our Space* Figure 18.

[35] Business Development Capacity Assessment [pg 10, 75, 79, Figure A7-1 and 121]

[36] NPS-Capacity Policies PA1, PA2, PA3(b), PB3, PB5 (as this relates to NZTA) and PC13

[37] *Our Space Officers Report. Pg 28, 48.*

98.1 Within *Our Space*

(a) Delete the reference in Section 5.6 'Transport and other Infrastructure' [pg 27]:

"…longer journey times. ~~Further major investment in road networks is not scheduled.~~ For Greater Christchurch…"

(b) Amend the text in *Our Space* to explicitly reference necessary upgrades to strategic freight routes (including in particular the need for future upgrades to State Highway 1 (Johns Road – Russley Road).

98.2 Insert into Section 5.6 'Transport and other Infrastructure':[38]

**The efficient movement of goods and services is essential to prosperity and realising employment growth. Lyttelton Port of Christchurch and Christchurch International Airport are Canterbury's and the South Island's main national and international gateways.**

**There is also a significant role undertaken by strategic road and rail links in the distribution of freight within Greater Christchurch, as well as to neighbouring regions and the rest of New Zealand.**

**It is crucial that such infrastructure and networks are upgraded and improved to meet future demand, as travel delays and uncertainty from congestion creates real and substantial costs to businesses and impacts on realisable economic and employment growth in Greater Christchurch.**

98.3 Amend Figure 18 (or preferably inset a new Figure), explicitly identifying Greater Christchurch's strategic freight network, including the routes connecting: Christchurch International Airport, Lyttleton Port of Christchurch, City Depot, Midland Port and MetroPort. and

*Rapid Transit corridor*

99 CIAL has requested that the transport corridor between the Airport and the Central City be identified as an 'Indicative Rapid Transport Corridor' on Figure 14. Currently *Our Space* only identifies such corridors to the north and south west.

100 The corridors are identified as providing high speed public transport services, by way of light rail, rapid bus ways or automated trackless trains. This will encourage higher density development and improve

[38] It is noted that broader employment and economic needs are not identified as a strategic theme in Figure 3.

accessibility to jobs, services, recreation and education without necessarily having to rely on a private vehicles.[39]

101 The Officers' report recommends that CIAL's submission be rejected. The reasons given are that the route is not identified in the Future Public Transport Business Case.

102 I acknowledge that the Draft Canterbury Regional Public Transport Plan (2018 – 2028) does not identify the Airport – Central City link for rapid transit.[40] However, the draft Public Transport Plan does recognise that new services and protection of the Network structure is required between the City centre and the Airport.[41] I also note that these documents are working to different time-scales.

103 **Mr Penny** identifies that a rapid transit corridor between the city centre and the Airport would be appropriate and would more likely be viable than the indicative corridors, due in part to all-day demand from CIAL passengers, employees and visitors.

104 *Our Space* is clear that identification as a 'indicative rapid transit route' simply provides for the identification and protection of high-speed public transit routes. It does not necessitate the installation of rail services, and a high speed bus route could well suffice. **Mr Penny** has also identified that provision for rapid transit between the Airport and City Centre could be achieved by widening the road between Clyde Road and Greers Road.

105 Based on the above, and that *Our Space* is to direct longer term outcomes integrating transport infrastructure (road and Airport) with land use, it would seem prudent to also identify the central city – Airport route as 'indicative rapid transit'. As a minimum, and given the reliance on the Canterbury Regional Public Transport Plan (2018 – 2028) the route should be identified as a 'Core Public Transport route' on Figure 14 and Figure 18.

**Flooding and bird strike**

106 The Officers' report at page 48 accepts CIAL's submission that the flood hazard map in Figure 10 of *Our Space* 'flooding' be amended to show the full extent of the flood hazard associated with a breakout of the Waimakariri River in terms of a constraint.

107 With regard to Birdstrike, the Officers' report recommends no change to *Our Space.* This is on the premise that managing bird strike hazard is not an absolute constraint to development, and can be managed through provisions in respective District Plans. The

[39] *Our Space [page 28]*

[40] Draft Canterbury Regional Public Transport Plan (2018 – 2028). Figure 2.1 (30 year vision).

[41] Canterbury Regional Public Transport Plan (2018 – 2028). Figure 8.1 'Proposed Public Transport Network'.

Officer correctly identifies that this is undertaken in the Christchurch District Plan.

108 I agree that *Our Space* is a high-level document. However, I consider it prudent that there is a link within *Our Space* that highlights the need to consider such operational constraints and risks, such that CIAL (and indeed other Strategic Infrastructure providers) can establish a nexus to more specific provisions in Policy Statements and Plans.

109 I recommend that Our Space is amended as follows:

109.1 Amend the following into Figure 3 (page 5):

> Strategic regional and subregional infrastructure, including Lyttelton Port and Christchurch International Airport, service and utility hubs, and existing and future corridors, ~~is~~ **are:** protected**; the operation of this infrastructure is not compromised; and the health, safety and wellbeing of the communities of Greater Christchurch enabled**.

**RESPONSE TO OTHER SUBMITTERS AND OFFICER'S REPORT**

**Officers' report**

110 I have addressed these matters in relation to each submission point.

**Issues raised by submitters**

111 The submissions of Lawrence and Cherry McCallum (*036)* and Spokes Canterbury (*041)* are supportive of the 50dBA Ldn as a constraint to urban sprawl, and in particular residential development. That support is noted.

**CONCLUSIONS**

112 Given the importance of Our Space in terms of guiding future changes to statutory documents (the CRPS and District Plans), the Panel must be satisfied that is robust, adequately incorporates necessary infrastructure support to provide for business and residential growth, and appropriately identifies and acknowledges key elements of Greater Christchurch's urban form. I consider that the current drafting goes some way to achieving this goal but lacks specificity in some areas.

113 I support the drafting in Our Space in terms of its direction, and its recognition of the Airport as Strategic Infrastructure, and associated with the 50dB Ldn Air Noise Contours.

114 However, based on the evidence of **Mr Akehurst**, **Mr Boswell** and **Mr Penny** I consider that the additional amendment recommended above will improve the Update in terms of clearly identifying and protecting the Airport as strategic infrastructure, better recognising freight routes (which extends beyond just the issues raised by

CIAL), and better integrating transport provision and infrastructure into the Update. It is essential, given the significance of the Airport to the Regional economy and transport network, that its efficient and effective operations is properly protected and provided for in *Our Space*.

Dated: 15 February 2019

Matthew William Bonis

Before the Greater Christchurch Partnership Hearings Panel
at Christchurch

*under:* the Resource Management Act 1991, Land Transport Management Act 2003 and the Local Government Act 2002

*in the matter of:* Submissions in relation to the draft Our Space 2018-2048: Greater Christchurch Settlement Pattern Update

*and:* **Christchurch International Airport Limited**
Submitter 039

# Statement of Evidence of Rhys Boswell

Dated: 15 February 2019

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## STATEMENT OF EVIDENCE OF RHYS BOSWELL

### INTRODUCTION

1 My full name is Rhys Duncan Boswell.

2 I am the General Manager, Strategy and Sustainability at Christchurch International Airport Limited (*CIAL*). I have held this position since 2009.

3 I have been employed by CIAL in a variety of management and planning roles since March 2000.

4 My qualifications include a Bachelor of Arts and a Master of Regional and Resource Planning from the University of Otago.

5 I have been authorised by the Chief Executive of CIAL to provide evidence in relation to CIAL's submission (number 039) on the draft Our Space 2018-2048: Greater Christchurch Settlement Pattern Update (*the Update*). I am familiar with the submission made by CIAL on 29 November 2018.

### SCOPE OF EVIDENCE

6 My evidence will deal with the following:

6.1 an overview of Christchurch International Airport (*CIA / the Airport*);

6.2 CIA operations and development;

6.3 the process for remodelling the operational noise contours and progress to date;

6.4 bird strike.

### OVERVIEW OF CHRISTCHURCH INTERNATIONAL AIRPORT

7 CIA is the largest airport in the South Island and the second-largest in the country. It connects Canterbury and the wider South Island to destinations in New Zealand, Australia, Asia and the Pacific.

8 There are approximately 6,000 people who call the Airport campus their place of employment – this includes 300 people directly employed by CIAL.

9 Airports have a strong multiplier effect on the economies they serve. Independent estimates indicate that for every $1 Christchurch

Airport earns, the wider South Island economy earns $50.[1] In 2017 the Airport was estimated to contribute $2.6 billion to the GDP of the Canterbury region.[2] Ministry for Business, Innovation and Employment research reports that one international airline passenger into Christchurch generates 12.3 commercial bed nights across New Zealand and 9.9 commercial bed nights into the South Island.[3]

10 Just under 7 million travelling passengers per year and their associated meeters and greeters currently pass through the Airport.[4] Combined Airport activities see between 25,000 and 30,000 people visiting the Airport every day. CIA is home to several international Antarctic science programmes and their associated facilities. The Airport is also the primary air freight hub for the South Island, playing a strategic role in New Zealand's international trade as well as the movement of goods domestically. On that basis, the Airport is a significant physical and economic resource in national, regional and local terms.

11 Of fundamental importance, the Airport has a competitive edge over other airports in New Zealand and in the southern hemisphere as it operates uncurfewed and unrestricted as to the type of aircraft that can use it. The ability of the Airport to continue to operate 24 hours a day, 365 days of the year is integral to the future economic and social wellbeing of people and the communities of Greater Christchurch and the South Island in general.

## AIRPORT OPERATIONS AND DEVELOPMENT

### CIAL corporate profile and operations

12 CIAL operates the Airport, with ownership shared between Christchurch City Holdings Limited (75%) and the New Zealand Government (25%). The company is responsible for the efficient, safe and secure operation of the airport.

13 CIAL owns the airport terminal and the airfields, and approximately 859 hectares of land, including the property of the Antarctic Centre. CIAL's wider interests (including land leased by CIAL) total some 1052 hectares. 693 hectares of CIAL's landholdings are within the Special Purpose Airport Zone (*SPAZ*). CIAL works closely with many other businesses on the airport campus including passenger airlines, the Airways Corporation, the US Antarctic Program, air cargo

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1 "The shape of Christchurch in 2025, Christchurch International Airport and three economic growth scenarios" BERL, May 2014

2 BERL. Christchurch International Airport. December 2017.

3 International Visitor Survey, Ministry for Business, Innovation and Employment (MBIE) 2018

4 Total achieve in 2018 calendar year.

operators, warehousing and aviation specialists, rental car companies, retail and food outlets.

