BEFORE THE ENVIRONMENT COURT

UNDER	**the Resource Management Act 1991**
AND	
IN THE MATTER	**of appeals against Private Plan Change 372 to the Auckland Council District Plan: Isthmus Section 1999**
BETWEEN	**NGATI TE ATA WAIOHUA & NGATI TAMAOHO TRUST** **Appellants in ENV 2015 AKL 000158**
AND	**SOUTH EPSOM PLANNING GROUP INC & THREE KINGS UNITED GROUP INC** **Appellants in ENV 2016 AKL000001**
AND	**AUCKLAND COUNCIL** **Respondent**
AND	**FLETCHER RESIDENTIAL LIMITED** **Private Plan Change Proponent**

Statement of Evidence of Richard Leonard Cheyne Reid for South Epsom Planning Group (Inc) and Three Kings United Group (Inc)

06 May 2016

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Contents

1 Introduction

1.1 My full name is Richard Leonard Cheyne Reid. I am an architect, landscape architect and urban designer with the qualifications and experience stated in Appendix 1.

1.2 My evidence is given on behalf of the South Epsom Planning Group (Inc) and Three Kings United Group (Inc) (**"The Societies"**).

1.3 I submitted a statement of evidence on 26 May 2015 on behalf of the Societies for the PC372 hearing before Commissioners.

Code of Compliance

1.4 I have read and am familiar with the Code of Conduct for Expert Witnesses in the Environment Court Practice Note (2014), have complied with it, and will follow the Code when presenting evidence to the Hearing. I also confirm that the matters addressed in this Statement of Evidence are within my area of expertise, except where relying on the opinion or evidence of other witnesses. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

1.5 I further acknowledge that in the provision of expert evidence and, in appearing as an expert witness, I am not acting as an advocate for "the Societies" (the submitter for whom I am appearing). I am engaged as an independent expert. My qualifications and experience are outlined in Appendix 1.

1.6 In preparing this evidence I have had regard to the proposed evidence of Graeme Lawrence, Jan McCredie, Jan Lindsay, Garry Law and the relevant lay evidence prepared on behalf of the Societies.

2 Executive Summary

2.1 The proposed plan change does not give effect to the RPS's long term focus and policy objective for a Regionally Significant Volcanic Feature (ONF) which is to protect, remedy, mitigate and where practicable, enhance their values.

2.2 In addition to the ONF values, Graeme Lawrence has addressed historic heritage values that are of national importance under s6(b) RMA and are associated with the features identified in Appendix B. Mr Lawrence's position is that environmental bottom lines are required for the PC372 provisions to address s6(b) and s6(f) values of national importance (ONF and historic heritage). My evidence focuses on the ONF values.

2.3 The ONF's wider relationship with the volcanic landscape features associated with Three Kings Volcano include (but are not limited to) Western Park, Southern Reserve, Three Kings Domain, the bluffs above the Southern Reserve, Barrister Ave and Fyvie Ave respectively and the tuff ring adjacent to Landscape Road. These relationships will likely be erased, severed or significantly weakened by development enabled by the plan change.

2.4 The Fletcher plan change cannot be accommodated within the existing environment without significant modification of the existing environment.

2.5 The plan change requires extensive modification of the existing quarry and adjacent public reserve land in order to build apartments and make access to the quarry floor viable and manageable. I believe these modifications create significant adverse effects. The effects illustrate the fundamental problem with the development which is that its depth is too far below the surrounding environment. This depth requires infrastructure whose effects cannot be avoided, adequately remedied and only partly mitigated.

2.6 The deep level of the quarry below the surrounding street network, as well as the circuitous routes needed to access the quarry floor, will not facilitate efficient walking, nor will it support easy and direct access to public transport or the town centre for residents.

2.7 The plan change will likely produce a development pattern across the filled quarry floor that will reinforce historic property boundaries. The ONF and built development will not be integrated with each other. The plan change replaces the entire volcanic landscape surrounding Big King with buildings. It gives a prime value to the residential potential of the quarry location and not to protecting and enhancing the ONF.

2.8 The location of open space in the plan change will not contribute to the protection, remediation or enhancement of the ONF. The playing fields provided are distant from the ONF and the area between the open space and ONF is zoned for four storey high residential buildings. Fletcher's open space is bounded by a perimeter road, the access road from Grahame Breed Drive and the large area of landscaping required to mitigate the effects of the access road (Koru Terrace).

2.9 The landscape values, spatial qualities and community uses of Western Park will be lost through excavation and filling of the playing field; intrusion of inappropriate building/s, private uses and access roading; and the distinctive volcanic bluffs which frame either side of Western Park and Grahame Breed Drive will be lost from view and/or diminished in presence.

2.10 The location, scale and breadth of potential development enabled by the proposed re-zoning, RL's and maximum building heights will create significant adverse effects on the ONF and historic heritage values. These will reduce the values of the ONF, including the values of the ONF in its wider context, and significantly reduce the contribution of the wider context to the ONF as well. The overall contribution of the ONF to Auckland will not be maintained or enhanced. The adverse effects are cumulative and likely to be permanent. The overall impact of the re-zoning is not consistent with the operative Regional Policy Statement.

2.11 The Fletcher masterplan envisages eleven nine-to-ten-storey apartment buildings forming a monumental wall stretching 750 metres around the eastern and southern edges of the quarry. The existing natural character and scenic qualities of Three Kings Reserve will be replaced by an over-scaled built environment which competes with and diminishes the volcanic landforms, landscape character and amenity of both this and Big King Reserve.

2.12 The Fletcher apartment typology and site arrangement of buildings are inefficient and externalise their impacts on the existing environment. The masterplan is an inappropriate and inefficient use of the site and an inappropriate and inefficient use of natural and physical resources.

2.13 In my opinion, Big King will not become a fundamental feature of any development or be integrated with new development until the fill level of the quarry is substantially lifted and the volcano is absorbed into the footprint of a development plan. Otherwise it will likely be left isolated outside the development.

2.14 In contrast to the Fletcher masterplan and concept plan, the RRA Plan fits within the volcanic landscape and enables the residual volcanic features from Three Kings Volcano to continue to strongly define the volcanic landscape and shape the built environment.

2.15 The RRA Plan will create an appropriate relationship with the Three Kings Volcano ONF and avoid adverse effects; will enhance the ONF's multiple values by providing significant open space opportunities and a suitable and efficient open space network; will build upon the underlying structure of the volcanic landscape and city plan in an integrated development of the quarry with its surrounds; and provide significant residential intensification efficiently.

2.16 The potential housing yield from the RRA Plan (as one example of an alternative design) is approximately 80% of the Fletcher yield and in my opinion will not create adverse effects on the environment.

3 Statutory Context

The statutory context for the plan change appeal has been provided by Mr Graeme Lawrence.

4 Methodology for protecting, remedying, mitigating and where practicable, enhancing an ONF

4.1 I have had extensive involvement with the protection of volcanic features in Auckland over the past seventeen years. I outline below the methodology I believe is appropriate for responding to the Three Kings Volcano ONF with this plan change.

Identify the feature and understand what the feature includes and may be part of

4.2.1 The Three Kings Volcano ONF is a complex landscape. It is one of the largest volcanic features in Auckland and is made up of many volcanic structures which have not been mapped as part of the ONF but have been explicitly described in Appendix B of the RPS.

4.2.2 The ONF's overall presence and definition is imprinted across a wide area instead of being solely focused on one primary heritage feature. This is a different situation from many other volcanic ONF's in Auckland.

4.2.3 The Three Kings Volcano ONF, as described by Prof Lindsay's evidence and Appendix B, extends across many physical and legal boundaries and must be understood, considered and managed in an integrated and comprehensive way.

4.2.4 As a result, the wider values and context of the ONF must be appreciated. This includes the influence of settlement on the area over time. At Three Kings this has been a complex interaction, and includes both the obvious impact from past quarrying, and the subtle role and place that cultural uses or remnant features of the ONF continue to have.

Understand the feature – its present condition, past history and potential form

4.3.1 Three Kings Volcano ONF is one of the most modified volcanic landscapes in Auckland. Part of its complexity arises from trying to ascertain what comprised the feature, what has been removed, what remains, and what defines and gives value to it?

4.3.2 The graphic evidence of what has been removed makes appreciating the ONF a challenge.

4.3.3 The starting questions are how to remediate and where not to build? Overall, the plan change presents an opportunity to enhance the ONF as much as to avoid and protect. What are the techniques which will enable this?

Understand the existing environment the feature is a part of

4.4.1 The present condition and setting of the Three Kings Volcano ONF are the cumulative expression of all the values which have shaped it. The American cultural geographer J B Jackson believed that the way society shapes land and space explains a lot about a culture and what it values. European land practices and built environments have typically been extended into the sanctuary of ONF's at great cost to the ONF whilst for Maori it historically radiated outwards (the maunga were focal points for defence, living and cultivation).

4.4.2 In this situation, a landscape architect's responsibility should include understanding the value that historic uses and early city plans gave the feature and the recognition of what these originally related to and provided for. Similarly important is evaluating what new landscape patterns or relationships have emerged or may have the potential to over time.

4.4.3 A community's vision and aspirations for a place sometimes coincides with these. The Three Kings community led by Puketapapa Local Board has produced a thirty year planning document for the area (The Three Kings Plan) which seeks to recognise and restore the mana of Te Tātua a Riukiuta and enhance the public open space network; revitalise the Three Kings town centre; encourage high quality residential development; improve connections between people and places; and develop a sense of local character around the presence of Te Tātua a Riukiuta / Big King.

4.4.4 The Three Kings Plan is a study of relationships and land uses in order to create well-being for the natural and built environment and well-being for the community which lives and works there. The starting question is how to integrate all of their concerns?

Understand and respect how the statutory context expects you to approach this feature

4.5.1 The relevant policies afford a high level of protection for Three Kings Volcano ONF. The focus of the policy is on the protection of values and avoidance of the adverse effects of activities, such as buildings, structures and earthworks or land disturbance that are physically or visually intrusive. The overall contribution of the ONF should be maintained or enhanced. An integrated approach is required to ensure that their values are identified and protected and their relationship with the surrounding area is maintained.

4.5.2 The statutory context is therefore clear that the ONF must be approached with caution and sensitivity. The constraints placed on the effects from development should be recognised and respected. Urban intensification must be consistent with RPS Policies 6.4.19.1-4.

4.5.3 The statutory context requires that the fundamental guiding principles of a development proposal should be sound.

4.5.4 Any rehabilitation must be toward protecting and remedying the values of an ONF as a priority and where practicable should enhance it. The final landform should integrate with its surroundings. The location of open space should enhance the values of the ONF particularly where rehabilitation is needed. The location and scale of buildings must be sensitive in relation to the ONF.

Understand what kind of outcome the statutory context expects

4.6.1 For the above reasons I believe the plan change should endeavour to:

i) create an appropriate relationship with the Three Kings Volcano ONF and avoid adverse effects
ii) protect and enhance Big King Reserve's relationships with the wider volcanic landscape features associated with the Three Kings Volcano
iii) enhance the ONF's multiple values by providing significant open space opportunities and a suitable and efficient open space network

iv) build upon the underlying structure of the volcanic landscape and city plan in an integrated development of the quarry with its surrounds

v) provide significant residential intensification efficiently

vi) support Te Aranga Māori Design Principles

vii) future-proof the potential requirement for additional recreational and community activities as a result of residential intensification of the Three Kings area

5 Assessment of existing environment

5.1.1 The Three Kings volcanic complex has had a formative influence on the local area, of which Big King scoria cone is now the most prominent and recognisable component.

5.1.2 The local area is strongly defined by the Three Kings Volcano including the historic layout of streets in relation to the volcanic complex (Fig. 01-03). The complementary relationship established between the natural feature and city plan is unique in Auckland, and quite probably, internationally.

5.1.3 My review of the local area over multiple site visits and through desk top research shows that the Three Kings volcanic landscape is deeply imprinted / embedded in the city plan. I included this research in my statement of evidence for the plan change hearing and have provided the relevant extract in Appendix 2.

5.1.4 A high level planning order was overlaid on the volcanic complex which accommodated its distinctive topography and regulated the location and layout of streets both inside and outside the tuff ring in relation to the volcano (Fig 2, 3).

5.1.5 The division of properties is also highly sensitive to the volcanic landform, especially the steeply rising land between McCullough Ave and Simmonds Ave. The narrow allotments up to the tuff ring rim adopt a land use pattern which is unique in Auckland.

5.1.6 The ‘nesting’ of the scoria cones inside the tuff ring (like five eggs inside a nest), the volcano nesting inside the square frame of the city plan and the

plan's overall symmetrical composition in relation to the volcanic landform, are structured as a series of concentric circles and scales laid one inside the other.

5.1.7 Together with the road alignment and viewshafts to and from Maungawhau to the north (Fig. 04-05), the early town planning gesture is profound in both urban scale and landscape order (or landscape scale and urban order).

5.1.8 From early in the 20th century, and still ongoing, the city has enabled quarrying and development to extract the resources intrinsic to Three Kings Volcano at the expense of its circular structure and the spatial clarity of the city plan. The volcano has been divided along property lines and significantly compromised as a result.

5.1.9 Four of the five cones' removal has isolated Big King and distanced the surrounding tuff ring, such that its exposed walls below Landscape Road seem like an incidental feature in the vicinity of Big King rather than being understood as intrinsically related to it.