14 Under CIAL's long-term strategy, "Real Growth 2025", we expect to meet the following targets by 2025:[5]

14.1 8.5 million passengers p.a.;

14.2 $1 billion in additional GDP (SI and NZ); and

14.3 10,000 new jobs (SI and NZ).

15 The most recent revision of the Airport Master Plan (2016) identifies expected growth levels to 2040:

15.1 Passenger Movements to grow from 2018 levels of 6.9 Million (5.1 Million Domestic; 1.8 Million International) to 11.7 Million in 2040 (7.6 Million Domestic; 4.1 Million International);

15.2 Passenger Aircraft Movements to grow from 2018 levels of 72,000 movements (61,000 Domestic; 11,000 International) to 111,000 in 2040 (90,000 Domestic; 21,000 International); and;

15.3 Cargo Aircraft Movements to grow from 2018 levels of 3,100 movements to 4,200 in 2040. It must be noted that in addition to these cargo specific aircraft movements, the clear majority of air cargo to and from Christchurch is carried in the belly hold of commercial passenger aircraft (see domestic and international movement growth above).

**Airport development**

16 CIAL's core business is to be an efficient airport operator, providing appropriate facilities for airport users, for the benefit of both commercial and non-commercial aviation users and to pursue commercial opportunities from wider complementary products, services and business solutions.

17 Airports are a unique kind of city infrastructure. In order to operate its strategically-important infrastructure and services, CIAL needs additional secure revenue streams.

18 To ensure long term economic sustainability the airport company is expected to be run as a profitable business for the people of Christchurch on the same footing as any other corporate entity. To that end, the airport has multiple sources of income, including:

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5 "The shape of Christchurch in 2025, Christchurch International Airport and three economic growth scenarios" BERL, May 2014.

18.1 landing charges from airlines;

18.2 leases for businesses in the passenger terminal such as rental car companies and food outlets;

18.3 property leases in the property precincts being developed around the Airport;

18.4 a percentage of sales from commercial outlets in the terminal; and

18.5 car parking charges.

19 CIAL aligns its commercial initiatives around three core business streams – aeronautical, commercial, and property. Each of these represents a distinct and separate part of the airport business; however, each is intrinsically linked to the other. I have attached a map of CIAL developments – Mustang Park, Spitfire Square and Dakota Park – to my evidence (**Attachment A**).

20 It is through the development of each of these key areas of business that an airport is ultimately successful. To ignore any one of these areas would result in the Airport becoming uncompetitive, which could have a knock-on effect to the regional economy within which it operates.

**LONG-TERM PROVISION FOR INDUSTRIAL LAND AT THE AIRPORT**

21 CIAL considers that, in the 30-year time horizons of the Update, land between the main runway and Ryans Road will be needed to provide more industrial space for logistics, distribution and warehousing facilities associated with airport and freight activities.

22 The 80ha Dakota Park development contains several warehousing, courier, freight and distribution companies. These operations require ready access to the airport runway and generate heavy traffic, which requires access to State Highway 1. The businesses operating at Dakota Park include DHL, NZ Post, Mainfreight, Iron Mountain, Agility Global Integrated Logistics, Ebos Logistics and various other distribution and import/export companies. Predicted trends in the growth of online shopping and e-commerce will drive increasing demand for the kinds of activity (logistics, distribution) currently located at Dakota Park which are dependent on close links to air freight operations. These activities are time-critical and if they were located more remotely from the airport this will reduce economic viability. For these reasons, the activities at Dakota Park will not locate in other parts of the city.

23 CIAL is also committed to ensuring that it has adequate land available for Antarctic Program operations logistics support in the long term. This also drives the need for us to signal now that there will be additional land required adjacent to the runway in the next 30 years. Antarctic operations are currently constrained in their existing location adjacent to the passenger terminal, which is also expected to grow within the life of this plan.

24 CIAL acknowledges that the Update identifies that there is sufficient industrial land available generally to meet the city's needs. However, the activities I have described above have unique characteristics which mean the existing industrial zones in other parts of the city would not be appropriate for these types of activities. There will ultimately need to be an extension of the Specific Purposes (Airport) Zone and Airport Purposes designation to accommodate these activities in the next 10 to 30 years. CIAL is seeking that the Update recognise and provide for this more specific future need by including this land between the runway and Ryans Road within the urban area and projected infrastructure boundary on Figure 16 in the Update document.

## NOISE CONTOUR REMODELLING EXERCISE

### Background

25 One of the most frequent RMA issues airport operators face is in relation to "reverse sensitivity" effects caused by activities sensitive to airport activities being planned for or located in close proximity to established airports (in particular, noise effects which cannot be reasonably internalised, such as those generated by the taking off and landing of aircraft).

26 Since 1991 CIAL has taken proactive steps through various planning processes to ensure appropriate zoning and land use rules are in place to ensure airport operations are safeguarded. This includes providing modelled air noise contours (showing the extent of aircraft operational noise levels at 65dB Ldn, 55dB Ldn, and 50dB Ldn) for inclusion on planning maps with accompanying objectives, policies and rules.

27 The noise contours are developed based on projected future growth and airport operations scenarios.

28 In 2007, the Environment Court directed a panel of independent experts to prepare a set of noise contours. This exercise was completed in 2008 and the resultant contours are known as the "Expert Panel contours".

29 The Expert Panel contours were incorporated into the Land Use Recovery Plan for Greater Christchurch and, via that plan, into the Canterbury Regional Policy Statement (*RPS*) Map A. Chapter 6 of

the RPS contains Policy 6.3.5 that avoids noise sensitive activities within the 50dB Ldn contour shown on Map A. As it is required to 'give effect' to the CRPS, the recently-reviewed Christchurch District Plan also incorporates the Expert Panel contours into its planning maps along with associated objectives, policies and rules.

30 Policy 6.3.11 of the RPS requires Environment Canterbury to monitor and review development in the Region to ensure there is adequate land available for residential and business use. As part of this exercise, Policy 6.3.11(3) allows Environment Canterbury to request that CIAL undertake a remodelling of the noise contours "prior to" initiating a review of chapter 6 RPS.

31 The expert panel recommended in 2008 that the contours be remodelled in 10 years. That modelling exercise was done according to NZS6805, which also indicates that a minimum of a 10-year period should be used for the future projected contours.

**Remodelling the noise contours**

32 CIAL supports the inclusion of the 50dB Ldn noise contour in the Update.

33 We noted in our submission that CIAL has begun a process of remodelling the operational noise contours. However, this is still in an early stage. I explain the process and present status of this work below.

34 CIAL understands that there is no indication that Environment Canterbury is seeking to initiate a review of chapter 6 RPS and CIAL has not received a request from Environment Canterbury to initiate a remodelling of the noise contours under Policy 6.3.11(3) RPS.

35 However, CIAL has initiated a remodelling exercise itself on the basis that:

35.1 the 10-year timeframe was recommended by the Expert Panel has now arrived; and

35.2 this is consistent with assurances that I gave to the Christchurch District Plan Review Hearings Panel and submitters in 2016.

36 In 2018 CIAL began the process of identifying the scope of the remodelling work and engaging the expert advice required.

37 CIAL is working with experts from the following organisations:

37.1 Airways New Zealand (air traffic service provider);

37.2 Airbiz (specialist international aviation consultancy);

37.3 Marshall Day Acoustics (acoustic engineers and consultants).

38 There are several aspects to the work necessary for the remodelling:

38.1 updating the computer model used to predict aircraft noise levels and thereby generate the contours to reflect recent developments in international best practice. The Integrated Noise Model (INM) programme used to predict the contours in the Expert Panel process has since been superseded by the Aviation Environmental Design Tool (AEDT) model. This process requires extensive checking and calibration to confirm any contribution or influence of changes in the newer AEDT software programme (as opposed to any changes in flight path, aircraft movement, fleet mix and similar assumptions) to changes in outcomes compared to previous contours;

38.2 sensitivity-testing and validating the AEDT model against real-life monitoring data from sites around the Airport;

38.3 examining a range of future scenarios and sensitivity tests in relation to key assumptions such as: commercial and non-commercial aircraft movement numbers, fleet mix, airfield configuration and runway modes of operation, flight paths, allocations and dispersion, meteorology and climate;

38.4 noise abatement considerations in the Airways airspace design processes for future flight paths and aircraft movements;

38.5 review and finalising the model.

39 The remodelling work is now well underway. However, it is too early to draw conclusions as to the size and location of the noise contours that will eventually emerge from this exercise. CIAL has been advised by its experts that the finalised contours will be produced in approximately 6 months' time.

40 Once CIAL has finalised the remodelling exercise, we anticipate that Environment Canterbury will instigate additional processes and external review of the updated contours.

41 As mentioned above, it is too early to indicate what the remodelled contours will look like with any accuracy. However, CIAL understands from discussion with its experts that it is highly unlikely the remodelled contours will be larger (in total area) than the current Expert Panel contours shown on Map A and in the District Plan maps.

**BIRDSTRIKE**

42 CIAL has sought recognition of the hazard posed by bird strike in the Update.

43 Bird strike is a collision between birds and aircraft. Bird strike has potentially very serious consequences, and CIA has a significant bird strike risk profile.[6]

44 CIAL works extremely hard to ensure that the risk of bird strike hazards is as low as reasonably practicable on-Airport. CIAL has a responsibility (including legal duties in Civil Aviation Authority (*CAA*) Rule 139.71) to provide a safe airport operating environment and therefore must actively work to minimise the threat and incidence of bird strike around the Airport as well as on the airfield and land controlled by CIAL. In 2008, the company implemented a Wildlife Hazard Management Plan (*WHMP*), to achieve compliance with CAA Rule 139.71, which sets out how CIAL manages wildlife hazards both on and off the airport. The CAA monitors compliance with this rule in scheduled annual audits.