5.1.10 The numerous quarries and other private developments have also erased or cut off any previous or potential penetrations of the street network from the eastern and southern sides.

5.1.11 Although the quarries may have sliced through the volcano and erased much of the substance of its original form, both its form and corresponding urban structure are still embedded within the landscape and city plan.

5.1.12 These qualities and attributes have remained largely unrecognised and still under-appreciated, including in the reports and evidence provided by Fletcher and Council for the PC372 Commissioner hearing which did not address this profound wider context and fundamental base condition.

5.1.13 Fletcher's masterplan and concept plan for "renewal' of the quarry will continue to remove or conceal intrinsic parts of the outstanding natural feature and erase its unique relationship with the city plan.

Current Volcanic Landscape of Three Kings Volcano

5.2.1 I note that the mapped Three Kings Volcano ONF does not form the full extent of the volcanic feature. The feature is described in Appendix B and reveals that volcanic activity produced a complex variety of volcanic structures across a large area principally defined by the tuff ring but not exclusively. Big King scoria cone is part of the ONF and is directly adjacent to the plan change area.

5.2.2 The ONF is a comparatively small mapped feature when compared to other volcanic reserves in Auckland, mainly due to the removal of four of the scoria cones by quarrying. The remnant cone is therefore an even more "scarce" resource and more deserving of protection and enhancement.

5.2.3 The traces left behind of the four absent scoria cones and other quarried features are one of Three Kings Volcano's most unusual characteristics and make it a particularly complex yet also unique and interesting landscape to interpret, protect and enhance.

5.2.4 For instance, the rise in landform between Fyvie Avenue and the quarry's western boundary is the rise of the largest cone which has been removed. The bluff at the end of Barrister Avenue to the south is not the end point of a volcanic landform behind it but rather the remnant toe of the largest cone removed in front.

5.2.5 From a landscape perspective I believe there still is a high degree of order and representativeness of the Three Kings Volcano which can be read in the landscape. This includes the legibility of the tuff ring within the surrounding Three King residential areas and the smaller features within the tuff ring which have local significance. My overall assessment is that there exists a high degree of potential to enhance the Three Kings Volcano ONF. I believe the plan change represents a significant opportunity to achieve this.

5.2.6 Specific areas of land and features which have not been mapped as part of the ONF but which I believe contribute to its multiple values, and are affected by the plan change, include:

i) Three Kings Reserve which includes Western Park, Southern Reserve and Three Kings Domain

ii) The three 'bluffs' which are remnant features of the ONF that form strong landmark and counterpoint features in the landscape

iii) The Fletcher property including the eastern face of Big King

iv) Although these features are not mapped in the RPS, they form part of the Appendix B description as noted by Prof Lindsay.

Three Kings Reserve

5.3.1 The Fletcher masterplan and concept plans require further excavation of the Fletcher quarry site as well as of adjacent reserve land to the south and west of the quarry in order to provide building platforms for apartment blocks and access down to the quarry floor. I have overlaid the areas needing modification in Fig 06.

5.3.2 The area most affected by the proposed additional quarrying is Three Kings Reserve which is a volcanic reserve adjacent to the most prominent remaining part of the ONF, Big King Reserve.

5.3.4 The Three Kings Reserve forms a valuable setting to Big King Reserve. However the value of Three Kings Reserve is not only due to it being adjacent to Big King Reserve. The Three Kings Reserve contains important residual features of the Three Kings Volcano ONF and therefore forms an integral and valuable part of the ONF, especially considering what has been removed from the ONF in the past by quarrying.

5.3.5 Three Kings Reserve contains three individual parks which are joined under one management plan: Western Park, Southern Reserve and Three Kings Domain. The shape, breadth and continuity of Three Kings Reserve are significant. The joining of Western Park, Southern Reserve and Three Kings Domain into one overall reserve indicates the Reserve Management Plan saw these areas are related to one another in public use, landscape amenity and community value. The collective reserve also benefits from the areas being used, joined and retained together as open space. The integrity of the overall reserve and its constituent parts are significantly affected by the plan change and masterplan (Fig.07).

Western Park

5.4.1 Western Park has been created from the removal of the largest scoria cone of the Three Kings Volcano. Although the park is a man-made feature, it is still a volcanic landscape. It has a similar sculptural shape to the breached craters of many volcanic features including Maungakiekie One Tree Hill (Fig. 08-10).

5.4.2 The dimensions of Western Park are set by the steep sides from the leftover quarry. The quarry walls are battered, varying between 6-8metres in height and taper gently towards the north-western corner. The walls form a strong and spacious enclosure to the park.

5.4.3 The battered slopes are included as part of the reserve and form a distinctive scenic backdrop to the park. The park retains a sense of naturalness due to its strong landscape form and presence, monumental scale and people's immersion within the enclosure. Planting, even though scattered and weedy, adds to the naturalness.

5.4.4 Western Park forms part of the wider volcanic landscape and plays an important role in extending the length of the southern slope of Big King and Big King Reserve (Fig 11-12). Seen from the south round to the east, Big King now appears to rise from Western Park.

5.4.5 The level field of Western Park (RL72) complements the terrace levels higher up on Big King. These levels are also artificial, the original slopes modified for quarrying purposes and to accommodate a water reservoir and supporting infrastructure. Together, the terrace levels serve to create a distinctive profile for Big King.

5.4.6 Western Park also serves as an important physical and visual buffer between Big King Reserve and the residential areas on Barrister Ave, Smallfield Ave and the town centre. The recreational use and natural, scenic, historic, cultural, geological, educational and community values of Big King Reserve benefit from Western Park being located adjacent to it.

5.4.7 If the slopes of Western Park were vegetated, these would form a cohesive, natural and scenic backdrop to the recreational space on the floor of the park, as well as join with the vegetated slopes of Big King

Reserve. Western Park would be enhanced as a special feature of Three Kings Reserve.

Southern Reserve

5.5.1 Southern Reserve is also a former quarry. It sits 17 metres directly below the town centre at approximately RL60 and lies below Western Park by 12 metres. It is accessed via a rough walking track from the town centre which descends beside the Barrister Ave bluff (see 'The three bluffs' in the following section). Exposed basalt formations can be seen beside the track. It can also be accessed from Western Park and Big King Reserve although its unmanaged state and contamination status tends to discourage park users.

5.5.2 The sheer drop of the quarry from the Town Centre accentuates the reserve's depth below surrounding ground levels. The reserve is located and experienced within the deep hole of the quarry. It is only when the bottom-most level of the reserve has been reached that the sheer walls of the quarry are revealed although much of their elevation is overgrown with weedy vegetation (Fig. 08).

5.5.3 Both Fletcher and Council are critical of the position, height below street level and relationship of the Southern Reserve to the rest of Three Kings Reserve. Yet the southern reserve's limitations can be overcome by lifting its RL closer to other levels of the reserve and town centre. To my knowledge, neither Fletcher nor Council investigated the southern reserve's potential to be joined and integrated as part of the final landform of the quarry either before or as part of their land exchange agreement. Raising the fill level would also create a more efficient open space network.

Three Kings Domain

5.6.1 The Three Kings Domain was historically part of the lave lake which spread around the bases of the scoria cones (pers.com with Prof. Lindsay). Its shallowness is apparently due to subsidence over time rather than quarrying. This has formed a low depression in the landscape especially in relation to the surrounding roads (Mt Albert Road, Mt Eden Road and Grahame Breed Drive). It gives the park an intimate character

which is enhanced by mature planting around its edges (in particular along Grahame Breed Drive). (Fig.12)

5.6.2 The park's subtle rise / fall around its eastern and northern edges coincide with the Grahame Breed Drive bluff which is an exposed basalt section of the lava lake. If the weedy vegetation was cleared from the bluff, views of the sky and Big King beyond would become one of the special features of the park. These views outwards over the top of the bluff and quarry from within the subtle enclosure of the park would confer a unique character to Three Kings Domain – part prospect / part shelter; a strong sense of elevation and ground (Fig. 12).

The three bluffs

5.7.1 I have identified these remnant or residual features as the Barrister Ave 'bluff', Grahame Breed Drive 'bluff' and Fyvie Ave 'bluff'. (Fig.13, 14). I understand Prof Lindsay who is appearing for the Societies also identifies these features as important residual parts of the ONF and outlines their geological and scientific value and national recognition. From my perspective, these features play an important landscape role and have local significance.

5.7.2 Firstly, they inform us of the former extent, shape and respective parts of the ONF described in Appendix B of the RPS. They are also instrumental in enabling us to understand the ONF today.

5.7.3 Whilst I have named these features as 'bluffs' this only describes their present landform condition which appears to mark the end of a larger landform.

5.7.4 However, in the case of Barrister Ave 'bluff' and Fyvie Ave 'bluff' these are remnant parts of the lower slope or 'toe' of the largest scoria cone which has been almost entirely removed by quarrying. Hence, they formed part of the beginning of a landform not its end.

5.7.5 The Grahame Breed Drive 'bluff' is different again and Prof Lindsay is best placed to describe its volcanic origins. My understanding is that it is an exposed section of basalt from the lava lake which covered the area surrounding the multiple scoria cones, including Grahame Breed Drive. It

has been exposed by the excavations from quarrying as well as the cutting required to form Grahame Breed Drive. The southern side of the basalt formation rises just above the road whilst its northern side is exposed to the full depth of the quarry and significant views of Big King. Presently, it is covered in weedy vegetation which merges into the background setting of the plane trees on Grahame Breed Drive so its prominence is reduced. However, if it was cleared of this vegetation and possibly soil cover too, it would read as an assertive landform in the landscape.

5.7.6 The geological formation is valuable because it is both a volcanic feature in the landscape as well as a classic location for appreciating views of the volcanic landscape, as celebrated by 19th century German Romantic artists such as Caspar David Friedrich - see "*Wanderer above the Sea of Fog"* (1818). The small size of the geological formation belies its landscape value and resonance.

5.7.7 These three bluffs are equally important for another reason. They structure the volcanic landscape and built environment surrounding Big King and the town centre in new ways which are related to their present condition and strategic positions rather than to their past volcanic origins.

5.7.8 Firstly, the Barrister Ave and Fyvie Ave bluffs form a continuum with the Big King scoria cone (Fig. 08, 11). They extend the profile of the maunga and reinforce its strong north-south axis. The Barrister Ave and Fyvie Ave bluffs also form distinctive landscape features either side of Western Park. When seen from the east, including the Grahame Breed Drive bluff, they provide a frame or proscenium arch for the staged setting of Western Park. Looking from within the park, they frame the park's opening towards the quarry and Mt Eden Road.

5.7.9 Secondly, the Barrister Ave and Grahame Breed Drive bluffs form distinctive landscape features either side of the car parking terrace in front of the town centre. This is apparent both when looking towards the town centre from Big King Reserve and from the car parking terrace looking towards the quarry. The two bluffs provide a strong symmetrical structure for the town centre. They also bring focus and a sense of proportion to the huge space of the quarry. The prominent position of the bluffs gives potential guidance on how the emerging town centre may be

planned and developed in relation to the ONF (Fig. 14).

5.7.10 Thirdly, these relationships are best appreciated from the volcanic landscape – either from Big King, one of the bluffs looking to the others or potentially in the future within the space of the redeveloped quarry.

The Fletcher property including the eastern face below Big King

5.8.1 The deep space of the Fletcher site is surrounded by very high quarry walls which form a distinctive edge and background feature to the activities below and Big King opposite. Their carved terraces and undulating lines give a measure of definition to the vast internal dimensions of the quarry. The walls form a continuous line around the eastern and northern edges of the site and are clearly related to the volcanic form of Big King in character and appearance (Fig. 08).

5.8.2 Quarried walls in fact extend around the edge of the whole plan change area, from Mt Eden Road around the Southern Reserve, Western Park and including along and below the eastern face of Big King. The walls give the whole plan change area a high degree of consistency and cohesion.

5.8.3 It is only the different management techniques and quarry depths to each area which serve to dissolve or highlight the strong defining role the walls share. Where the walls are covered with vegetation they assume a much softer appearance than the frontal assertiveness of exposed walls. Where the walls are taller in elevation reflects a deeper exploitation of the resource.

5.8.4 The cut face below Big King takes a different line from the boundary walls above the cut. A low quarried wall below Western Park extends the line of Big King well to the south. This wall acts as a bridge to the Southern Reserve whilst supporting the low terrace of Western Park above it. The wall provides Big King with a stronger profile and elevation.

5.8.5 The haul road imposes a different geometry and character on Big King. The road's attachment to Big King underlines its excavation and distances the face from an engagement with the space of the quarry. Big King has, in effect, been commandeered to become a supporting piece of

infrastructure for the quarry rather than avoided by the quarry to protect its integrity and natural values. The deepness of the cut for the haul road as it descends also detaches the cut face from the surrounding volcanic landscape. Too much has been exposed; the cut face loses a sense of connection with Western Park's ground plane.