45 Over the past few decades CIAL has also participated in planning process to manage bird populations in the vicinity of the airport, and avoid land uses establishing close to the airport that attract birds and therefore increase the risk from bird strike. This has resulted in rules in the Christchurch District Plan and is an important component to complement the action that CIAL takes both on- and off-airport.

**COMMERCIAL LAND AVAILABLE AT THE AIRPORT**

46 The Update indicated a need for more commercial space in north-west Christchurch in the next 25 to 30 years. CIAL considers there are parts of the Airport campus which would be a possible location to provide for future commercial development within the timeframe indicated.

47 In particular, there are some areas in the CIAL landholdings that, by virtue of their location, serviceability and size, are currently not the most appropriate for core Airport purposes and could, in the interim, usefully provide for the shortfall in commercial land identified in the life of the Our Space Update but still be retained for longer term core Airport purposes uses. For Airport planning purposes, we work to time horizons of much longer than 30 years.

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[6] See Evidence of Katherine McKenzie submitted to the Christchurch Replacement District Plan Independent Hearings Panel for the Chapter 6: General Rules and Procedures Stage 2 Proposal, 17 February 2016, available at http://www.chchplan.ihp.govt.nz/wp-content/uploads/2015/07/2348-CIAL-Evidence-of-Katherine-McKenzie-17-2-2016.pdf.

48 Our commercial leases contain break clauses allowing CIAL to retain control over the use of our land for core operational purposes as the need arises.

49 As an example, CIAL has already identified an area of land near Orchard Road as appropriate for interim commercial use as we do not need the land for core Airport purposes in the medium term. Resource consent has been obtained for a Bunnings Warehouse, which is currently under construction. Other large format uses could locate in and around this vicinity. I understand that location of large format retail here would remain compatible with the centres network. CIAL would like the Panel to preserve the opportunity for this area to be considered as an appropriate area to accommodate large format retail and ensure that the Update does not preclude this.

**CONCLUSIONS**

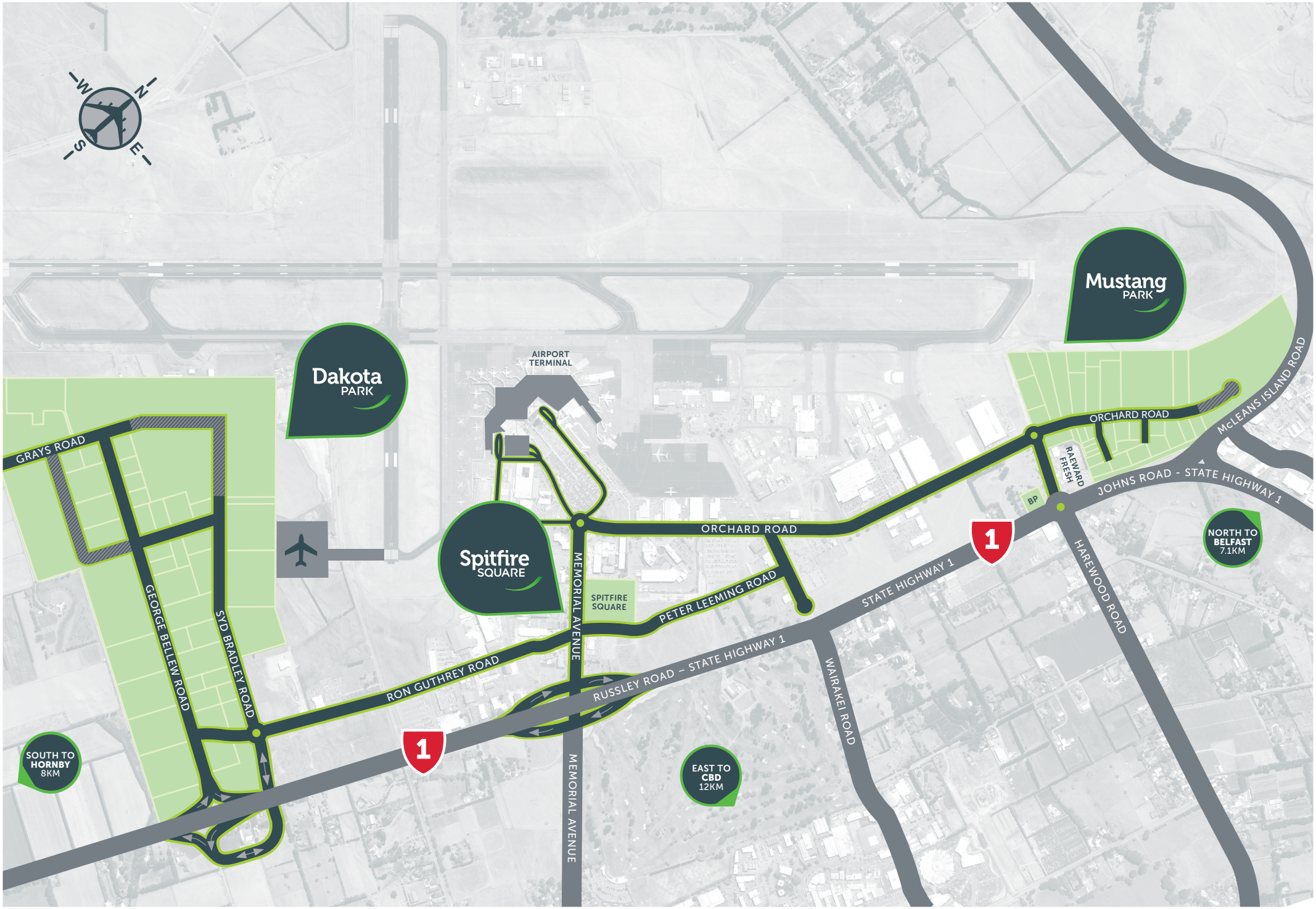
50 The activities at Christchurch International Airport make a significant contribution to the social and economic wellbeing to the communities and economies of Christchurch, Canterbury, the South Island and indeed New Zealand.

51 For Christchurch International Airport to continue to deliver on its potential and provide significant social and economic benefits to its community, the Update must recognise the strategic importance of the Airport and the need to safeguard Airport operations from inappropriate development and potential reverse sensitivity as well as facilitate the continued development of the Airport to ensure it has a sustainable source of revenue enabling it to operate effectively in the long term.

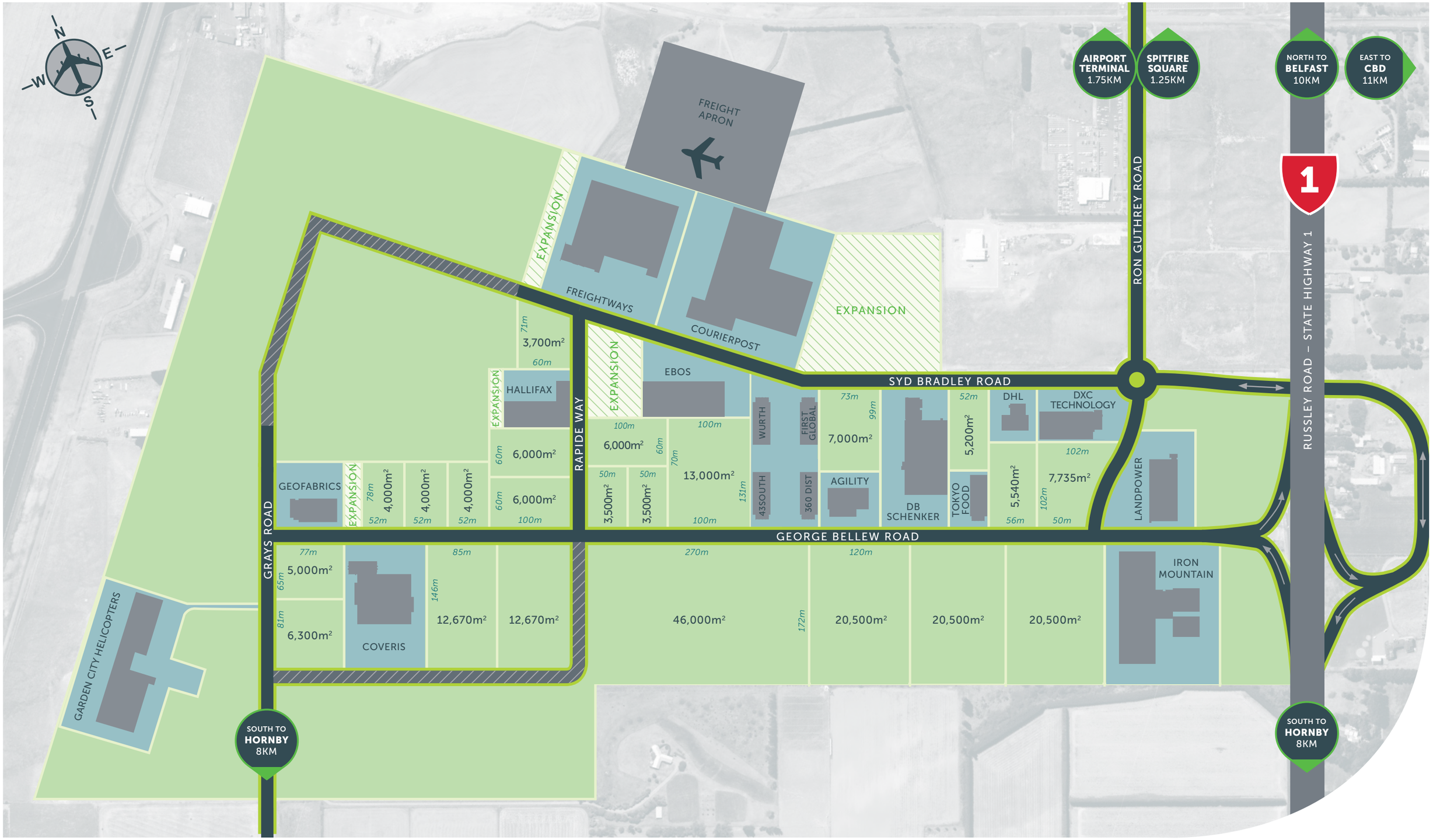
Dated: 15 February 2019

Rhys Duncan Boswell

**Attachment A – Map of CIAL developments**


Mustang PARK
Dakota PARK
AIRPORT TERMINAL
Spitfire SQUARE
SPITFIRE SQUARE
GRAYS ROAD
GEORGE BELLEW ROAD
SYD BRADLEY ROAD
RON GUTHREY ROAD
PETER LEEMING ROAD
MEMORIAL AVENUE
ORCHARD ROAD
McLEANS ISLAND ROAD
RAEWARD FRESH
BP
JOHNS ROAD - STATE HIGHWAY 1
STATE HIGHWAY 1
RUSSLEY ROAD – STATE HIGHWAY 1
HAREWOOD ROAD
WAIRAKEI ROAD
1
1
NORTH TO BELFAST 7.1KM
SOUTH TO HORNBY 8KM
EAST TO CBD 12KM

**Attachment B – Map of Dakota Park**


N
E
S
W
AIRPORT TERMINAL 1.75KM
SPITFIRE SQUARE 1.25KM
NORTH TO BELFAST 10KM
EAST TO CBD 11KM
1
RON GUTHREY ROAD
RUSSLEY ROAD – STATE HIGHWAY 1
FREIGHT APRON
EXPANSION
FREIGHTWAYS
COURIERPOST
EXPANSION
SYD BRADLEY ROAD
RAPIDE WAY
EXPANSION
EBOS
100m
6,000m²
60m
100m
50m
3,500m²
50m
3,500m²
70m
13,000m²
131m
100m
WURTH
FIRST GLOBAL
73m
99m
7,000m²
43SOUTH
360 DIST
AGILITY
DB SCHENKER
52m
5,200m²
TOKYO FOOD
DHL
DXC TECHNOLOGY
102m
5,540m²
56m
7,735m²
102m
50m
LANDPOWER
GEORGE BELLEW ROAD
GRAYS ROAD
71m
3,700m²
60m
EXPANSION
HALLIFAX
60m
6,000m²
60m
6,000m²
100m
EXPANSION
GEOFABRICS
78m
4,000m²
52m
4,000m²
52m
4,000m²
52m
77m
65m
5,000m²
81m
6,300m²
COVERIS
85m
146m
12,670m²
12,670m²
270m
46,000m²
172m
120m
20,500m²
20,500m²
20,500m²
IRON MOUNTAIN
GARDEN CITY HELICOPTERS
SOUTH TO HORNBY 8KM
SOUTH TO HORNBY 8KM

Dakota PARK

Before the Greater Christchurch Partnership Hearings Panel
at Christchurch

*under:* the Resource Management Act 1991, Local Government Act 2002 and Land Transport Management Act 2003

*in the matter of:* Submissions in relation to the draft Our Space 2018-2048: Greater Christchurch Settlement Pattern Update

*and:* **Christchurch International Airport Limited**
Submitter 039

# Statement of Evidence of Gregory Michael Akehurst

Dated: 18 February 2019

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**STATEMENT OF EVIDENCE OF GREGORY MICHAEL AKEHURST**

**INTRODUCTION**

1 My full name is Gregory Michael Akehurst.

2 I am a Director of Market Economics Limited, an independent research consultancy (*M.E*). I have a Bachelor of Arts, majoring in Geography and a Bachelor of Commerce, majoring in Economics from the University of Auckland. I have more than 20 years' consulting and project experience, working for commercial and public sector clients.

3 Of direct relevance to this hearing, I have been involved in assessing the Economic role played by significant infrastructure including Auckland International Airport, Wellington International Airport as well as Ports of Auckland. In addition, I have assessed the role of Queenstown Airport in the Queenstown economy and the effect of altering the airport noise boundaries to cater for growth.

4 I have been engaged by Christchurch International Airport Limited (*CIAL*) (submitter number 039) to provide economic evidence in relation to CIAL's submission on the draft Our Space 2018-2048: Greater Christchurch Settlement Pattern Update.

5 I am familiar with the submission made by CIAL on 29 November 2018.

6 Although this is not an Environment Court hearing, I note that in preparing my evidence I have reviewed the code of conduct for expert witnesses contained in part 7 of the Environment Court Practice Note 2014. I have complied with it in preparing my evidence. I confirm that the issues addressed in this statement of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

**SCOPE OF EVIDENCE**

7 Specifically, I am providing evidence on the economic significance and role, of the Christchurch International Airport (*CIA* or *'the Airport'*). The purpose is to provide a high level economic context to CIAL's submission on the Growth Strategy, Our Space 2018 - 2048. My evidence will address the following matters:

7.1 The economic significance of the airport;

7.2 The role of Airport Noise Contours;

7.3 Christchurch International Airport as a key transport and economic node;

7.4 Medium to long term commercial space needs in North West Christchurch; and

7.5 Industrial development capacity on land near the Airport.

**EXECUTIVE SUMMARY**

8 Airports are essential infrastructure that generate wide ranging social and economic benefits to regions. Effectively they generate returns to a wide group of stakeholders including direct shareholders and the wider business sector and society in general. The speed, connectivity and convenience of air travel is a major factor promoting leisure travel, freight activity and business, all of which are facilitated by airports. International tourism is New Zealand's largest foreign exchange earner and Christchurch's tourism is heavily reliant on air transport facilitated by CIA, which also improves access for domestic tourists and business travellers.

9 CIA is the most important airport in the South Island and is second largest in New Zealand with almost 7 million passengers per year. It is the main air freight hub for the South Island meaning that its significance is regional and national.

10 My assessment finds that the airport is a major employment hub with up to 15,600 workers engaged either directly or in the immediate surrounds of the airport. This makes the Airport the second largest economic activity centre in Christchurch (compared to the centre network; and the third largest node of activity overall).

11 The linkages between the airport and the wider economy are strong, such that if the airport is constrained in its growth or current activity the effects are widely felt. I have estimated that every 1% reduction in airport activity results in a $17m direct impact on GDP (annually) rising to almost $34m once the flow on effects are included.

12 Shortage of currently zoned land adjacent to the runways and aprons, suitable for logistics, freight handling and other airport related activities, is likely to lead to constraints in the future. Growth in demand by these businesses for this location is not able to be met by the surpluses of industrial land identified elsewhere in the HBDCA. This will lead to constraints and lower levels of GDP generated across the Christchurch economy.

13 Finally, the Airport relies on noise contours to both enable it to carry out its activities, but also to alert the wider community to the footprint of its effects. This means that appropriate growth and

development decisions can be made that avoid reverse sensitivity issues restricting the airport and to ensure public health and safety – with respect to noise. In the Christchurch situation, the noise boundaries do not generate any community economic disbenefits given the wide range of development options available.

**ECONOMIC SIGNIFICANCE OF THE CHRISTCHURCH INTERNATIONAL AIRPORT**

14 CIA plays a major role in the Christchurch City and Canterbury regional economies. It is of significance within the wider sub-national and national economies. The Airport is a major piece of strategic regional infrastructure and is relied upon for the efficient functioning of the regional economy. There are several core ways in which the Airport drives the regional and sub-national economies, which are set out below.

15 First, the Airport is an important gateway for passengers and freight accessing and departing Christchurch and the South Island. It is the South Island's largest airport and is located within its largest city.

16 In 2017 there were 6.57 million passenger movements through CIA - approximately 25% of these were international visitors and 75% domestic visitors. This accounts for 61% of the total passenger volumes for the South Island, and 73% of international departures and arrivals to the South Island. It is also significant nationally, with a 13% share of total international passenger movements.

17 These Airport passenger movements are essential for both the domestic and international tourism markets. It is estimated they account for around one-third of the visitors to Christchurch City. The Airport is critical given the importance of tourism within the Christchurch and wider South Island economy.

18 These tourism flows, a substantial share of which occur through the Airport, play a significant role within Christchurch's economy. Ministry of Business, Innovation and Employment (*MBIE*) statistics estimate there was $3,141 million of direct expenditure from international and domestic tourists within the Christchurch Tourism Organisation area, with 83% occurring within Christchurch City.

19 Earlier research in 2003 found value-added from tourist expenditure within Christchurch had a multiplier of 1.81[1]. The flow-on effects of tourism in Christchurch were estimated to be higher than in other smaller regional economies due to the diversified nature of the

[1] Butcher, G., Fairweather, J.R. and Simmons, D.G. 2003 *The Economic Impact of Tourism on Christchurch City and Akaroa Township,* Tourism Recreation Research and Education Centre, Report No. 37, Lincoln University, April 2003.

Christchurch economy where flow-on effects occurred across a range of other sectors.

20 Second, the Airport plays a significant role in freight within the regional and wider sub-national economies. It provides essential inter-regional and international connections to businesses within Christchurch and the wider region.

21 In the 2017 calendar year, there were $860m of imports and $768m of exports ($2017) that passed through the CIA[2]. This equates to approximately 12% of the South Island's imports and 5% of its exports. The Christchurch Seaport plays a much larger role in freight (accounting for 63% of the Southland's imports and 36% of its exports). However, the value to weight ratio of freight through the Airport is between 20 and 50 times that of the cargo passing through the seaport.

22 This points to the criticality of airfreight to move high value goods – often highly perishable, to national and international markets.

23 Third, in addition to the tourism and freight roles, the operational activities of the Airport itself have a significant footprint in the Christchurch economy. There are over 300 people directly employed by CIAL, and approximately 6,000 people employed within businesses located on the airport campus (evidence of **Mr Boswell**, para 8). These account for approximately 3% of the total employment activity within Christchurch.

24 Fourth, a large number of businesses seek to locate in the area surrounding the Airport. A high volume of these are either operations directly supporting the Airport activities or activity which is reliant on the Airport. In 2018 there were 9,300 people employed in over 300 businesses located within the Christchurch Airport Statistical area[3]. This amounts to more than 4% of Christchurch's total employment.

25 The direct role of the Airport and the activity it generates stimulates the economy to provide goods and services to meet the needs of airport based and related businesses. These have been estimated in a 2017 report released by BERL (*the BERL report*).[4] They state that the Airport generated a contribution to GDP equivalent to $2.6 billion in the Canterbury Regional economy, and $4.1 billion in the South Island economy. This includes a direct contribution of $1.3

[2] Statistics New Zealand, 2018 NZ Port by HS2 Chapter: January 2016 to August 2018, *Overseas Trade Imports – Merchandise Trade,* customised data; Statistics New Zealand, 2018 NZ Port by HS2 Chapter: January 2016 to August 2018, *Overseas Trade Exports (incl. re-exports) – Merchandise Trade,* customised data

[3] Statistics New Zealand, 2018 *Business Demographic dataset.*

[4] BERL *Christchurch International Airport*, December 2017.

billion, and a further $1.3 billion GDP contribution through indirect and induced effects.