6 Integrated final landform

Introduction

6.1.1 The PC372 Commissioner Hearing Decision stated in its Reasons for the Decision:

> *1 (b) Any actual or potential adverse effects on the environment from the plan change will be less than minor and have been appropriately managed by the modifications we have made to the plan change provisions.*

6.1.2 The Decision for the plan change accepted the evidence from Council and Fletcher that overall the "*proposed fill levels will provide for a well-connected community with a range of choices for people to move within and through the development*." (8.3.81)

6.1.3 The Decision cited evidence from Council and Fletcher that "*demonstrates that the proposed levels will provide good connectivity and not be a barrier to the use of public spaces or to pedestrians. Conversely, no opposing expert evidence has been presented to show that there are adverse effects from the levels proposed*." (8.3.79)

6.1.4 The commissioners acknowledged submitters concerns that "*connectivity and integration may be improved if the site was filled to a greater extent than proposed by Fletchers*" (8.3.79).

6.1.5 In my opinion, the commissioners' were wrong to state that the "*proposed fill levels will provide for a well-connected community with a range of choices for people to move within and through the development*." I believe the commissioners' were also wrong to find that the effects of the lower fill level had been adequately addressed by Fletcher and Council's

evidence.

6.1.6 The commissioners were also incorrect in stating that no opposing expert evidence was presented to show that there were adverse effects from the levels proposed.

6.1.7 In my evidence, I assessed the effects from the proposed levels in sections on Transport, access and circulation (4.6) and the haul road (4.3) both of which discussed the adverse effects on the existing environment from providing this access.

6.1.8 This is clearly acknowledged in the Decision's summary of my evidence in para 5.2 (w): "*In his executive summary he [Richard Reid] stated that …the decision to set the quarry fill level to 15-17metres below Mt Eden Road street level "fundamentally compromises the development's ability to integrate with the surrounding built and natural environment, as well as provide efficient access and a walkable neighbourhood. The low fill level will also increase vehicle dependence not reduce it. The redevelopment is an inappropriate subdivision, use and development of natural resources*."

6.1.9 I also stated in my plan change evidence that connectivity and integration <u>will</u> be improved with a raised fill level and significantly.

6.1.10 The commissioners' omission of reference to my landscape evidence, particularly in light of the fact that Fletcher failed to provide evidence with a landscape assessment of effects, was in my view a serious shortcoming of the Decision.

Testing the Decision

6.2.1 Since the Decision I have been engaged by Puketapapa Local Board to undertake a study of different fill level options for the quarry. The Local Board was not satisfied with the levels Fletcher proposed and decided to engage my practice to develop the RRA Plan we submitted to the plan change hearing (see Appendix 3).

6.2.2 We were also asked to compare Fletcher's and the RRA Plan contours with the contours included in an Environment Court 214 Decision (2008)

(Fig. 15) which were used as the basis for Puketapapa Local Board's 'Three Kings Plan', a planning document prepared for investigating the redevelopment of the Three Kings area over the next thirty years.

6.2.3 I had studied the EC214 Decision whilst developing an alternative proposal to the Fletcher masterplan. I gave evidence to the PC372 hearing on my analysis of the methodology set out in Condition 77 from a landscape architecture perspective. This methodology was a formative influence on my development of the RRA Plan.

EC214 Methodology

6.3.1 In EC214 Condition 77, the Environment Court directed a future consultation process between Winstones and relevant stakeholders (including the "Societies") to consider three issues. These were:

> ***77. Finished Contour Plan and Landscaping***
>
> *i) The desirability of an integrated final landform, and a more suitable and efficient open space network surrounding the site*
>
> *ii) How the landform might best relate to the surrounding topography, in particular Big King Reserve, Hunters Quarry, and the Council sites*
>
> *iii) Whether the contour should rise toward Big King Reserve on the northern part of the site and if so how this rising contour is to be provided*

6.3.2 I considered that these issues asked pertinent yet open questions about the quality and character of the relationships that could be achieved between the quarry and its surrounds.

6.3.3 These issues also address resolution of the final contour levels ahead of the design of any built development.

6.3.4 The EC decision provided a contour plan which I considered should be properly evaluated to establish whether it can be treated as a base case for the most appropriate level from which to consider a final landform. My professional judgement was that it had merit and also potential limitations.

6.3.5 These limitations were mainly derived from the fact that Condition 56 determined that the proposed fill levels could not go beyond the Fletcher property boundaries or above the contours set by EC214.

6.3.6 The EC214 Decision did not consider any land swap arrangement between Fletchers and Council in the Decision but the Court did contemplate that a final landform might consider how adjacent land uses could be joined and integrated.

6.3.7 My assessment at the time of the plan change hearing was that Condition 77 addressed much of the substance of the plan change. Even though the Court had considered different factors, conditions, issues etc, the methodology recommended for investigating a final fill level was still relevant and sound for the plan change.

The desirability of an integrated final landform, and a more suitable and efficient open space network surrounding the site

6.4.1 With the first consideration I interpreted "final landform" to mean the final quarry level, not Big King's integration with the quarry. I interpret "integrated" to mean achieving a high quality relationship and connection between:

i) the final quarry level and the surrounding community;
ii) the final quarry level and Mt Eden Road;
iii) the final quarry level and Big King Reserve;
iv) the final quarry level and town centre;
v) the final quarry level and council administered reserves;
vi) the quality of the connections between the reserves surrounding the quarry, including Big King Reserve.

6.4.2 My interpretation of the wording of the first consideration was that it inferred that integration will create a more suitable and efficient open space network surrounding the site. By implication, this suggests an unintegrated final landform will not.

6.4.3 The Court's direction seemed open to several outcomes: whether the quarry should be filled to accomplish integration; or the quarry left as a feature disparate from its surroundings; and/or the surroundings in turn

also left disparate due to inefficient connections between open spaces.

6.4.4 The Court attempted to draw from the consultation process what the right relationships for the final landform and its surrounds should be.

6.4.5 My opinion is that integration of the final landform is desirable.

6.4.6 I have assumed Fletcher also considered integration was desirable because they described their 17H-1 masterplan for the plan change as an "integrated comprehensive development."

How the landform might best relate to the surrounding topography, in particular Big King Reserve, Hunters Quarry, and the Council sites

6.5.1 I interpreted the second consideration to concern the best height level of the final landform in relation to its surrounds.

6.5.2 What kind of interface can be created to complement each side of the property line of the quarry? What fill level will enable efficient movement across the quarry site and surrounds?

6.5.3 In the relationship with Big King Reserve, I believe a high fill level will erase many of the long standing problems associated with the quarry such as the haul road's proximity and effects on the scoria cone. Filling the quarry to a higher level will reshape the volcano without needing to modify its physical form.

6.5.4 In the relationship with the council sites, the more recent land swap arrangement between Fletcher and Council has created an opportunity to consider alternative methods of enhancing Council-administered and adjacent land, including adding fill to the southern council-administered reserve to bring it closer to the level of the town centre and Western Park.

6.5.5 This suggested the Environment Court methodology should be investigated and tested to establish what relationships the quarry might potentially create with adjacent sites. What fill levels will achieve integration between the sites?

6.5.6 Puketapapa Local Board engaged my practice to prepare detailed site analyses, cross-sections and three dimensional models to explore and measure what the different and potential interfaces could and should be.

Drawings

6.6.1 My practice has modelled in two and three dimensions the EC214 contours, the Fletcher masterplan contours, the RRA Plan contours, and the existing quarry filled to RL60 without other Fletcher's modifications (for a selection see Fig. 16-22, otherwise refer to Appendix 4-6).

6.6.2 The RL60 model is used as a base line for comparing the effects of the three fill level options. RL60 is the level which EC214 used as the minimum level for the final landform in the south-west corner. Fletcher has used RL60 as the base for a large part of its proposal, with a level slightly below this for the playing fields (RL59) and slightly higher for the Riu valley (RL60-64). All of the RRA Plan is above RL60.

6.6.3 The 3D contour models show what the overall landform and level changes look like without the distraction of development. The drawings show the relationships and differences in level between the external surrounding environment and the final fill level for the quarry site. See:

i) Appendix 4 for contour plans of the respective options
ii) Appendix 5 for site sections of the respective options
iii) Appendix 6 for 3D perspectives of the respective options

Findings

6.7.1 These are my observations of each option.

6.7.2 **RL60**

i) protects and strongly defines existing volcanic features
ii) is a very complete environment with volcanic features all around the site
iii) a very big internal space; its vast size is scaled down because of the strong definition of landform features breaking up the monotony of quarry walls

iv) almost no evidence of a way in and out except the haul road and walking track from town centre

v) it seems remote from everything around it, like a sanctuary waiting to be discovered

vi) a raw environment

vii) focus is all around the internal space rather than towards Big King

viii) soft edges to the walls around the quarry

ix) from different views is relatively intimate due to the strong connections between the landforms and the quarry's soft edges

x) north-south symmetry between Grahame Breed Drive and Barrister Ave bluffs to/from town centre

xi) east-west symmetry between Barrister Ave and Fyvie Ave bluffs to/from Western Park

xii) the geometry of the haul road removes the naturalness of the line of the cut face below Big King

xiii) the haul road turns Big King into a piece of infrastructure

xiv) the depth of the quarry shows too much of the cut face below Big King; the cut face is too high

6.7.3 **Fletcher option**

i) is a vast hole in the ground

ii) it is essentially still a quarry – there has been no remediation of its fundamental constraints, limitations and character – it is a deep hole, disconnected and withdrawn from the surrounding environment, remote, internal focused, exclusive, man-made

iii) no definition of the space other than the ground plane – it is shapeless and dimensionless

iv) focus is on the centre of the space of the quarry, not Big King

v) everything flows into the centre of the space; nothing flows out

vi) Big King is a background feature to the space

vii) The soft quarry walls of RL60 have all been excavated away around the edges of the plan change area

viii) is a hard landscape – all the softness of RL60 has been removed

ix) Will be equally hard or harder with buildings – a straight edge environment with no relief

x) one is either inside or outside the site – there is no in-between

xi) very few access points provided and these are distant from one other – basically one for each side of the plan change area

xii) Access is only via specific points rather than across general areas

xiii) accessways are minimal in dimension compared to the area of the site

xiv) Minimal ways in; no apparent way out

xv) abrupt changes in level for access which reinforce height of quarry walls and depth of quarry

xvi) Nothing is joined

xvii) Big King is isolated through the removal of the wall below Western Park which acts as a bridge connecting Big King with the wider volcanic landscape

xviii) Will not encourage walking – even Koru Park has been shaped to support a road

xix) Will encourage driving

xx) Wider volcanic landscape has been highly modified, including the three bluffs

xxi) The geometry of the haul road removes the naturalness of the line of the cut face below Big King

xxii) The haul road turns Big King into a piece of infrastructure

xxiii) The depth of the quarry shows too much of the cut face below Big King; the cut face is too high

xxiv) Is crudely proportioned

xxv) A monotonous environment

xxvi) minimal imaginative engagement with the site

6.7.4 **EC214**

i) A vast plane tilted towards S-W corner

ii) The plane is shapeless

iii) The plane is a new landform inserted into the site

iv) Fill level does not go beyond Fletcher property boundary

v) Disjointed landscape – no connections to Southern Reserve, town centre or Western Park

vi) No flow between spaces

vii) Some north-south continuity around eastern side of site via Mt Eden Road

viii) Strong focus on the cut face below Big King

ix) Fill level against Big King showcases beautiful line of volcanic wall below Big King at ground level

x) Retains existing flows and desire lines between Western Park and

town centre but does not create any new connections

xi) No inside; the side from Mt Eden Road takes control of the site

xii) Volcanic features are around the edge of the site

xiii) Cuts Grahame Breed Drive bluff along property line

xiv) Fill level erases haul road (by cut and cover)

xv) Minor north-south symmetry between Grahame Breed Drive and Barrister Ave bluffs to/from town centre

6.7.5 **RRA Plan**

i) Strong presence of existing volcanic features

ii) Strong north-south symmetry between Grahame Breed Drive and Barrister Ave bluffs to/from town centre

iii) Strong east-west symmetry between Barrister Ave and Fyvie Ave bluffs to/from Western Park

iv) Strong symmetry based upon working with existing landforms

v) New terracing joins with Western Park amphitheatre

vi) Focus shifted to open space in front of Big King

vii) All quarry barriers dissolved

viii) All the land is joined; the ground is continuous

ix) Very little level differences and changes; these are subtle

x) Access improved from Southern Reserve to town centre; Southern Reserve to Western Park;

xi) Existing desire lines embedded in the new levels

xii) Fill level around Grahame Breed Drive bluff opens up more space between bluffs; centres the space between the bluffs and the town centre

xiii) Volcanic wall below Big King continues around southern edge of lowest terrace and back up infrastructure terrace

xiv) Infrastructure terrace mirrors volcanic wall of Big King

xv) Filtered environment – flow of space between and through landforms

Summary of findings and techniques used

6.7.6

RL60	leaves the land alone
Fletcher	removes the land
EC214	fills the land
RRA Plan	integrates the land

Modification of the volcanic landscape to provide connections to the site

6.8.1 In my opinion, the Decision does not properly take into account the inappropriate effects on the surrounding environment which the 15-17metre level difference imposes. The Decision stated that:

> *(b) Any actual or potential adverse effects on the environment from the plan change will be less than minor and have been appropriately managed by the modifications we have made to the plan change provisions.*

6.8.2 The Fletcher plan change requires extensive modification of the existing quarry and adjacent public reserve land in order to make access to the quarry floor viable and manageable. I believe these modifications create significant adverse effects.