26 Over half (61%) of this impact is estimated to be generated by businesses located on the Airport campus that serve functions for the Airport. A further 23% is from international visitor expenditure, with the remaining shares from international students (9%), Airport operational expenditure (5%) and Airport capital expenditure (3%).

27 I consider that the 2017 BERL report may over-state the GDP impact of international visitors and students as a share of this expenditure may already be captured within the businesses at the airport campus. However, I also consider that the BERL report only partially captures the economic effect of the role of the Airport. This is because the Airport facilitates a significant portion of the business activity within the Greater Christchurch area through its role in freight and passenger movements. The trade role does not appear to be captured within the BERL report.

**AIRPORT NOISE CONTOURS**

28 As I understand it, CIAL are not seeking to amend the contours shown in Our Space. Therefore, I shall limit my comments to a high level overview of the economic issues in play with respect to the noise contours.

29 The Airport activities generate high noise volumes that affect the surrounding area, with the spatial extent identified by the noise contours. The contours provide certainty for the Airport operators in terms of what they can do and for developers in terms of where they are able to develop and any potential trade offs that might arise when seeking to develop on land covered by the noise contour.

30 Land use controls are required to give effect to the noise contours. These essentially restrict the development of noise sensitive activities within the noise contours. They seek to avoid reverse sensitivity issues arising with the current and future airport activities that may restrict airport activity. At the same time they provide limits to what the Airport can and cannot do in terms of generating noise.

31 There are a range of economic costs and benefits associated with the land use controls that give effect to the noise contours. It is important to consider the overall balance of these costs and benefits at the community-wide level. At a high level, there is a trade-off between the operation of the Airport and the development that would otherwise be likely to occur within the noise contours.

32 I consider that the land use controls generate important and substantial economic benefits through enabling the ongoing efficient

functioning of the Airport. In the previous section ("Economic Significance of the Christchurch International Airport") I outlined the integral role of the Airport within the Greater Christchurch economy and identified the Airport as being of sub-national and national significance.

33 I understand that the noise generating activities form a core fundamental part of the Airport's operation and that any reduction in the scale or frequency of these activities will impede the ability of the Airport to operate. Therefore, in my view, it is likely that any reduction in the frequency of these activities would have a directly corresponding reduction in the economic role of the Airport.

34 I consider that a reduction in Airport activity is likely to both directly and indirectly affect a share of Greater Christchurch's economy that is reliant upon or facilitated by the Airport. This has the potential to constrain the future economy. Limits in Airport activity are likely to affect the full share of the Airport operational and capital expenditure as well as businesses located on the airport campus. That is a 1% drop in Airport activity results in a 1% reduction in these business expenditures.

35 I also consider it is likely to have an effect on international visitor and international student expenditure identified in the BERL report generated by the Airport. I believe this will be smaller than the direct impacts on the Airport, so I have modelled it at 50% of their impact.

36 In order to understand the scale of effect of any changes to the noise contours that might be brought about by reverse sensitivity issues, I have tested the effect of a 1% drop in Airport activity using the ratios and categories of impact identified in the BERL report. This translates into a 1% reduction in Airport activity and may result in a 0.8% reduction in the GDP effect of the Airport. In other words, a reduction of $11m GDP effect on the Greater Christchurch economy in one year. If flow on effects are added, this grows to a total effect of $22m annually. A 5% reduction in activity may result in a direct effect of around $53m GDP reduction, and around $108m total reduction in GDP p.a. taking into account indirect and induced effects.

37 Any economic constraint is also likely to increase through time as the underlying demand for Airport activity increases into the future, where the restriction is applied to a larger potential size of activity. Any restrictions through reverse sensitivities within the noise contour areas are likely to prevent the airport from being able to effectively function to meet the demand, meaning that the future economy would be likely to be significantly smaller in scale than if airport activity were not constrained by development within the noise contours.

38 CIAL estimate that Airport activity will increase to 11.7m passengers (+70%), 111,000 passenger aircraft movements (+54%) and 4,200 cargo aircraft movements (+35%) p.a. by 2040 (Airport Master Plan described in **Mr Boswell's** evidence, para 15). If the activity were similarly constrained by 1%, this may result in an estimated direct effect reduction of $17m on the Greater Christchurch economy in the year 2040, and a total reduction of $34m taking into account indirect and induced effects. A 5% reduction in airport activity may result in a direct effect GDP reduction of $83m, and a total reduction of $169m (Note, all these values are in 2017$ terms).

39 In total, in $NPV_{5\%}$ terms the 1% constraint in Airport activities may result in $180m direct negative impact on GDP ($2017) over the next 23 years to 2040, and a $368m total effect including indirect an induced effects. A 5% reduction results in corresponding GDP reductions of $902m (direct) and $1,839m (total). These values are significant, highlighting the importance of the noise contours to the Christchurch economy.

40 However, it is also important to consider the economic costs of the noise contours and how these compare to the scale of the economic effects through a reduction in Airport activity (if they were not in place). The primary effect of the contours is that additional houses are unable to be constructed within the noise contour area, or that they face limitations in terms of numbers or additional construction costs (double glazing, ventilation etc).

41 This becomes a real effect and begins to impact on the Christchurch economy if there are no alternative locations for development, or if the alternatives are inferior in terms of location and other characteristics. In other words, if the land covered by the air noise boundaries represented a significant portion of the future development capacity for the Greater Christchurch area, then the imposition of air noise boundaries will affect economic wellbeing.

42 That is not the case in and around Christchurch Airport. The growth strategy has identified a wide range of future development areas to the west and south of the Airport that will accommodate future growth in broadly similar locations with broadly similar characteristics, without needing to develop on the land under the noise contours. This means that the costs associated with the air noise boundaries are negligible or zero – at the community wide level.

43 It is true that individual land owners who hold land under the contours that are constrained in their ability to develop will suffer some private disbenefits, however because the market overall is not constrained, the effect on the economy is zero (or close to it).

44 To estimate the individual land owner effects, I have approximated the benefit loss with the loss of profit margin that would otherwise occur on each house constructed. The average house sales price in Christchurch City in 2018 was around $466,000, and I have assumed an average price of $560,000 to reflect a premium for new dwellings. An assumed margin of 20% (as used in the National Policy Statement on Urban Development Capacity (*NPS-UDC*) assessment guidance) results in a profit margin of around $112,000 per dwelling. This would be multiplied by an individual's land holding.

45 These figures can be used to estimate the number of dwellings that would need to be facilitated in order to offset each 1% of Airport activity constraint (identified above). Using the average house prices and profit margins (and applying a real increase in house prices of 1% p.a.), there would have to be approximately 5,100 houses constructed in the noise contour areas (that would not alternatively be constructed in another location) to match the equivalent GDP impact of a 1% constraint in Airport activity.

46 The NPS-UDC assessments undertaken in Greater Christchurch provide useful context for these figures. Christchurch City has a total housing target of 56,000 additional dwellings over the next 30 years. This compares to a capacity of around 51,000 dwellings if construction occurs at historic densities. This suggests a shortfall of around 5,000 dwellings in Christchurch City, with the wider shortfall of around 22,000 dwellings across the Greater Christchurch area. However, the District Plan now enables much higher dwelling densities than previous plans and historic development patterns. In Christchurch City alone, there is total plan enabled capacity for an additional 166,000 dwellings, approximately 115,000 dwellings above the historic rate of take-up.

47 Moreover, the NPS-UDC housing capacity and demand assessment found no shortfall in housing capacity within the north-west area (i.e. the location of the airport) of Christchurch. It instead found a surplus of nearly 5,000 dwellings in this location, even where development is assumed to occur at historic lower densities. The assessment found that the plan enabled around a further 20,000 dwellings to be constructed (in addition to the projected demand and surplus) in the northwest area of Christchurch. Additionally, the noise contours cover only a share of the rural area surrounding Christchurch City that could potentially be zoned in the future for urban expansion.

48 On this basis, I consider there is little evidence to support the notion that a restriction of development within the noise contour areas could result in any constraint to city residential growth. Instead, the analysis finds that even a small reduction (e.g. 1%) in Airport activity may result in a substantive economic cost that could only be

outweighed by a very high constraint to residential growth at the city level (a reduction in around 5,100 houses), which is very unlikely to occur as a result of the inability to develop within the noise contours.

**CHRISTCHURCH INTERNATIONAL AIRPORT AS A KEY TRANSPORT AND ECONOMIC NODE**

49 CIA represents an important node for transport and economic activity. The transport node is twofold through both the Airport's role as a gateway for air passengers to the Greater Christchurch area and the South Island, as well as the commuting demand generated by the large amount of economic activity located at the Airport.

50 A large share of the travel demand is also generated by the fundamental role of the Airport within the urban structure as a key gateway for visitors to Christchurch and the South Island.

51 I consider that the presence of the Airport and the major role this plays in the inter-regional, national and international connectivity of Christchurch fundamentally differentiates the employment node at the Airport area from other major employment nodes within Christchurch. This is manifest in the substantial economic role of the Airport within the regional economy, as outlined in the Economic Significance section above. Furthermore, the Airport is a major piece of regional and national infrastructure that serves much wider geographic catchments beyond the local area.

52 In 2018, there were 9,300 people employed within the Christchurch Airport statistical area[5]. This includes the Airport campus (approximately 6,000 employees), together with an industrial area adjacent to the northern edge of the campus. A further 6,300 people were employed in the industrial area adjacent to the eastern side of the Airport campus. Overall, there were 15,600 people employed within the Airport campus and immediately adjacent industrial areas.

53 This scale of employment alone means the Airport area represents an important spatial node of economic activity within Christchurch City. A total employment base of 15,600 people equates to 6.7% of the employment within the city.