6.8.3 The effects illustrate the fundamental problem with the development which is its depth is too far below the surrounding environment. This depth requires infrastructure whose effects cannot be avoided, adequately remedied and only partly mitigated.

6.8.4 Instead, the infrastructure's impacts are externalised on the environment and further undermine the integrity of the ONF.

The extension of Grahame Breed Drive:

6.9.1 The provision of a new road through Western Park will require the removal of the quarried wall below Western Park. This wall has an important landscape value which has not been recognised by Fletcher.

a) The wall is an extension of the Big King scoria cone and connects Big King with the volcanic landscape surrounding it (Fig. 08). The wall is part of the eastern face of Big King by virtue of its physical and visual continuity with the cut face of Big King and Fyvie Ave bluff. The wall stretches Big King towards the Barrister Ave bluff and the quarried walls of the Southern Reserve.

b) The wall strongly defines Western Park. It provides a foreground feature to the park and contributes to the park's setting as a buffer space for Big King. The wall strengthens the park's horizontality

and mirrors the background walls encircling the park.

c) I have modelled the wall in three dimensions (both in physical and CAD models). In my opinion these show the wall's connectivity role and landscape strength (see Fig. 21).

d) The strength of the wall as a landscape feature is maintained even when some of its elevation is lost from view after extra fill is added to raise the overall level of the quarry (either as part of the EC214 contours or the RRA Proposal, see Fig.21).

e) I have also modelled Fletcher's proposal which removes the wall for the extension to Grahame Breed Drive (see Fig.21). In my opinion, the key landscape outcome from its removal is that Big King will become disconnected and isolated from the surrounding volcanic landscape it is currently attached to.

f) The shape of the access road compounds this effect. The road alignment comes too close to Big King and then turns against the side of Big King in order to descend to the floor of the quarry. Its strong curvilinear geometry and downward slope destroys the existing connections and dominant horizontality of the volcanic landscape.

g) Big King will become a background feature and its values significantly diminished as a result.

6.9.2 The landscaped slope below the road (Koru Park) also serves to push Western Park into the distance. The extensive plane of the slope becomes the foreground feature. It combines with the open space of the playing fields and the residential development bordering the open space to change the dominant north-south axis of the volcanic landscape to an east-west recreational reserve axis. This further diminishes the presence of Big King and the values of the wider volcanic landscape.

6.9.3 The road also forms a physical barrier between Western Park and the floor of the quarry.

a) The road measures 17-18metres wide and forms a significant visual and physical impediment walking between the two spaces. Pedestrians are forced to the sides of Western Park rather free to move in any direction.

b) It also destroys one of Western Park's primary values which is as an open space reserve without vehicular traffic. Roading is already too

dominant an element of the plan change and will permanently affect the amenity, scenic and natural qualities of Three Kings Reserve

c) The amount of area taken from Western Park for roading purposes outweighs and overscales the leftover recreational use of Western Park and Koru Park below it. The access road is an intrusive vehicle open space at the expense of the natural environment, landscape amenity and passive use of the reserve.

d) Koru Park is largely a device to try to disguise the adverse visual and physical impacts of the access road. It is not equal in value to the area lost from Western Park. Council will be required to maintain this challenging topography.

e) Pedestrians are clearly subservient to the function and alignment of the access roads. Footpaths will be within a suburban context and beside traffic which will detract from the public's use and enjoyment of Three Kings Reserve.

f) The deep level of the quarry below the surrounding street network, as well as the circuitous routes needed to access the quarry floor, will not facilitate efficient walking, cycling and driving for all users, including those with disabilities, nor will it support direct access to public transport for residents (Fig. 22).

g) This is a poor use of reserve land which the public does not gain a net benefit from.

Path from Smallfield Ave

6.10.1 The walking route proposed by Fletcher from Smallfield Ave to Western Park uses one of the highest and steepest points in Western Park to gain access to the park. To overcome these constraints, Fletcher proposes to fill in nearly half of Western Park to create a manageable walking gradient.

6.10.2 This grand landscape gesture will replace the communal function and use of the reserve, destroy its strong spatial and horizontal definition and erase its subtle scenic and natural qualities. In particular, the graded path will:

i) transform and significantly diminish Western Park in use, form, space, orientation, amenity, character and values, including its relationships with Big King and the wider volcanic landscape of

Three Kings Volcano

ii) The levelled floor of the park will be lost forever. The whole of the park has been re-shaped to be sloped from Smallfield Ave to the quarry floor. Activities and uses which the current levelled floor area support will need to go elsewhere.

iii) Western Park will essentially be used as a thoroughfare for the public rather than a destination in its own right.

iv) The shape of the fill and excavation of Western Park forms a valley which flows into the floor of the quarry to the east instead of forming an extension of Big King to the north.

v) This changes the north-south axis of the volcanic landscape into an east-west axis of recreational open space which has less status and landscape value

6.10.3 There is no guarantee this graded slope will be built. The officer's report states in D. Other Works (p 379), it "may occur" after the land exchange. Some of Fletcher's previous planning iterations for Western Park contain housing blocks without this graded ramp, meaning without this access Western Park has the potential to become a cul-de-sac for residential development only accessed from Grahame Breed Drive. It would therefore be in danger of becoming a private enclave to be enjoyed chiefly by the residents overlooking it from Superlot G.

Haul Road

6.11.1 I presented evidence on the effects of the haul road at the plan change hearing. The haul road is located directly adjacent to Big King and has formed the main access into the quarry. The cut face of Big King can be attributed to providing this access. As the quarry was quarried deeper, so the effects of the haul road increased in relation to Big King (Fig. 23, 24).

6.11.2 The commissioners' decision made no reference to my evidence and nor did they make any reference to the adverse effects created by the haul road. I was the only landscape expert to give evidence on this aspect of the plan change. In my opinion, the lack of consideration of the effects from the haul road is an omission and weakness of the plan change decision.

6.11.3 It was, and still is, my opinion that the haul road creates significant adverse effects on the multiple values of the ONF.

6.11.4 It significantly detracts visually and physically from the volcanic feature.

6.11.5 It severs the volcanic feature's eastern face at a critical point and further visual conflict is created with the movement of vehicles across its face. The scale of the cut is out of all proportion to the size of the vehicles which use the haul road.

6.11.6 It is apparent that the cut required to bench the road is too close to the western property boundary and may contravene the 1915 Act in the angle of batter it has shaped.

6.11.7 Both the cut for the haul road and the haul road itself largely follow the orthogonal line of the property boundary. This significantly detracts from two of the scoria cone's defining features – its naturalness and curvature. The straight lines foreground and reinforce the activities and form of the quarry – and proposed residential development which will replace it – and not the values of the ONF.

6.11.7 Mr McKeown's evidence addresses the angle of the cut face and whether it should be accurately and independently surveyed to establish whether it complies with the 1915 Act.

6.11.8 The effects from the cut required for the movement of vehicles in and out of the quarry must be remedied, especially with discontinuation of the quarrying activity. In my opinion, the access road should be removed from being adjacent to the eastern face of the ONF.

6.11.9 In my plan change evidence, I outlined two ways of achieving this. Firstly, the cut slope could be made good with material which would re-establish the continuity of a slope. However, in my opinion, this is unlikely to produce a convincing outcome for the following reasons:

i) the location of the Kennards storage facility directly north of the property boundary prevents any short to medium term rehabilitation of the volcano from being achieved in the round. The Kennards facility has been built well into the curvature of the volcano and

therefore will not enable any reshaping to continue northwards. Any reshaping within the quarry land may therefore end up looking piecemeal, superficial and unconvincing

ii) The continuity of any slope may be compromised by the strict alignment of the cut face with the orthogonal property boundary and the difficulty of achieving any significant curvature from the east round to the south.

6.11.10 Secondly, the significant adverse effects of the haul road could be remedied by raising the level of the quarry so that the haul road is erased. I supported this second option of raising the fill level of the quarry. I stated that I believe this will produce the best form of remediation for the abuse the volcanic feature has suffered by quarrying.

6.11.11 I have since been commissioned by Puketapapa Local Board to study the contours that the EC214 decision set in order to assess the benefits or otherwise of a higher fill level for the ONF. My research has revealed that the EC214 contours would have required the removal of the haul road in its entirety. The contours were set so that the haul road is either covered by fill or needs to be lowered by grading to meet the new levels.

6.11.12 As part of my research I have modelled the higher fill level set by the EC214 contours in three dimensions. In my opinion, the higher fill level substantially remedies the significant adverse effects created by the haul road. Its removal also largely erases the orthogonal line imposed on the feature by the property boundary. Instead, the higher fill level places emphasis and focus on the face of the ONF and reveals its undulations without physical and visual interference, including at ground level. The base line of the ONF becomes a line of beauty. In my opinion, these provide sufficient reasons to remove the haul road (see Fig. 25).

6.11.13 The joint witness statement on landscape and urban design recorded that “native planting will be continued on the eastern side of the road with the intention of providing a bush environment character to the entry to the site” (p6). The experts’ discussed the potential benefits from this planting and all supported “this approach to remedying the effects of the haul road on the maunga.” I qualified this support by noting that “this is one approach”.

6.11.14 I reflected upon the use of the word “remedying” in the expert statement overnight and requested an amendment to my support the following morning (31 March) to Commissioner Hodges. I stated:

> “*I have reflected overnight on one point in the conferencing which I supported - Point 5, last para. The current wording does not properly explain my position and seems to be partly ambiguous.*
> *My support of the use of the word "remedy" as being "one approach" was loose. The words "help remedy or help mitigate" the effects of the haul road would be a better description of my position.*
> *I therefore ask that the last para be amended. The only change sought relates to the description of my statement of position, as follows:*
> *"All experts support this approach to remedying the effects of the haul road on the maunga. RR notes this is one approach, but is better described as "help mitigate" or "help remedy" the effects of the haul road*."

6.11.15 Although my preferred amendment was not included, I still stand by my qualification of support. In my opinion, planting does not substantially remedy the adverse effects of the haul road on the ONF.

6.11.16 In my opinion, planting will help mitigate the road’s effects from a visual distance, not close up.

6.11.17 I therefore reserve my assessment of the degree of remedying of the haul road’s effects by planting until the new design is produced.

6.11.18 Mr Lord’s specified location for planting will also conceal any quarry walls left exposed after building development. Mr Leo Jew from Council in his report for the PAUP hearing has considered the exposed quarry walls to be one of only three key values on the site. In my estimation, there will be little or no exposed quarry walls left after development of the site which includes the planting Mr Lord describes.

New path to Big King Reserve

6.12.1 The Fletcher Masterplan proposes a new path from Western Park to Big King Reserve in order to overcome access issues presented by the existing staircase. This staircase is steep and poorly designed. The risers are too high making each step more difficult than it should be. The staircase is also in poor condition. At the least, it should be rebuilt to a more exacting specification.

6.12.2 Fletcher proposes a universal access ramp on a different route which requires making a wide cut into the Fyvie Ave bluff, an important remnant from the Three Kings Volcano ONF. To achieve this, the section of bluff above the path has been reshaped in the design to massage the cut into the landform. This will have the effect of altering the significant landform feature, severing the critical relationship between the bluff's base on the floor of the quarry and the summit (see Fig. 06, 25).

6.12.3 The RPS is clear that improving public access to an ONF should be consistent with protection of the feature. In my opinion, the new path will create significant adverse effects. It may be difficult and expensive to build. It may contravene the 1915 Act as well.

6.12.4 Although providing universal access is laudable, this is not realistic or warranted on a volcanic landscape where its natural landform (highly modified as it is) is part of its remaining finite value as an ONF. Every section removed of the volcanic landscape to provide universal access will forever remove the very unique landscape which is accessed.

6.12.5 Even if a new path with a universal access gradient was built for this section of the path, the gradient for the rest of the path, and in fact the rest of Big King, present unsurmountable access problems. Where does one stop when providing universal access if it involves having to continue to modify the ONF?

6.12.6 It makes more sense to open up the disused public accessway from Fyvie Ave (between no. 47 and 51) than build Fletcher's proposed path. Of even more lasting value, the property at 53 Fyvie Ave should be purchased by Council and added to Big King Reserve. This would improve access to the reserve without modifying the ONF. It would also

open up the reserve from another direction, making the reserve more visible and permeable. The RRA Plan proposes this but this is an 'optional' extra because I understand this is not within the scope of PC372.

6.12.7 Fletcher's proposed path is another example of them seeing the value in radically modifying the volcanic landscape in order to achieve their Masterplan objectives. Like the proposal for Western Park, it creates adverse effects instead of avoiding them and fails to identify that there are more practicable alternatives which achieve the same objectives without adverse effects.

Gantry to the eastern side of BK accessed from the haul road.

6.13.1 The proposed gantry bridge on the eastern side of Big King is unnecessary and inappropriate for an ONF. The short cut if offers might seem appealing compared to the circuitous journey Fletcher provides through its trafficked built environment to access Big King from Western Park.

6.13.2 However, it is chiefly unnecessary because the northern side of Big King Reserve is easily accessible from Duke Street which is close to the quarry site via Mt Eden Road.

6.13.4 The gantry is another engineered imposition on the ONF. The RPS directs that access needs to be consistent with protection of the values of the feature.

6.13.5 An alternative masterplan for the plan change area in which roading and housing were not dominant elements of a walking environment adjacent to the ONF would not need such devices.

Access points down onto the floor of the quarry

6.14.1 The Fletcher drawing 17H-1 contains seven access points from the surrounding environment down onto the floor of the quarry. These are:

i) via a staircase, ramp and lift from the top of Grahame Breed Drive adjacent to the Town Centre. The difference between levels is

17metres, nearly the height of a six storey building. The zig-zag ramp is approximately 200metres long to negotiate the level change. It is not clear whether the lift is public or part of the publicly accessible plaza.

ii) via an extension of Grahame Breed Drive down onto the floor of the quarry. The new road cuts through the current floor level of Western Park before turning and descending to the floor of the quarry. The road accommodates vehicles, cycleways and footpaths. The length of this road is approximately 420 metres over a fall of 17metres.

iii) via a staircase and lift from Mt Eden Road opposite Kingsway adjacent to the SHA. It is not clear whether the lift will be public or publicly accessible. The difference in levels is 15metres

iv) via the quarry haul road (renamed Bush Road) which currently is wide enough to accommodate only two vehicle lanes and a narrow footpath. Fletcher has discussed widening this road in landscape and urban design expert conferencing however no new plans were released prior to the filing of evidence

v) via a ramped path from Smallfield Ave down to Western Park. A staircase was shown for the first time in the landscape and urban design expert conferencing although it is not shown on Fletcher Masterplan drawing 17H-1 or 18H-1

vi) Fletcher also proposes a new access route from Western Park to Big King Reserve via a ramped and bridged path. This zig-zag path extends the ramped path from Smallfield Ave to pass behind and above a proposed whare manaaki to a new path higher up the slope which will need to be cut into the Fyvie Ave bluff.

vii) A gantry to the eastern side of BK accessed from the haul road. This was omitted from the Fletcher masterplan 18H-1 but was shown on Masterplan 17H-1 for the plan change application.

6.14.2 These access points form two of the three primary walking routes to/from the quarry. The stair from Mt Eden Rd (a 15metre level change) and the stair from the plaza (17m level change) are both abrupt and appear vertiginous. The abrupt level change between the different levels accentuates the poor connection and lack of integration between quarry and surroundings. I believe providing lifts in both places confirms this.

6.14.3 The third walking route, from Smallfield Ave to Western Park, uses one of the highest and steepest access points in Western Park. To overcome these constraints, Fletcher proposes to fill in nearly half of Western Park to create a manageable walking gradient.

Local walking examples cited by Fletcher

6.15.1 In coming to their conclusion, the commissioners accepted Fletcher's evidence that "*the grade separation proposed is consistent with the gradients residents experience in streets surrounding town centres in other parts of Auckland. The examples quoted to us included Whangaparaoa, Glenfield, Birkenhead, Mount Albert, Eastridge, Ponsonby and existing access to the Three Kings town centre. In addition the proposed development includes a staircase, ramps and public lifts to provide access to and from the town centre and Mount Eden Road*." (8.3.78)

6.15.2 I disagree with this conclusion. I base my opinion on an assessment of the specific local examples of similar level changes and walking distances surrounding town centres Mr de Keijzer from Fletcher provided in his PAUP evidence (Appendix 7).

6.15.3 In my opinion, the Decision does not recognise and address four key points:

- none of these examples provide stairs and ramps along the primary access route
- in each of these examples, the gradients are reasonably consistent (even if steep) and do not require staircases and ramps to negotiate abrupt level changes
- these examples do not have level changes which are vertiginous in scale except for Ayr Street which is one reason why it is not commonly walked
- the primary walking route and the desire line (the line of easiest movement) are the same line, meaning people will use these routes if walking. In contrast, the easiest walking routes in the plan change area, the extension of Grahame Breed Drive and the haul road, are well away from walking desire lines and are only accessed by a circuitous roading network

6.15.4 I believe the disadvantageous situation at Three Kings may increase car dependency, not encourage walking.

Bayswater Peninsula

6.16.2 I consider a more accurate and relevant local example of level changes and walking distances is at Bayswater on the North Shore. Here, a road and footpath have been extended from the end of the headland to Bayswater Marina and Marine Park Reserve below.

6.16.3 The difference in level between the headland and the water is 15 metres, similar to the quarry. Whilst the new access road, Sir Peter Blake Parade, meanders gently down to the marina 4m above water level (its gradient is much shallower and more directly aligned than Grahame Breed Drive), a more direct route to Marine Park Reserve from the headland above is prevented by the line of cliffs between.

6.16.4 Seen from Marine Park Reserve below or Marine Terrace above (Fig. 26), the degree of separation between the levels is acute. These levels would not be integrated even if a footpath and ramp were to be built to directly connect them. Nor would their ascent or descent be managed easily.

6.16.5 I believe the access proposed by Fletcher from the Town Centre or Mt Eden Road to the quarry floor will have the same effect. The height differences, abrupt level changes and surrounding vertical walls (whether cliff faces or apartment buildings) underline the different areas are separate places. These areas are remote from each other physically and experientially, however much a footpath or ramp may attempt to bridge the difference. The levels are not integrated even if they are connected.

6.16.7 Essentially, at Bayswater, one's descent from the headland to the water's edge (either by road or footpath) is a withdrawal in physical and experiential terms from the surrounding community. I believe the Fletcher development is also a withdrawal from its surroundings and therefore I do not support the argument that the floor of the quarry is integrated with the surrounding community.

7 Location of Open Space

7.1.1 The location of open space in relation to Three Kings Volcano ONF is one of the defining issues of the plan change. I presented landscape evidence on this matter at the plan change hearing. This evidence was not cited in the Decision and nor to my knowledge was this addressed in the Decision.

Precedents for land uses adjacent to outstanding volcanic features

7.2.1 There are a considerable number of examples of buildings set against Auckland's volcanic features, many of which create adverse effects.

7.2.2 The Kennards storage building immediately north of the Three Kings Quarry site is a telling example. The building forms a long, solid wall along the property line and cuts deep into the side of the maunga. The outcome is likely to be long lasting, if not permanent (Fig 08, 23).

7.2.3 There are examples where a comparative view of a volcanic feature with and without buildings adjacent to it is able to be made. Otahuhu Mt Richmond ONF and the Auckland Grammar Quarry playing fields below Maungawhau ONF are good examples. From these two situations we can gauge the relative effects on the volcanic feature.

7.2.4 At Otahuhu Mt Richmond ONF (Fig.27), industrial buildings on Portage Road have been built hard up to the property line of the volcanic reserve to maximise their developable space irrespective of the presence of the ONF within the property boundary. Further along the street, public open space in the form of recreational playing fields has been located in front of the volcanic reserve. The continuity of grass surface and soft character from playing field to the volcanic reserve greatly enhances the setting for the volcanic feature.

7.2.5 The Auckland Grammar playing fields below Maungawhau ONF are a new use of a former quarry which has been partially filled. The interface of the playing fields with the basalt face of the quarry walls is positive, with the grass plane accentuating the strong seemingly upward thrust of the columnar jointing. Both the volcanic feature and the playing fields are enhanced by this relationship (Fig.28).

7.2.6 Yet around the corner, an industrial building butts up against the quarry wall, like at Otahuhu, concealing the volcanic feature and denying the potential landscape contribution of the feature (Fig. 29).

7.2.7 The visual and physical adverse effects of building in front of a volcano is one of the reasons given by the Environment Court in a decision against the location of houses at the base of Maungarei Mt Wellington ONF (ENV-2006-AKL-000917, page 13, Landco Mt Wellington Ltd vs Auckland City Council, 9 July 2008). I have provided photos of the recent situation there (Fig. 30, 31).

7.2.8 With Big King, as at Maungarei Mt Wellington, buildings will reduce the character of the ONF and by hiding its base and concealing the quarry face, suppress its own raison d'être and the place of the feature within the development.

7.2.9 Big King will look and feel like it is on the outside and on the margins of the development rather than being an integral part of or the fundamental feature defining the development.

Appropriate land use within and adjacent to an ONF

7.3.1 In the description of landscape architecture elements submitted by Fletcher in the PC372 hearing, a diagram was produced showing a generic overview of the 'occupation' and physical modifications to volcanic cones by Maori and European cultures through time (Fig. 32).

7.3.2 This generic overview of human engagement with Auckland's volcanoes is over-simplified, avoids substantive examination of the volcanic field (and especially Three Kings Volcano) and the full range and impact of occupation and modifications Maori and Europeans have made, particularly the destructive impact by Fletcher (and associated companies) through quarrying.

7.3.3 The diagram provides only one pathway which leads from excavation and quarrying through to development. This is not supported by a survey of the volcanic field.

7.3.4 My survey reveals (Fig.33-40):

i) Volcanic features which have been quarried and which have since been transformed into recreational open space:

Western Park as part of Three Kings Volcano (ONF)
Owairaka Mt Albert Volcano (ONF)
Green Mount
Mangere Mountain (ONF)
Maungawhau (ONF)
(this includes public reserves and recreational open spaces on and below the maunga (e,g, Tahaki, Eden Gardens and Auckland Grammar playing fields)
Puketutu Island
O Huiarangi Pigeon Mountain
Taurere Taylors Hill, Glendowie
Takaroro Mt Cambria
Rarotonga Mt Smart

ii) Volcanic features which have had water reservoirs buried inside their landform and which are maintained with recreational space above:

Te Tatau a Riukiuta Three Kings (ONF)
Maungakiekie One Tree Hill (ONF)
Maungawhau Mt Eden (ONF)
Owairaka Mt Albert (ONF)
Puketapapa / Pukewiwi Mt Roskill (ONF)
Pukekawa Auckland Domain (ONF)
Takarunga North Head (ONF)
Maungarei Mt Wellington (ONF)
Ohinerangi Mt Hobson (ONF)

Note all these volcanic features have an ONF status despite the range of modifications to them.

iii) Volcanic features which have had craters filled in and which have since been transformed into recreational open space:

Pukekawa Auckland Domain (ONF)
Maungarei Mt Wellington (ONF)
Hopua Volcano (Gloucester Park)
Whakamuhu Glover Park (St Heliers) (ONF)
Kohuora, Papatoetoe

iv) Volcanic features which have recreational open space surrounding them (typically Open Space 3):

Maungakiekie One Tree Hill (ONF)
Maungawhau (ONF)
Otahuhu Mt Richmond (ONF)
Maungarei Mt Wellington (ONF)
Ohinerangi Mt Hobson (ONF)
Te Ahi ka roa a Raka Mt Albert (ONF)
Hampton Park
Mangere Lagoon
Mt Robertson Sturges Park
Taurere Taylors Hill, Glendowie

v) Volcanic features which have recreational open space on them (often Open Space 1):

The features cited above

vi) Volcanic features which have been quarried and been developed into a residential suburb or precinct on the quarry floor:

Stonefields at Maungarei Mt Wellington (ONF)

7.3.5 I conclude from this survey firstly that:

i) Almost all of the volcanic landscapes and features in Auckland have been modified in some way
ii) original or historic features of the volcanic field were either destroyed or replaced with new contours and grass cover. These

modifications were “absorbed” into the volcanic landscape’s ‘natural’ aesthetic which we mostly take for granted, or remain largely unaware of

iii) these modifications are seen to become part of the volcanic feature even if they form crude interventions (e.g. Big King has a buried water reservoir which has not affected its status)

iv) the volcanoes of Auckland now form ‘natural’ left-over spaces saved from the spread of surrounding development. The maunga are grand but isolated objects within a re-contextualised and expansive landscape setting dominated by European settlement

v) public open space, usually in the form of sports fields, is the predominant land use and amenity provided adjacent to and often within the volcanic features (especially within tuff rings)

vi) even though the cones’ have been recognised as both outstanding natural and cultural features, there has been little enhancement of their values

vii) Private Plan Change 372 fails to address these concerns

viii) Auckland seems to be always waiting for an ‘enlightened’ time when the city sees fit to properly recognise, protect and enhance our volcanic landscapes and features. Until then, it is business as usual.

7.3.6 Secondly, I conclude that the use and development of a quarry for residential purposes at Stonefields does not form a model for development on or adjacent to or surrounding volcanic features, especially those recognised as outstanding and regionally significant. The overwhelming trend is redevelopment as open space.

7.3.7 In fact, the Stonefields residential development of the quarry at Maungarei Mt Wellington was originally planned to have open space provided in front of the base of the northern face. School playing fields here would form an appropriate interface, transition and buffer zone between the maunga and built development. As a consequence, this did not concern either me or the Auckland Volcanic Cones Society (AVCS) who I provided independent advice to on this arrangement.

7.3.8 This ideal relationship was subsequently changed by the landowner and Council who agreed to move the playing fields to the centre of the residential development and replaced the open space with housing at the

base of the maunga. I understand this has been the subject of dispute and court action for many years since I was last involved.

7.3.9 Thirdly, I conclude that the ONF is a comparatively small mapped feature when compared to other volcanic reserves in Auckland, mainly due to the removal of four of the scoria cones of Three Kings Volcano by quarrying. The remnant cone is therefore an even more “scarce” resource and deserving of protection and rehabilitation.

7.3.10 Fourthly, I conclude from my survey and the relevant Court findings that open space adjacent to and surrounding Big King will ensure activities are managed so that significant adverse effects on its values are avoided, remedied or mitigated, and where practicable the values will be enhanced.