54 The Airport area is substantial within the context of Christchurch City's urban economic structure. With the exception of the Central City (29,800 employees), it is substantially larger in employment than all of the defined Key Activity Centres. In comparison, the Key Activity Centres (less the Central City) range in size from 100 to

[5] Statistics New Zealand, 2018 *Business Demographic dataset.*

7,400 employees, with an average size of 3,900 employees (or 2,100 employees excluding the Central City).

55 The airport area is also substantial in employment size relative to other non-centres based areas of employment within Christchurch's spatial economic structure (Figure 1 below). With the exception of the Wigram/Middleton/Hornby area (combined employment of 41,000 employees), it is the largest node of employment within Christchurch. Other non-centres based areas of employment within Christchurch range from 600 to 4,900 employees.

| AREA | EMPLOYMENT | BUSINESSES | Share of Christchurch City Employment |
|---|---|---|---|
| **Key Activity Centre** | | | |
| Rangiora | 3,100 | 400 | |
| Woodend | 100 | - | |
| Kaiapoi | 1,400 | 300 | |
| Belfast | 1,200 | 100 | 0.5% |
| Papanui | 3,900 | 500 | 1.7% |
| Shirley | 1,400 | 100 | 0.6% |
| New Brighton | 600 | 100 | 0.3% |
| Riccarton | 7,400 | 1,100 | 3.2% |
| Central City | 29,800 | 3,800 | 12.8% |
| Linwood | 1,100 | 100 | 0.5% |
| Hornby | 2,300 | 200 | 1.0% |
| Spreydon | 800 | 100 | 0.3% |
| Halswell | 600 | 100 | 0.3% |
| Rolleston | 2,600 | 200 | |
| Lincoln | 2,300 | 200 | |
| **KAC TOTAL** | **58,600** | **7,300** | |
| | | | |
| **Other Activity Node** | | | |
| CIAL Campus | 6,000 | | 2.6% |
| Rest of Christchurch Airport Statistical Area | 3,300 | 300 | 1.4% |
| CIAL Adjacent | 6,300 | 700 | 2.7% |
| ***Wider CIAL Area Total*** | ***15,600*** | ***1,000*** | ***6.7%*** |
| Wigram East | 19,100 | 1,500 | 8.2% |
| Wigram/Hornby | 5,600 | 400 | 2.4% |
| Wigram Middle | 8,100 | 800 | 3.5% |
| Hornby South | 8,200 | 500 | 3.5% |
| Belfast South | 600 | 100 | 0.3% |
| Sydenham (wider) | 10,206 | 2,116 | 4.4% |
| Hillsborough | 4,900 | 500 | 2.1% |
| Bromley | 3,400 | 300 | 1.5% |
| Ferrymead | 1,700 | 300 | 0.7% |
| Lyttleton | 1,200 | 100 | 0.5% |
| **OTHER TOTAL** | **78,606** | **7,616** | |
| | | | |
| **CHRISTCHURCH TOTAL** | 233,200 | 42,500 | |
| **GREATER CHRISTCHURCH TOTAL** | **272,100** | **55,000** | |

Figure 1: employment and businesses in Key Activity Centres throughout Greater Christchurch, 2018 (Source: Market Economics *Modified*

*Employment Count*; Statistics New Zealand, 2018 *Business Demographic Dataset.*)

56 The substantial employment size of the Airport area generates significant commuting demand within Christchurch. Data from the Census 2013 show that the Airport area was the 4th largest destination for commuters within Christchurch.

| AREA | 2013 Commuting Inflows | RANK |
|---|---|---|
| Central City | 19,353 | 1 |
| Riccarton Central/South/West | 9,996 | 2 |
| Sydenham | 8,277 | 3 |
| Yaldhurst (CIAL) | 4,905 | 4 |
| Islington | 4,704 | 5 |
| Hornby North | 4,548 | 6 |
| Russley | 4,344 | 7 |
| Wigram/Middleton/Hornby Industrial Area | 4,089 | 8 |
| Addington | 2,595 | 9 |
| Sockburn | 2,508 | 10 |
| *Rest of Christchurch* | *65,175* | |
| **CHRISTCHURCH TOTAL** | **130,494** | |

Figure 2: 2013 commuting inflows in Christchurch by area (Source: Statistics New Zealand, *Census of Population and Dwellings,* 2006 and 2013; Statistics New Zealand, *Commuter View.*)

57 The large employment hub within the wider Airport area (CIAL campus, rest of Christchurch Airport Statistical Area (i.e. the non-Airport campus land within the statistical area) and the adjacent industrial area to the east) is likely to generate between 5 and 6 million commuting trips per annum.[6] The large passenger volume (6.57 million passengers) may also generate travel demand of a similar magnitude on Christchurch's road network as passengers travel to and from the airport on the roads.

58 In my view, it is likely that a significant share of the road network travel demand from Christchurch's airport passengers will occur between the Airport and the Central City. This is due to the dominant role of the Central City within Christchurch's centres hierarchy in providing goods, services and amenity to Christchurch visitors as a central activity hub.

[6] It is assumed that 92% of Christchurch City's 233,000 employees (and 272,000 employees in the Greater Christchurch area) make on average 8 trips to and from work per week across an average of 46 weeks per year (with the rest of the employees assumed not to make commuting trips based off the 2013 Census Travel to Work data patterns).

59 The role of the Central City for Christchurch visitors is reflected in the concentration of Christchurch's commercial accommodation within the central area. Approximately half (51%) of Christchurch's employment within Accommodation Services is located within the Central City (27%) and the Central City immediately surrounding fringe area (24%).[7]

**MEDIUM TO LONG TERM COMMERCIAL SPACE NEEDS IN NORTH WEST CHRISTCHURCH**

60 The Christchurch NPS-UDC Housing and Business Capacity and Demand Assessment (*HBDCA* – carried out in 2017) identified a large growth in demand for commercial space within Christchurch City over the long-term. It has identified a total demand for 246ha of land for commercial activities over the next 30 years. It projects that just over half (127ha) of this demand is for retail land, just over 1/3 (35%; 85ha) for commercial offices and the remainder (14%; 34ha) for commercial services.

61 I am relying on these figures which are obtained from the HBDCA as I have not had the ability to undertake a detailed review of the methodology they applied within the time available to prepare this statement.

62 At the city level, the assessment identified a shortfall in commercial capacity projected to occur in the long-term. It estimates that a total supply of 129ha of capacity, resulting in a shortfall of 119ha.

63 The assessment estimates that the largest long-term shortfall is likely to occur within the central area (-77ha). This is due to the high share of demand which is projected to occur in this location. Significant shortfalls of commercial land capacity are also projected to occur within the long-term in the south Christchurch (-27ha) and north Christchurch (-10ha) quadrants.

64 CIAL hold additional land around the Airport that is not suitable or required in the next 30 years to accommodate core Airport operational activities or industrial activities such as those undertaken at Dakota Park. I understand from **Mr Boswell's** evidence this is because these industrial activities require more direct access to the main airport and aircraft operations area.

65 This land, given its locational characteristics (adjacent to State Highway 1, adjacent to a large employment node with over 15,000 workers in close proximity, and tourist flows) has the potential to meet at least some of the commercial shortfall identified in the long term. While the nature of the location means it is unlikely to be

[7] Statistics New Zealand, 2017 *Business Demographic dataset* and Market Economics Ltd *Modified Employee Count.*

suitable for significant amounts of small format retail as this serves the community best in established centres – and in the Airport context, immediately within the Airport itself. This land would be suitable to be considered for some forms of large format retail (LFR). Therefore, it should not be excluded from consideration if additional land were sought to meet the long-term shortfall of commercial space identified within the HBDCA.

66 The Airport is projected to experience substantial growth into the future (70% increase in passengers from 2018 to 2040 - evidence of **Mr Boswell** para 15), at rates above the projected household and population growth rates over a similar period. Statistics New Zealand sub-national population projections project a 16% increase in Christchurch City's population from 2018 to 2038 and a 20% increase in households. If these projections hold true, then this suggests an increase in the relative role of the Airport in Christchurch.

67 I consider that the increased activity at the Airport may benefit from an increase in appropriate commercial activity in the area surrounding the airport. It is not clear within the HBDCA whether the future demand for commercial space includes any additional commercial activity demand arising from the Airport.

68 In conclusion, the area around the Airport should not be excluded from any assessment for additional land to accommodate future retail growth – in particular forms of LFR. In my view, further assessment is required to determine the appropriateness of retail activity within this location relative to the demand generated for retail around the Airport and the effects on the rest of Christchurch's centres network.

**INDUSTRIAL DEVELOPMENT CAPACITY ON LAND NEAR THE AIRPORT**

69 Our Space 2018-2048 provides not only for future residential capacity, but also industrial and commercial capacity. This is in line with the NPS-UDC, which states Councils must provide sufficient, feasible development capacity to support future household and business growth, over the short (0-3 years), medium (to 10 years) and longer term (10 – 30 years).

70 It is clear from the capacity assessments, that Christchurch City has sufficient capacity to accommodate both residential and industrial growth over the medium and long term. There are some residential constraints in the long term once the GCP partners are included in the analysis. However, significant amounts of land available for industrial development in Selwyn, in particular ensure that the sub-regional market is well supplied.

71 The NPS-UDC requires sufficient land capacity both in total and "*for different types of business activities for different locations within the urban environment*". In the context of Christchurch Airport, as discussed above, there is a strong concentration of logistics and transport based activities that locate on industrial land adjacent to an airport. This location is as important as the space itself.

72 Currently there is approximately 120ha[8] of vacant land immediately surrounding the Airport. However only a portion of this land is immediately adjacent to the runways and aprons of the Airport. Many of the freight/logistics and servicing type industries need that access. The alternative of more generalised industrial land nearby is simply not substitutable. I understand from **Mr Boswell's** evidence that this means that these logistics, distribution and freight activities are far more likely to seek out locating at another airport if they cannot get close at CIA.

73 Therefore given projected future growth in Airport activity and resulting growth in these associated and support activities (the key activity types that choose to locate adjacent to the Airport), the amount of good accessible industrial land already identified is insufficient to cater for future long-term growth.

74 I believe, based on a high level assessment, that the Christchurch economy is best served if the growth strategy provides for additional industrial land adjacent to the airport (an extension of Dakota Park) to cater for this demand growth – regardless of the amount of other industrial land provided for in the Northern Quadrant, or within Christchurch overall.