7.3.11 This does not necessarily mean a decrease in developable land and/or density; rather that other residential typologies need to be explored (but haven’t been adequately assessed by Council or Fletcher) to avoid significant adverse effects from the location and scale of development.

Local plans give direction on open space as part of the rehabilitation of the quarry

7.4.1 The above precedents give direction for the potential of open space (POS) to protect and enhance Big King.

7.4.2 The Three Kings Reserve Management Plan (RMP) and Puketapapa Local Board’s Three Kings Plan give guidance on the desirability of public open space as part of the rehabilitation of the quarry.

7.4.3 The operative Reserve Management Plan envisaged this scenario many years ago (1981) when it identified its four key objectives in Section II as:

i) To maintain the reserve as a significant community focal point providing for civic, cultural and recreational and sporting uses

ii) To maintain the reserve as open space and minimize further encroachment of buildings, roading and parking

iii) To ensure that the quarries are developed to their maximum long term potential as a major sporting or recreational venue complementary to the Civic Centre

iv) To develop and maintain the reserve as a place of character and beauty, and encourage its fullest use by the general public.

I believe these objectives are still relevant and contemporary.

7.4.4 The Three Kings Plan (August 2014) echoed this need and vision when it stated its first key principle (p9) as:

- *Increase the total amount of quality public open space, including playing fields and informal recreation spaces*

Dimensions of Open Space adjacent to the ONF

7.5.1 The potential for open space should be future-proofed so that it satisfies long term community needs and provides sufficient amenity in the face of population growth and increasing residential densities, not just on this site but in the Three Kings area and adjacent wards.

7.5.2 The site itself also offers unique opportunities that should be taken advantage of, including the need to maximise the community outcomes from any public land exchanges with other parties.

7.5.3 Western Park's location offers the unique opportunity to join public open space adjacent to Big King with open space surrounding it and provide an ideal long-term outcome for the ONF and community.

7.5.4 This amount of open space would be able to accommodate playing fields and passive recreation uses so that there is flexibility for a diverse range of users and uses including informal recreation, cultural and civic activities.

Fletcher open space and playing fields

7.6.1 Fletcher has located buildings adjacent to the ONF in the plan change instead of open space. These will create significant adverse effects. I will review these effects in the next section on 'Proposed zoning, RL's and building heights'.

7.6.2 The location of open space in the plan change will not contribute to the protection, remedying or enhancement of the ONF. The playing fields provided are distant from the ONF and the space between the open space and ONF is filled with four storey high residential buildings. Fletcher's open space is also bounded by a perimeter road, the access road from Grahame Breed Drive and the large area of landscaping required to mitigate the effects of the access road (Koru Terrace).

7.6.3 The area of the playing fields is oriented in an east-west direction towards Western Park. This significantly changes the existing orientation of the volcanic landscape which presently runs north-south from Big King to Western Park. The east-west axis of recreational open space will be separate from and different in character to the volcanic landscape.

7.6.4 As a result, the values of the ONF will not be protected, remedied or enhanced and will likely diminish.

Fletcher's consideration of alternative locations for open space and playing fields

7.7.1 Mr John Duthie in his s32 report sets out Fletcher's consideration of options for the location and arrangement of sports fields within the Plan Change area (Fig. 41).

7.7.2 I make the following observations about the six options illustrated:

i) the floor of the quarry is set well below the surrounding existing environment in every option
ii) the haul road to access the floor of the quarry against the side of Big King is retained in every option
iii) residential development is located adjacent to both Big King Reserve and the part of Three Kings Reserve connected to Big King Reserve in every option
iv) none of the options locate and arrange the sports fields adjacent to Big King Reserve
v) Option 4 is the only option where the sports fields are aligned with Big King Reserve, well north of the other options, however the haul road is positioned between Big King Reserve and the sports fields which weakens the potential open space connection and

relationship. The level of the sports fields is also uncertain – are they on the floor below the haul road or at the same level as the haul road? It appears more likely the former level

vi) In four options, a diagonal "landscape" connection is created between Three Kings Domain and Big King which the quarry floor street pattern and sports fields are aligned with, incorporated within or positioned in relation to

vii) Western Park is separated from the floor of the quarry in every option, including where there is a diagonal landscape connection.

7.7.3 I make the following comments about these options:

i) None of the playing field options seeks a physical connection to Big King – they are all distant from the scoria cone and Big King Reserve. Only a visual relationship is achieved. However the sightline is typically over the top of residential development which is located between the sports fields and Big King

ii) The one option which provides a clear, unobstructed view towards Big King from the sports fields, Option 3, has a strong relationship to Big King, with the diagonal line of open space meeting Big King tangentially rather than connecting with it front or side on, meaning the residue of open space left over is arbitrary in shape and extent and does not add to Big King Reserve in a substantial way

iii) Five of the six sports field options are bounded or intersected by roads meaning the movement of vehicles takes priority over open space amenity and character

iv) None of the options locate and arrange the sports fields in a way which extends Big King Reserve

v) None of the options has a street pattern which relates to the surrounding street pattern. All internal roading is remote and largely separate from the surrounding street system

vi) None of the options locate and arrange the sports fields in a way which enhances Big King

7.7.4 The six options are limited by retaining a low level for the quarry and choosing weak development patterns. The depth and shape of the quarry walls stops the surrounding grid street pattern being extended into the site, preventing an efficient organisation of access routes and residential development internally; lends itself to a convoluted and circuitous street

pattern which is highly inefficient in land area and land use (creating leftover spaces for development including sports fields); and fixes the site's boundaries, preventing practicable connections to and extensions of adjacent land uses and landforms, thus limiting important relationships being created between the site and its surroundings (Big King Reserve, Western Park, town centre and Mt Eden suburb).

Western Park

7.8.1 Fletcher proposed terrace housing on both the northern and southern side of Western Park as part of its master and concept plans. It also proposed the grading and excavation of substantial parts of Western Park in order to provide an access road from Grahame Breed Drive down into the quarry floor as well as access the apartments on Western Park.

7.8.2 The Commissioners who heard the land exchange application declined to approve the terrace houses on the northern side of Western Park due to the perceived significant adverse effects on Big King Volcano.

7.8.3 Any buildings on the southern side of Western Park will:

i) significantly reduce its area, public use and community / recreational focus
ii) quarry into one of the park's walls that shape the space thus destroying the slope permanently
iii) use key parts of the space for private purposes
iv) focus use of recreational open space in one (the playing fields on the lower floor of the quarry)
v) adversely affect the natural environment, scenic character and landscape amenity of Western Park

7.8.4 These buildings will change the use, character and amenity of the park's open space in adverse ways. Public access is significantly restricted and may well create the feeling of entering someone else's property and territory, a landscaped forecourt for the residential buildings.

7.8.5 Instead the battered grass slopes surrounding Western Park should be made more accessible and enhanced with planting to integrate the shape

and character of the park with the Big King Reserve. Both will be enhanced as a result.

7.8.6 To secure the long term benefits of this enhancement, the whole of Western Park should be rezoned Open Space 2 or 3. Western Park's location offers the unique opportunity to join public open space adjacent to Big King with open space surrounding it and provide an ideal long-term outcome for the maunga and community.

7.8.7 The proposed graded entry from the end of 29 Smallfield Ave down to the floor of Western Park will consume a large area of Western Park. There is no guarantee this graded slope will be built. The officer's report states in D. Other Works (p 379), it "may occur" after the land exchange.

7.8.8 Some of FRL's previous planning iterations for Western Park contain housing blocks without this graded ramp, meaning without this access Western Park has the potential to become a cul-de-sac for residential development only accessed from Grahame Breed Drive.

7.8.9 I have discussed the significant issues arising from the plan change locating buildings in Western Park in more detail in Section 8.8 of this evidence.

Three Kings Domain

7.9.1 Fletcher locates cascading apartment buildings A-04and A-05 along the northern edge of Grahame Breed Drive which will require the removal and replacement of the bluff. Prof Lindsay has discussed the value of this bluff from a geological and scientific point of view.

7.9.2 These buildings will also close off for all time the relationship of Three Kings Domain to the rest of Three Kings Reserve. They will also foreclose potential to enhance the Three Kings Domain by opening up views to the space of the quarry and Big King (see 5.6 - Assessment of the Existing Environment). The buildings will form a significant barrier which will prevent the Domain engaging fully with its surroundings as the Three Kings Reserve Management Plan envisages for the overall reserve. I believe any buildings should be sited in this location.

8 Proposed zoning, RL's and building heights

8.1.1 In its 'Reasons for the Decision' 1(c) the commissioners' conclude:

> *"There will be significant positive effects on the environment from the plan change in relation to the enhancement of views and visual connections to Te Tātua a Riukiuta, the opportunity to provide for residential growth adjacent to an existing town centre in a location along major transport corridors, the provision of additional quality open space and sportsfields and the opportunity to provide a quality built environment."*

8.1.2 In its 'Reasons for the Decision' the commissioners' conclude:

> *"We do not find that the proposed rezoning will be inappropriate subdivision, use and development of land adjacent to the outstanding natural feature that is Te Tātua a Riukiuta. We do find that the proposed rezoning will protect and have minimal effect on Te Tātua a Riukiuta while at the same time will enable the efficient use and development of this valuable land resource that will make a significant contribution towards meeting the future housing needs of Auckland."*

8.1.3 I presented landscape evidence to the plan change hearing which assessed the effects of the proposed rezoning on the ONF. I concluded the proposed rezoning would be inappropriate subdivision, use and development of land adjacent to the ONF.

Testing the Decision

8.2.1 For the purpose of testing the Decision, I have translated the zoning, RL's and building heights approved in the Decision onto six site sections (Fig. 42-47). These are the same levels and building heights sought by the Council for its proposed zoning and precinct plan provisions in the recent Proposed Auckland Unitary Plan (PAUP) process on Zoning which all of Fletcher's experts agreed with.

8.2.2 Up until the PAUP hearing on Zoning (29 March), to my knowledge I have been the only expert to express the vertical dimensions of Council's zoning and building heights in section and elevation drawings. Fletcher did not provide section and elevation drawings showing its proposed RL's for the plan change hearing and no drawings were produced after the Decision for explanation or public review.

8.2.3 Yet it is this kind of representation which will best illustrate whether the zoning and precinct plan provisions form an appropriate relationship to the ONF and surrounding residential community. I have also undertaken detailed examination of the location of Fletcher's proposed buildings in relation to the ONF.

8.2.4 The preparation of these drawings was necessary due to the lack of information from Fletcher. The Fletcher proposal, which is a very large urban intensification development located adjacent to an ONF and emerging town centre, has advanced through the regulatory process with a masterplan and two site sections (the sections are unchanged since the notified plan change nearly one and a half years ago). In my opinion, this is insufficient information with which to illustrate the development proposal or evaluate it in relation to an ONF.

8.2.5 I have used DKO's iterative plans 17H-1 and 18H-1 and two site sections to help generate these site sections. I have applied known and measurable reference points to align DKO's plans with Council's GIS and RL information.

8.2.6 My preparation of site section drawings has given me a much better understanding of what will be enabled by the proposed zoning and precinct plan provisions, including across the quarry floor, in the area to the south of the playing fields and Western Park. In essence, these drawings confirm that the assessments I made in my primary evidence are considered accurate.

Summary of findings

8.3.1 The preparation of these site sections reveals that the proposed zoning and precinct controls sought by Fletcher and confirmed with minor modifications by Council enable a location, scale and breadth of

development that is inappropriate adjacent to and surrounding an ONF. The full extent of the adverse effects is adverse for the ONF and community well-being.

8.3.2 The ONF has not been managed in an integrated manner to protect and enhance its values across physical and legal boundaries. The proposed re-zoning and building heights will enable development which is too close and too high in relation to the ONF and will conceal critical parts of the ONF from view: its junction with the ground, large parts of its eastern face including the vertiginous walls left from quarrying, and side-on views of the eastern face from the south and north.

Proposed rezoning, RL's and building heights immediately adjacent to the ONF

8.4.1 The RL across the whole quarry floor has been approved by Council at RL64 with a maximum building height 14.5m above RL64. The floor of the quarry has been zoned Residential 8b.

8.4.2 The Concept Plan enables a Residential 8B Zone to be located directly adjacent to the eastern face of Big King. Fletcher and Council have argued that the area zoned Open Space 2 between the residential zone and the ONF forms an appropriate buffer.

8.4.3 The 'buffer' zone of open space provided by Fletcher, which appears to distance the residential zone from the ONF, lies mostly above the cut face of the ONF beside Big King Reserve rather than forming part of land at its base. The buffer zone therefore does not contribute to mitigating any adverse effects from the residential zone and buildings planned directly adjacent to the ONF (Building Lots A-12, A-13, A-14 and A-15).

8.4.4 Fletcher's apparent provision of open space between the ONF and residential zone, suggesting it can be used in a similar way to Western Park for example, is largely non-existent. Instead, what is enabled by the re-zoning is 'wall to wall' development on the quarry floor.

8.4.5 I have studied the distance of Building Lots A-12, A-13, A-14 and A-15 from the most forward projection point of the cut face of Big King where it meets ground level using GIS contour information and my site sections. I

have plotted these measurements overlaid on a scaled aerial photo of the site with contours which shows a very different plan view of the situation than Fletcher's 17H-1 and 18H-1 masterplans and the approved concept plan which have no site information on them (Fig 48).

8.4.6 My measurements show that the back of Buildings' A-14 and A-15 are less than ten metres away from the most forward projection point of Big King at ground level. Given that the apartment buildings proposed here can be four storeys high, the vertical gap between the buildings and the face of the ONF provides almost no space to form a buffer zone. Essentially, these buildings are positioned hard up against the ONF.

8.4.7 I expect this distance will be especially critical when looking along the cut face of the ONF whilst descending the haul road (Bush Road). The road is tightly wedged between the cut face of the volcano and the four buildings adjacent. Any appreciation of the cut face is compromised by the close proximity of these buildings. The view is more directed into the back of these buildings than the cut face itself.

8.4.8 There would also be limited views along the cut face from the south, for example from the access road descending to the floor of the quarry. This view is largely blocked by a whare manaaki and the side wing of Building A-15. The line of the cut face is compromised by the footprint of these buildings.

8.4.9 The location of Building A-13 provides no relief either. The nose of this building is approximately 15 metres from the most forward projection of the cut face at ground level. The potential four storey building is also uncomfortably close to the base of the slope supporting the haul road. There is not sufficient space provided for both land uses.

8.4.10 The haul road turns to enter the floor of the quarry through a 20 metre gap provided between Buildings A-14 and A-13. This gap is the only view of the cut face which is clear of buildings in front of it.

8.4.11 The masterplan and concept plan therefore enable almost the entire eastern elevation of Big King to be hidden from view up to 14.5metres high by buildings directly adjacent to the ONF. The face is likely even more hidden from view from distant vantage points.

8.4.12 This is a very different outcome from the scenario described by Fletcher and Council experts and accepted by the Decision. The Reasons for the Decision include:

> *(b) Any actual or potential adverse effects on the environment from the plan change will be less than minor and have been appropriately managed by the modifications we have made to the plan change provisions.*
>
> *(c) there will be significant positive effects on the environment from the plan change in relation to the enhancement of views and visual connections to Te Tātua a Riukiuta, the opportunity to provide for residential growth adjacent to an existing town centre in a location along major transport corridors, the provision of additional quality open space and sportsfields and the opportunity to create a quality built environment.*

8.4.13 In addition to concealing a 14.5metre height of the ONF's eastern elevation, this wall of buildings will conceal most of the cut face of the ONF which is arguably the eastern elevation's most valuable and dramatic feature.

8.4.14 A site section I have prepared (Fig.45) demonstrates this. There is little of the cut face on view. It is only possible to view a fuller area of the cut face right up close where the haul road opens onto the floor of the quarry but even here one cannot gain an extensive view or full elevation due to the close proximity of buildings.

8.4.15 There is clearly no benefit to or enhancement of Big King with the proposed zoning and precinct provisions. The ONF has not been managed in an integrated manner to protect and enhance its values across the jurisdictional and ownership boundary. There is not adequate separation between land uses.

8.4.16 These observations confirm that the assessments I made in my primary evidence are considered accurate.

8.4.17 The proposed zoning, RL and building height for buildings immediately adjacent the quarry floor:

i) will conceal one of the defining characteristics of the ONF's which is the connection between its vertical slope and surrounding ground level
ii) will impose a 14.5m high wall across the face of Big King that distances and diminishes it. The ONF will become a background feature left-over from development
iii) will reinforce the historical form of the quarry and proposed residential development, not the values of the ONF
iv) will reinforce the orthogonal line of the property boundary which will detract from the ONF's undulating shape and naturalness
v) will be higher in elevation than Western Park which is the crucial datum line for appreciation of the vertical and horizontal projection of Big King
vi) will separate Big King from the wider volcanic landscape and values of the ONF
vii) will amplify the dominant built character of the quarry development
viii) does not form a complementary relationship with the ONF

The shape and visibility of Big King in the surrounding environment will be adversely affected as a result.

8.4.18 In my opinion, the proposed zoning and precinct plan provisions run counter to the objectives and policies in RPS 6.4.19:2(iii) and 6.4.19:3, as well as (to the extent relevant) the PAUP Chapter B: 4.3.2 for the protection, and where practicable, enhancement of an ONF's multiple values.

8.4.19 The proposed zoning and precinct plan provisions will create significant adverse effects, and significantly reduce the values of the ONF, by the inappropriate use and development of land surrounding or adjacent to the feature. They will also significantly reduce the value of the ONF in its wider context and significantly reduce the contribution of the wider context to the ONF as well.

Expert conferencing

8.5.1 The joint witness statement records that Fletchers proposes to move buildings A-12 to A-15 to the eastern side of the connector road between the haul road and extension of Grahame Breed Drive (the orange line). All experts agreed this would improve the outcome. However until such a drawing/s is produced which shows this, it is hard to gauge the effectiveness of the space opened up between the buildings and ONF.

Proposed rezoning, RL's and building heights across the floor of the quarry

8.6.1 Fletcher, Council and the commissioners' Reasons for the Decision have made a virtue out of the 15-17metre depth of the quarry being able to enhance views of the ONF. Their reasoning seems chiefly that a lower fill level will limit the height and view of buildings in relation to Big King, thereby increasing the visibility and views of Big King above them.

8.6.2 However, the proposed zoning, RL's and building height enable the whole northern half of the quarry to be filled with buildings up to the top of the quarry walls. In effect, the buildings will fill the quarry to a higher level in relation to Big King than either the EC214 or RRA Plan fill levels. Furthermore, the arrangement of laneways and streets on the quarry floor are aligned so that views down the streets and lanes mostly terminate with solid buildings and not a view of the face of Big King.

8.6.3 Any visual gain from the quarry's fill level is therefore lost through the proposed building height, street layout and site coverage. Views of Big King will only be seen across and above this development, pushing Big King into the background. The high degree of naturalness the view currently has from Mt Eden Road (even taking into account it is a highly modified landscape) will be transformed into a strong urban setting with low natural value.

8.6.3 In my opinion, the proposed zoning, RL and building height for the quarry floor will reinforce the same adverse effects I itemised in 8.4.17.

8.6.4 The Kennards storage building to the north will compound this effect. It is noteworthy that the only scaled image prepared by Fletcher (Fig. 49), an

early axonometric, does not show the Kennards building. I believe it would amplify the dominant built character of the quarry development and serve to further exclude and distance Big King from the development.

Proposed rezoning, RL's and building heights for the 'cascading' apartments

8.7.1 The proposed apartment blocks located around the eastern and southern sides of the Fletcher masterplan and concept plan are out of scale and character with Big King's ONF and Regionally Significant Volcanic Feature classification.

8.7.2 The buildings around these two sides are nine-to-ten-storeys high seen from inside the quarry. A ten-storey building has been defined as 'high rise' by Auckland City Council's "Volcanic Landscapes and Features Management Strategy" (1999) and positioned adjacent to the ONF will create the same significant adverse legacy effects that The Pines apartment tower created when it was built beside Maungawhau Mt Eden.

8.7.3 Both the RPS and "Volcanic Landscapes and Features Management Strategy" describe the effects from the location of high rises adjacent to volcanic features:

> *Adjacent development of sites for high rise buildings (e.g. 'The Pines' – Mt Eden) seriously 'competes' with the volcanic landform, detracts from its naturalness, and conceals views from, to, the volcano."*

8.7.4 The view from the summit lookout on Maungawhau Mt Eden looking towards The Pines gives an impression of how confrontational the view may be towards the Fletcher apartments. The Pines tower is the same distance away from the Maungawhau summit lookout as the apartments closest to Big King (in front of the SHA) are to the lower walkway on the eastern side of Big King. Whilst The Pines tower is 40m lower than the Maungawhau summit, the walkway on Big King is close to the same level as the top of the Fletcher apartments.

8.7.5 Fletcher describes the nine-to-ten-storey buildings as 'cascading'. The word 'cascading' implies something 'naturally' stepping or falling down a

slope. These buildings are not like this. Apart from a platform level at the fifth storey which connects with the Mt Eden Road level, these buildings are vertical and the further away they are viewed the more vertical they will appear.

8.7.6 Yet the precincts containing these buildings are zoned Residential 8b. Residential 8b enables buildings of four storeys (and greater). Fletcher has sought special dispensation from Auckland Council to increase the height of these buildings by 2.5x above what is permitted.

8.7.7 Fletcher has designed the apartments so their sensitivity is attuned to Mt Eden Road. From Mt Eden Road the buildings appear no higher than four storeys, thus appearing to comply with the residential 8b zoning. In point of fact, the sensitivity lies on the other side of the apartments, towards the ONF, and it is from this side the height limit should be restricted.

8.7.8 The scale of these apartment buildings is compounded by:

i) the number of them – eleven
ii) their consistent height around the edge of the quarry (some c.750m long) with only minimal gaps between each block
iii) their bulk which is needed to accommodate car parking above ground level behind the apartments rather than hidden in a basement
iv) the width of the apartment buildings is such that views through gaps between buildings are mostly on to side walls rather than through to open space beyond, reinforcing the wall effect

8.7.9 Together, the line of apartment buildings will create a monumental wall through the local area which will be unique in New Zealand. Certainly, there are other examples internationally, for instance European mass housing developments such as the Byker Wall in Newcastle or Quarry Hill in Leeds. However, these examples are well short of the nine-or-ten-storey height of the Fletcher proposal (Fig.50, 51).

8.7.10 Admirers of Quarry Hill and other walled western communities admit these are a “classic example of an ‘island estate’, geographically cut off and socially isolated. Encircling main roads and the perimeter blocks…created a fortress-like appearance which intimidated non-

residents." (https://municipaldreams.wordpress.com/2013/02/26/leeds-the-quarry-hill-flats).

8.7.11 None of these international examples are opposite an outstanding natural feature. They are instead an attempt to create a strongly contained and controlled internal social environment and/or windbreak from hostile natural elements. This is not required or necessary at Three Kings. The local community did not ask for this insularity or exclusivity in their consultation feedback for the Three Kings Plan.

8.7.12 The development is walled almost entirely around its edges with few pathways in and out. It closes down many opportunities to maintain or create connections and appears to extend its border control much further into the surrounding areas. It is a gated quarry now and it may well be a gated community in the future.

8.7.13 The wall of apartments opposite Big King will seriously compete with and significantly reduce the scale, distinctiveness and naturalness of the ONF. The scene will have little if anything to do with respecting the values of the ONF.

8.7.14 I believe a spectator on the lower walkway will feel outside this development and remote from its worldview. Such is the steep cut of Big King that one will look down on the roof levels of the buildings immediately below the walkway and see only a hard built environment across the quarry floor. The continuous wall of apartments around the eastern and southern edges will enclose the development almost in the round.

8.7.15 I believe Big King will look and feel like a leftover feature after this development rather than something which has been integrated with it. This is the impression I have also gained from visiting Stonefields.

8.7.16 There is nothing complementary or enhancing about this relationship with part of the ONF.

Proposed RL's and Building Heights for Western Park

Introduction

8.8.1 The existing ground level of Western Park is predominantly at the 72m contour level.

8.8.2 In the notified plan change, the RL of the whole of Western Park was set at RL73 + 3 storeys. I gave evidence against any building being located on Western Park in my plan change evidence and I retain that view.

8.8.3 However, the approved plan change and proposed zoning and precinct plan provisions change the RL's in significant ways. They divide the park into three areas with different RL's. The central area of the park, which is currently public land and open space, is set at RL73 without any buildings. The northern and southern sides of the central area are set at RL78 + 7.3m and RL82 + 7.3m respectively.

8.8.4 The Exchange of Lands Decision declined including the northern area in the agreement between Council and Fletcher and retained the area as public land and open space. The zoning for this area should have been confirmed by Council in its 2016 PAUP submission however it retained the old zoning.

8.8.5 Council's proposed RL for the southern side of Western Park of RL82 + 7.3metres is different again from the notified version. The reference point for the building height has been set at the Smallfield Ave level, not Western Park.

Implications of Smallfield Ave RL as the reference point for the zoning

8.9.1 One explanation for the RL being set from Smallfield Ave is to incorporate and control the future re-development of Housing NZ properties which back on to the reserve. A 7.3metre building height for these properties makes sense in light of the height sensitive area they are part of.

8.9.2 Using the higher RL of Smallfield Ave as the reference point, however, creates the opportunity for a potential building height of 17.3metres for housing located at the base of Western Park. This would enable a five

storey apartment block rather than three storey terrace houses, an opportunity which Fletcher confirmed it would take in expert conferencing. This is an extraordinary change from the notified version of the plan change and will have significant consequences for the existing environment.

8.9.3 The 10m extra height gained from this provision would dramatically change the relationship of Superlot G to Western Park, as well as fundamentally change the open space qualities, character and values of the park.

8.9.4 Perhaps more importantly, the 10m extra height gained from this provision would also dramatically change the relationship of Western Park to Big King. A five storey building would usurp the place of Western Park as the supporting foreground natural feature to Big King. By virtue of its scale, the building will look over the leftover park to set up a strong and direct built environment connection to Big King. This would erase another important function of Western Park which is as a buffer space between Big King and surrounding development.

8.9.5 Western Park would therefore lose its intimate connection with Big King. Big King will appear to stop at the northern boundary of Western Park instead of on top of the southern side of the park as it does currently.

8.9.6 The scale and stature of Superlot G will also transform the open space into a forecourt space for residents of these buildings to look down upon. The remaining leftover section of the park would essentially become a privatised domain, as I forewarned in my earlier plan change evidence.