75 The capacity and demand assessments carried out for the NPS-UDC identified demand growth for industrial land of approximately 108ha over the next 30 years. They also identified a significant amount of industrial land designed to meet that growth (over 400ha). However, the amount growth required to support the airports increased role, cannot take advantage of this apparent industrial land surplus due to its unique operational requirements.

76 As discussed above, even small constraints on the Airport's operation have relatively large impacts on the Christchurch economy (1% decline in activity is equivalent to $17m in direct GDP each year, or $34m once flow on effects are included).

**CONCLUSIONS**

77 In conclusion, based on my assessment above, I support CIAL's submission points, that:

[8] Christchurch International Airport Limited, 2018 *Christchurch International Airport Limited Development Land East of 20/20 Runway.*

77.1 CIA is a significant strategic piece of infrastructure;

77.2 The noise contours are important and necessary to support the airports ongoing operation and growth, therefore may need adjusting following remodelling of future demand growth;

77.3 The Airport is a major employment area and the gateway to the South Island for large numbers of tourists;

77.4 The identified shortfall in the medium to long term for commercial land in Christchurch could in part be addressed by a portion of current CIAL land holdings not required for airside activities; and

77.5 Growth in Airport activity will require additional industrial land adjacent to the runways and aprons to accommodate airport supporting logistics, freight and service activities – regardless of the amount of other industrial land available across Christchurch.

Dated: 18th February 2019

Gregory Michael Akehurst

Before the Greater Christchurch Partnership Hearings Panel
at Christchurch

*under:* the Resource Management Act 1991, Local Government Act 2002 and Land Transport Management Act 2003

*in the matter of:* Submissions in relation to the draft Our Space 2018-2048: Greater Christchurch Settlement Pattern Update

*and:* **Christchurch International Airport Limited**
Submitter 039

# Statement of Evidence of Anthony Thomas Penny

Dated: 20 February 2019

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**STATEMENT OF EVIDENCE OF ANTHONY THOMAS PENNY**

**INTRODUCTION**

1 My full name is Anthony Thomas Penny.

2 I am a Registered Civil Engineer and a Fellow of the Institute of Professional Engineers of New Zealand. I hold a Bachelor Degree in Mathematics and a Bachelor Degree in Civil Engineering from the University of Canterbury. My background of experience includes over 40 years in traffic engineering and transportation planning with the Christchurch City Council, the Department of Transport in the United Kingdom, the MVA Consultancy in Hong Kong and Traffic Design Group (TDG) Limited. I have worked for over 30 years practising as a traffic engineering specialist on projects throughout New Zealand and am a former Managing Director of TDG. I have been engaged by local authorities and private concerns in many centres to advise on the full range of transportation issues covering safety, management and planning matters.

3 I have been engaged by Christchurch International Airport Limited (*CIAL*) (submitter number 039) to provide evidence on transport issues in relation to CIAL's submission on the draft Our Space 2018-2048: Greater Christchurch Settlement Pattern Update (*the Update*). I understand that CIAL's submission seeks to ensure that the importance of the operations and activities at Christchurch International Airport (*CIA / the Airport*) are recognised appropriately through identification of the Airport as a Key Transport and Economic Node (*KTEN*). CIAL has also sought that the route between the Airport and the Central City is identified in the Update as a "Rapid Transit" corridor and that State Highway 1 (Johns Road / Russley Road) is identified as a strategic freight route.

4 Although this is not an Environment Court hearing, I note that in preparing my evidence I have reviewed the code of conduct for expert witnesses contained in part 7 of the Environment Court Practice Note 2014. I have complied with it in preparing my evidence. I confirm that the issues addressed in this statement of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

**SCOPE OF EVIDENCE**

5 My evidence will deal with the following:

5.1 The context and importance of CIA as a transport node;

5.2 The role of Rapid Transit corridors and the route between the airport and the city centre;

5.3 The status of State Highway 1 (Johns Road / Russley Road) and appropriateness of classifying this corridor as a 'strategic freight route'.

**SUMMARY OF EVIDENCE**

6 By way of summary of my evidence, it is my opinion that the Update could be amended to better provide for the future development of the Airport and the supporting transport infrastructure. In particular, CIA's status as a key transport and economic node should be better recognised in the Update.

7 To support the important functions of the Airport as a transport hub and any future commercial or industrial development at the Airport campus, the future transport network provisions in the Update should provide for the following:

7.1 A rapid transit corridor between the Airport and the central city; and

7.2 Recognition of State Highway 1 (Johns Road / Russley Road) as a strategic freight route and acknowledgment that significant upgrades will be required along that route within the 30 year horizon of the Update, including an interchange at Sawyers Arms Road/Johns Road and improvements to the bypass to the west of the airport.

**EXISTING TRANSPORT NETWORK**

8 I note that considerable funding has recently been allocated to upgrading the arterial road network in the immediate vicinity of the Airport to ensure that appropriate access is provided to the Airport as a significant transport and employment hub and to support development of the existing Specific Purposes (Airport) Zone. This upgrading has also accommodated growth in general traffic on the surrounding road network.

9 The NZTA have constructed a series of Western Corridor improvements of key significance regarding access to CIA. The Western Corridor included four laning of State Highway 1 (*SH1*) in the vicinity of CIA and an interchange at Memorial Avenue / Russley Road (SH1), the key access point to the Airport for private vehicles and visitors. An additional grade-separated southern Airport access provides access to the Dakota Park area of the Airport for goods vehicles. These improvements also included removal of access from SH1 to the Airport via Wairakei Road.

10 The other road network improvements identified as part of the Western Corridor project included the Broughs Road connection from Sawyers Arms Road to Mcleans Island Road and the

realignment of Pound Road to form a bypass to the west of the airport.

11 At the early stages of planning the SH1 Western Corridor upgrading project as part of the Roads of National Significance (*RONS*) programme, it was identified that there would need to be further enhancements to the road network in the Western Corridor at a later date (post 2026).[1] However NZTA decided that these enhancements would not be confirmed until after the RONS works were completed and their ability to cater for future travel demands has been determined.[2]

12 There will be future traffic growth associated with projected increases in airport passenger and freight activity. This growth should be appropriately factored into future planning for the transport system. Projections indicate that this future growth can be accommodated in the transport network provided, key arterial links (including public transport, walking and cycling options) are protected and maintained, and upgrades to those links are made where necessary.

13 In the longer term I understand the NZTA is considering a possible Sawyers Arms interchange associated with an extension of Orchard Road as an additional access to the Airport.[3] This interchange would allow the existing Harewood Road/SH1 roundabout to be removed and replaced with left turn only intersections on either side with a continuous solid median.

14 In 2014 I provided evidence for Plan Change 84 that supported a zoning for the Airport land that enabled higher traffic generation on the basis that the roading and transit enhancements already planned for the supporting transportation infrastructure would be compatible with the potential demands of the Airport in the appropriate planning horizon at that time (2026).

15 The transportation assessment undertaken by the Council for the PC84 process took into account full development in the CIA area in conjunction with full business development within some adjacent areas and moderate development in other development areas in the vicinity. I considered that this was an unrealistic test of the transport effects associated with PC84 as the demand for this level of development in the overall area was unlikely to be realised within the 2026 planning timeframe applicable. However, as the Update is

[1] NZ Transport Agency "Western Corridor Statement of Facts" May 2011 Report 20110520, at pp7 to 10.

[2] NZ Transport Agency "Western Corridor Statement of Facts" May 2011 Report 20110520, at p R.

[3] NZ Transport Agency "Western Corridor Statement of Facts" May 2011 Report 20110520, at p12.

working to a longer planning horizon than that plan change process, it will be important for the Update to confirm the need to implement further transport initiatives in the long term to facilitate sustainable and well-functioning transit connections to the Airport and to account for longer term commercial and industrial development on the land surrounding the Airport.

16 More broadly, it will be necessary to continuously investigate and undertake minor improvements to the road network connecting the city and arterial roads to the Airport over the next 30 years as traffic volumes increase and patterns change into the future.

**THE AIRPORT AS A KEY TRANSPORT AND ECONOMIC NODE**

17 Under the National Policy Statement on Urban Development Capacity, the Update is required to ensure there is sufficient land area available for future business activities (and housing) with appropriate supporting infrastructure. In transportation terms that requires an integrated land use and transportation infrastructure planning process.

18 I understand that CIAL has proposed that CIA should be recognised as a special KTEN in the Update. This would be consistent with the unique role of the Airport as a gateway connecting Christchurch and the South Island to other parts of the country and overseas and the role of the CIA as a local destination for the thousands of people employed on the Airport campus. It would also provide for projected future growth and development at the Airport. I consider that CIA could be usefully identified as a KTEN to recognise the Airport's unique role in the transport system and unique needs in terms of transport provision and accessibility.

19 The rationale for the existence of KACs is that the transportation system does not and could not practically support an urban structure which had all commercial activity centralised in and around the central city. That would require significantly upgraded radial transport facilities. Even if that were achievable, such a structure would result in overall higher travel distances and a less efficient transport system. In general KACs service local suburban catchments and in that way reduce overall travel and improve accessibility to goods and services by locating employment and services nearer to where people live The same transportation efficiency that supports the existence of KACs supports CIA's recognition as a KTEN.

20 Recognition of the Airport as a KTEN would reflect the reality that the Airport is a major employment and logistics hub which generates a significant volume of traffic and people movement and which requires appropriate, efficient and effective transport access.

It would also be consistent with the existing spatial distribution of KACs in that there are no KACs near CIA.

21 In transport terms, notation of the Airport as a strategic node and generator of significant movement of people and freight is equally, if not more, important than the recognition of major commercial centres as KACs. The Airport has different but equally substantial transportation characteristics as a KAC and I consider that the proposed KTEN recognition in the Update would appropriately reflect this.

22 **Mr Boswell's** evidence records that there are approximately 6,000 people employed at the Airport campus and just under 7 million travelling passengers per year passing through the Airport. This is a higher employment count than many KACs, although the kinds of activity is different – with the Airport being a hub for logistics, freight, airport-related commercial activities, and air travel rather than the usual mix of retail and commercial activities found in KACs. Further, the trip generation to the Airport is associated with fixed-time appointments (i.e. passengers on airlines, logistics, freight, postal and courier services). These activities depend on a reliable, effective and efficient transport system linking the Airport to the wider transport network. I consider it would be beneficial from a transportation perspective if the status of the Airport as a key hub and trip generator is recognised and provided for in the Update through a 'KTEN' status.

23 Provision for the airport as a KTEN would also further improve overall transportation efficiency because the commercial facilities located at the Airport would be able to better service the local area adjacent to the Airport.

**INDUSTRIAL LAND PROVISION EAST OF THE MAIN RUNWAY TOWARDS RYANS ROAD**

24 I understand that CIAL seeks that the Update provides for an extension of the urban limits to cover land between the runway and Ryans Road to allow that land to potentially be utilised for industrial activity in the long term.

25 In terms of the transport infrastructure required to service the expanded area, it would be possible to extend the internal road network currently servicing the existing commercial area (Dakota Park) in the southern section of the airport. This network is extremely well connected to the upgraded section of State Highway 1 via a new grade-separated facility which has more capacity than required for currently zoned area.

26 A secondary access to the major road system would be provided by the Ryans Road link to Pound Road which as part of a western

bypass, connects to State Highway 73 to the west and to SH1 to the south. This would conveniently avoid the need for much of the traffic generated by the airport commercial activity having to travel on the congested section of SH1 through Hornby.

27 In this regard I note that the western bypass and the southern section of Pound Road are not shown on the proposed transport network diagram even though the improvements recently completed to connect Pound Road directly to SH1 were promoted as providing the opportunity to have Pound Road become part of SH1 and to downgrade the section of SH1 that currently passes through Hornby.

28 Another advantage of a potential future extension of the airport zone is that it could be planned to be consistent with the NZTA concept to link Russley Road and Pound Road. This link was considered as part of the planning for the western corridor project that resulted in the recent upgrading of SH1 from the Waimakariri River to Yaldhurst just south of the airport. I note that this link is not precluded by the recent upgrading of SH1 but it is not shown on the proposed transport network diagram (only existing and committed state highways are) and I suspect that it may longer be part of NZTA thinking. If that is the case then the eventual development of the proposed CIA extension area could extend to include all the land south to Ryans Road.

**FUTURE TRANSPORT NETWORK PROVISION FOR THE AIRPORT**

29 It is important that the Update includes transportation analyses to determine future arterial road enhancements as well as enhanced facilities for other modes of transport involving public transport (including rapid transit), cycling and walking.

**Rapid transit corridor**

30 The Update indicates two rapid transit corridors running from the city centre north and south-west. Page 22 of the document suggests that rapid transport corridors could also be considered for the route to the Airport "over time". However, I consider that it is appropriate to provide for the route between the Airport and the City Centre as a rapid transit corridor now, rather than leave this to a later date.

31 Most major airports around the world have rapid transit systems servicing them, whether this involves rail or express bus services. It is essential that the Airport, as a transport, tourism and employment hub, is well connected to the Christchurch city centre. This will enable tourists and people travelling for work or business to better access the city centre. It will also provide better commute access for those working on the airport campus and, correspondingly, reduce private vehicle use and associated traffic.

32 A rapid transit corridor between the Airport and city centre is more likely to be viable than the indicative corridors shown on the transport network concept plan to the north and south. This is because there will be all-day demand from CIA passengers, employees and visitors whereas the other routes indicated would suffer from low demands in off-peak periods in the middle of the day.

33 The rapid transit corridors currently identified in the Update appear to reflect a desire to utilise the existing railway lines. However, rapid transit corridors do not need to utilise rail infrastructure in all cases. Options such as express buses are also viable. Previous studies have shown that utilising existing rail infrastructure is not always practical for economic and operational reasons not least of which is the lack of direct access to the central city (without interchange).[4] People resist interchanging between routes and therefore a system that requires a bus-train-bus journey is very unlikely to be successful. Hence rapid transit for Christchurch, at least between the Airport and city centre, could be bus-based with the extra flexibility for services to continue directly beyond the corridor without necessarily requiring interchanging.

34 Providing a rapid transit bus route along Memorial Avenue could be achieved through the widening of the road between Clyde Road and Greers Road. This would allow for bus priority in short term and possibly rapid transit in the long term even if that is a form of busway rather than rail-based transit.

35 Cycleways along Memorial Avenue should also be facilitated and would be well-used given the airport anchor at the western end and a series of schools and the university adjacent to the corridor.

36 In addition, in spite of its importance, Memorial Avenue is not included on the transport network diagram on page 23 of the Update as a 'Key Bus Route'. Including recognition for Memorial Avenue as a 'Potential Rapid Transit' corridor or at least a Key Bus Route would better reflect the need to more effectively support the use of public transport as a means of accessing the airport.

**Provision for roading upgrades and the importance of the roads connecting to the Airport**

37 In terms of the road network there are no new or upgraded roads shown in the Update other than the Northern and Southern Motorways that are currently under construction and the proposed bypass of Woodend.[5] I consider it a major concern that no roading

[4] See for example Environment Canterbury and Parsons Brinckerhoff "Christchurch Passenger Transport Futures Study" August 2008, at 4.4.3.

[5] Draft Our Space 2018-2048 Greater Christchurch Settlement Update Pattern, page 27.

projects have been identified in the Update for the next 30 years. In particular, it is likely that in this timeframe, upgrades and improvements will be necessary along the routes that provide access to the Airport. These upgrades will be important to the continued accessibility of the Airport and should be reflected and provided for in the Our Space document.

*Memorial Avenue - Fendalton Road*

38 Memorial Avenue - Fendalton Road will always be a major access route for the Airport and a gateway to the central city. It has long-served as the key arterial connection to the Airport. This status has been highlighted visually by the recent construction of the iconic interchange bridge at the current main entrance to the airport at Russley Road. I consider it is important for the plan to identify the need for future improvements and upgrades to the Memorial Avenue - Fendalton Road arterial route. In the 30 year timeframe until 2048 it is likely that upgrades will be necessary to ensure this key connection functions well and is able to absorb additional traffic associated with growth in passenger numbers and in freight volumes at the Airport.

*State Highway 1 (Johns Road - Russley Road)*

39 In its submission, CIAL sought that SH1 (Johns Rd-Russley Rd) be identified as a strategic freight route. This section of SH1 not only services freight movements to/from the airport but also forms part of a bypass of the main Christchurch area linking areas to the north with areas to the south and in particular the identified Freight Hubs at Hornby and Rolleston. While recognition of strategic freight routes exists in other transport planning documents, I consider that as the Update will set the high-level urban settlement pattern for Greater Christchurch for the next 30 years, it should also specify the freight routes that have strategic importance. These routes are significant in terms of the infrastructure necessary for urban development.

40 CIAL also sought acknowledgement of the need for significant upgrades along the SH1 route within the 30yr time horizon of the Update. I consider this relief is appropriate and would reflect the importance of these roads as well as the reality that essential upgrading and improvements will be necessary in the next 30 years as traffic increases (as discussed above).

41 The studies of the Western Corridor indicated that SH1 will have capacity constraint issues in the longer term and that future upgrades including a new interchange at Sawyers Arms Road would be required.[6] A new interchange would improve links to the bypass to the west of the Airport and improve access to the airport when

[6] NZ Transport Agency "Western Corridor Statement of Facts" May 2011 Report 20110520, at p12.

the expected overloading of the existing Harewood Road/SH1 roundabout occurs.

42 The Update should ensure that it fully captures the future roading capacity requirements that are likely to arise in the next 30 years and identify priorities for upgrade and investment. This will facilitate transport capacity that will keep abreast of traffic growth and transit demand, in particular demand generated by projected growth at the Airport.

**TRANSPORT PLANNING CONTEXT**

43 I have briefly examined the relevant transportation objectives and policies of the National Policy Statement on Urban Development Capacity (*NPS UDC*) and the Canterbury Regional Land Transport Plan (revised June 2018).

44 I will not analyse the NPS UDC in detail but do wish to note that the NPS UDC states that development capacity must be supported by infrastructure. It requires development capacity to be serviced with development infrastructure (this includes land transport infrastructure to the extent that it is controlled by local authorities) and other infrastructure (including land transport not controlled by local authorities) and encourages integration and coordination of land use and planning to promote the efficient use of infrastructure.[7] I consider that properly providing for land transport connections to the airport in the Update will be consistent with this direction in the NPS UDC as it will ensure that infrastructure is in place to support development capacity at the airport campus and also to support the airport as a KTEN.

45 The Canterbury Regional Land Transport Plan (*CRLTP*) operates on a shorter timeline than the Update but may still be relevant to consider here. The CRLTP emphasises the Airport's importance as a key component of the transport system in Canterbury.[8] In particular, the plan notes that "transport providers have a role in making the transport system a safe and attractive component of the overall South Island offering, and by supporting the airport to remain an attractive proposition for international carriers."[9] I consider that this policy direction supports the provision for transport connections to the Airport discussed in my evidence above.

[7] National Policy Statement on Urban Development Capacity 2016, pages 4 and 7, Objective OD1, policies PA1, PA2, PA3, PB5, PD2, PD4.

[8] Canterbury Regional Land Transport Plan 2015 to 2025, revised June 2018, at page 8 and 10.

[9] At page 10.

**CONCLUSION**

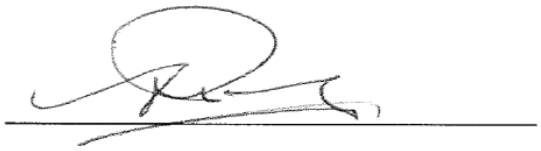
46 I conclude that the Update should be amended to better provide for the future development of the Airport and the supporting transport infrastructure. In particular, CIA's status as a key transport and economic node could be recognised in this document.

47 To support the important functions of the Airport as a transport hub and any future commercial or industrial development at the Airport campus, the future transport network provisions in the Update should provide for the following:

47.1 A rapid transit corridor between the Airport and the central city; and

47.2 Recognition of State Highway 1 (Johns Road - Russley Road) as a strategic freight route and acknowledgment that significant upgrades will be required along that route within the 30 year horizon of the Update, including an interchange at Sawyers Arms Road/Johns Road and improvements to the bypass to the west of the airport.

Dated: 20 February 2019



Anthony Thomas Penny