8.9.7 The new landscaping plan of the Western Park area proposed by DKO in their 18H-1 Concept Plan, submitted as part of PAUP 081 evidence, suggests this. The public open space has been completely reshaped in profile and area to align and merge with the private housing.

8.9.8 The land on which Fletcher has proposed these landscape modifications does not belong to them and to my knowledge they do not have approval for these modifications.

8.9.9 Public access improvements to Western Park can be achieved in the simplest of ways without wholescale change to the Park, its intrinsic values and wider landscape contribution as an extension of the ONF.

8.9.10 Any buildings on the floor of Western Park will also serve to fully encircle the volcano with housing and remove the buffer zone between residential development and volcanic reserve on the southern and western sides of Big King.

8.9.11 These buildings will change the use, character and amenity of the park's open space in adverse ways. Public access is significantly restricted and the provision/retention of only one accessway may well create the feeling of entering someone else's property and territory, a landscaped forecourt for the residential buildings.

8.9.12 The proposed residential development within Western Park will join with the proposed recreational open space on the quarry floor to re-orientate the current north-south axis of open space and continuity of volcanic landscape to a dominant east-west recreational open space which is separate from and different in character to the volcanic landscape.

Barrister Ave volcanic 'bluff'

8.9.13 An unnoted consequence from the Decision's rezoning of the southern area of Western Park to RL82 +7.3m will be that Superlot G's gain of two storeys will mean the five storey building will almost fully conceal the Barrister Ave 'bluff', a remnant volcanic feature from the Three Kings Volcano ONF.

8.9.14 The Barrister Ave 'bluff' forms an important landscape counterpoint to a similar remnant volcanic feature from Three Kings Volcano on the northern side of Western Park below Big King Reserve, the Fyvie Ave 'bluff', and another 'bluff' north of Grahame Breed Drive in front of Three Kings Park).

8.9.15 The proposed rezoning and precinct provisions for Western Park will lead to a significant reduction in the value of Big King in the wider historic heritage, cultural, landscape, natural character and amenity context of the Three Kings Volcano ONF.

Extension of the wall of buildings around the quarry to Western Park

8.10.1 Yet the potential development outcome from the proposed zoning and precinct plan provisions could be that the wall of nine-and-ten storey apartment buildings to the east of Western Park are extended across Grahame Breed Drive to Western Park. The building alignment is so close with Western Park that this outcome should be considered as part of an assessment of their effects.

8.10.2 Western Park would act as a 'plinth' or base to Superlot G, lifting the five storey building above the quarry floor in the same way that the 'cascading' apartments have a lower section distinguished from the upper section.

8.10.3 In this scenario, the nine-to-ten storey apartments to the east of Western Park would join visually and spatially with the five-storey apartments in Western Park to form a continuous wall around nearly the whole development site (approx. 830m).

8.10.4 In this way, Fletcher replaces the entire volcanic landscape surrounding Big King with buildings. It gives a prime value to the residential potential of the quarry location and not to protecting and enhancing the ONF.

8.10.5 This potential outcome is in stark contrast to the conclusion reached in the Decision which states: *"We do not find that the proposed rezoning will be inappropriate subdivision, use and development of land adjacent to the outstanding natural feature that is Te Tātua a Riukiuta. We do find that the proposed rezoning will protect and have minimal effect on Te Tātua a Riukiuta while at the same time will enable the efficient use and development of this valuable land resource that will make a significant contribution towards meeting the future housing needs of Auckland."*

Potential location of a whare manaaki in Western Park

8.11.1 Fletcher is proposing an alternative location for the whare manaaki different to that proposed during the plan change and land exchange hearings.

8.11.2 At these hearings, Fletcher accommodated the whare manaaki within the Bush Precinct. Now it wants to accommodate the whare manaaki within the public open space of Western Park and in a setting and on a site that the land exchange commissioners decided should remain free of buildings due to the adverse effects on the ONF. This is surprising given Fletcher has stated it has accepted the commissioners' decision and has removed its proposed terrace houses on the northern side of Western Park.

8.11.3 As far as I am aware, Fletcher did not discuss alternative locations for the whare manaaki at previous hearings. I have read the plan change submissions from respective iwi groups and they did not provide information on different locations for a whare manaaki in their submissions. They gave no evidence at either the plan change or land exchange hearings.

8.11.4 The alternative location Mr Duthie identified in his Proposed Unitary Plan Evidence on Zoning is on the northern side of Western Park close to the pathway connection to Big King Reserve.

8.11.5 The joint witness statements refer to the new position of the whare manaaki. Mr Rau Hoskins, a cultural advisor for Fletcher, has explained the new position. Experts have accepted that this is the preferred position by mana whenua groups in the Fletcher proposal and is a better location than the plan change location[1]. I agree with this because the former position would have blocked from view the critical line of the cut face of Big King and the new position is within an 'alcove' slightly remote from the rest of the park.

8.11.6 I recognise, however, that the new location is on reserve land and this has not been agreed through the Reserves Act process. I am also aware that the Puketapapa Local Board who manages the reserve has not been included in any discussions on the whare manaaki.

8.11.7 The Local Board has formerly requested that I do not show a location for the whare manaaki within the RRA Plan. They stated: "*Given that the Board has not been briefed nor has it discussed this situation it would be*

[1] But noting the evidence of Te Aroha Morehu for Ngati Whatua Orakei

premature to include any consideration of the location of a whare manaaki in the work you are currently undertaking for the Board" (22 April).

8.11.8 Although I supported the new location of the whare manaaki within Fletcher's proposal (in my opinion, if the plan change is approved, there is not much left to protect), I do have some outstanding concerns with the proposal.[2]

8.11.9 Firstly, Mr Duthie believes an area of 1000 sq.m should be set aside within Western Park to provide sufficient flexibility to accommodate it (para 97, PAUP evidence) which Council would support with a new zoning of RL 78 + 8m. However, the area Mr Duthie identifies provides a much larger site area and potential building footprint than the plan change location (which was a 140 sq.m building within a 310m site area) and could therefore lead to other facilities, uses and floor area being added. What starts as an important cultural gesture can over time transform into something much bigger. The Decision of the Exchange of Lands commissioners to avoid buildings in the northern area of Western Park because of the effects on Big King could end up being circumvented.

8.11.10 Secondly, the infrastructure needed to service the building (road access, car parking, lighting, fencing etc) will have actual and potential effects on Western Park, Three Kings Reserve and Big King Reserve which have not been determined or assessed yet.

9 Inefficient and inappropriate use of land and natural and physical resources

9.1.1 In 'Reasons for the Decision' the commissioners state the plan change "*will be the most appropriate way of achieving the sustainable management purpose of the RMA*." (1(f)) They also state in 7.2 "*We have concluded that the plan change is the most appropriate way to achieve a more efficient and appropriate use of the land covered by PC 372 and will promote the sustainable management of natural and physical resources as contemplated by Part 2 of the RMA*." (7.2)

[2] I acknowledge below that I am not an expert in cultural matters and that the location may raise s6(e), s7(a) or s8 RMA issues.

9.1.2 Elsewhere they state "…*we have concluded that there are a number of different approaches that could be taken to the redevelopment of the quarry site and the immediately surrounding land. The additional filling approach, supported by many submitters is one option. Fletcher's option, which proposes lower fill levels that would enable more intensive development, utilises the change in ground level to minimize any adverse effects on the surrounding environment*." (8.3.45)

9.1.3 I disagree with these findings.

9.1.4 Firstly, I believe the masterplan which underpins the plan change and concept plan is an inappropriate and inefficient plan for use of the land covered by PC 372. It will not promote the sustainable management of natural and physical resources. It will create inappropriate effects on the ONF which are directly related to the lower fill level and the inefficient use of land and natural and physical resources.

9.1.5 Secondly, I disagree with the commissioners' reasoning that a lower fill level would enable more intensive development. I have done further analysis to test this reasoning and find it is without basis. I have found the opposite. A more efficient use of land than Fletcher's option will enable more intensive development without the adverse effects on the ONF. Equally, a more efficient use of land and a higher fill level will enable a more intensive and integrated development without adverse effects on the ONF.

9.1.6 Thirdly, as set out in my earlier evidence, Fletcher has produced an apartment typology and scale of building on a lower fill level which minimises adverse effects on only one side of the environment: the Mt Eden Road side. Yet this same typology maximises adverse effects on the lower side facing the ONF where the height sensitivity is greatest. The Decision accepts the flawed logic of Fletcher and Auckland Council and in doing so, fails to apply the height sensitivity test where it is most needed. The Decision fails to protect the ONF from inappropriately scaled development.

9.1.7 I have set out below a detailed explanation for my disagreement with these findings. This is specifically related to:

i) the inefficient use of land through the use of an inappropriate and inefficient apartment typology

ii) the inappropriate use of natural and physical resources by excavating parts of the volcanic reserves connected to the Three Kings ONF (Southern Reserve and Western Park)

9.1.8 Ms McCredie's evidence addresses the inefficient street pattern of the Fletcher masterplan and concept plan.

Inefficient apartment typology

9.2.1 Fletcher's apartment typology organises the apartment buildings in the following way:

i) six floors of apartments are provided below the level of Mt Eden Road with the apartments located on the side of the building facing the open space of the quarry

ii) car parking is provided on the same six floors 'sleeved' behind these apartments against the side of the quarry wall

iii) three floors of apartments are provided at the same level of and rising above Mt Eden Road, with apartments arranged on both sides of the building - one side facing the open space of the quarry and the other side facing the open space of Mt Eden Road

iv) the top floor of the apartment building has only one apartment across the whole depth of the building and faces both open spaces.

9.2.2 In my opinion, this is an inefficient typology which creates unnecessary and inappropriate adverse effects on the ONF, open space, amenity and quality of the environment.

9.2.3 This typology provides apartments on only one side of the building for six out of their ten storeys, with the top storey shown in the only section provided as one apartment as well (total: 7/10). In contrast, only three out of the ten storeys have apartments on both sides of the buildings (3/10). This equates to only 65% of the potential housing yield of a ten storey building.

9.2.4 The potential housing yield further reduces as the development extends southward along Mt Eden Road. The building height (14.5m) is set from

RL's which reduce as the road falls to the south (from RL80 to RL78 to RL76). The number of floors within each building must reflect this change because the level of the quarry below and the building height above Mt Eden Road are set by the RL's.

9.2.5 With this situation, a nine storey building would deliver 55% or 60% of the potential housing yield of a ten storey building and for eight storeys it is either 50% or 55%, depending on where the floor levels are removed. The yield loss will be less below Mt Eden Road than from above it.

9.2.6 This is not a productive typology. From a developer's point of view, both the depth of the quarry and the apartment buildings' height must be maximised in order to overcome the inefficient design and location of buildings against the side of the quarry. The buildings effectively lose half their potential yield due to these constraints. Fletcher's Masterplan and Concept Plan are dependent upon retaining a 15-17metre deep quarry floor and building nine-to-ten-storey apartment blocks to maximise their housing yield.

9.2.7 Yet the deeper the quarry floor and the greater the buildings' height, the more these generate actual and potential adverse effects on the ONF, open space, amenity and quality of the environment. The scale and location of the 'cascading' apartments generate significant adverse effects. The receiving environment is not able to absorb, sustain or mitigate these significant adverse effects and the impacts on the ONF and wider landscape will be permanent.

9.2.8 The adverse effects result from an inefficient typology and relatively unproductive use of the site. It is the typology which should be modified not the receiving environment.

9.2.9 Since the plan change decision I have been engaged by Puketapapa Local Board to examine and calculate the potential housing yield from the alternative design my practice has prepared (the RRA Plan) compared to FRL's Masterplan (we used 18H-1 which was published after the plan change decision). I estimate FRL's housing yield to be:

i) ≈ 1050 dwellings from the eleven ‘cascading’ apartments

ii) ≈ 520 of these dwellings are produced from five ‘cascading’ apartments on land owned by Fletcher

iii) ≈ 530 of these dwellings are produced from six other ‘cascading’ apartment buildings on land currently owned/administered by Auckland Council

9.2.10 FRL’s provision of only half the yield of apartments from land it owns reveals that FRL require the exchange of land with Auckland Council to reach the overall yield of 1500 dwellings. This confirms to me that FRL’s apartment typology and site arrangement are inefficient.

9.2.11 A more efficient housing typology and compact site arrangement can meet the city’s need for residential intensification and policy imperatives which seek to protect, and where practicable, enhance the values of the ONF.

9.2.12 The buildings at Three Kings do not need to be high rises in order to provide significant intensification of FRL’s land. A more efficient housing typology and compact site arrangement can provide a similar or increased housing yield with half the floor levels and a much smaller use of FRL’s land, as well as provide a considerable amount of open space adjacent to the ONF.

Alternative apartment typology

9.3.1 Fletcher’s apartment buildings could be half their height and number of floor levels if apartments were provided on both sides of each building and with vehicles parked in basement/s below ground level.

9.3.2 This can be achieved by locating the buildings in open space rather than against the quarry walls. The ground level of the quarry could also be raised and sloped to create extra floor level/s on the downward side of apartment blocks, further increasing the potential housing yield. Basements would not need to be excavated from the site but instead would replace a large amount of fill needed to raise the levels across the site.

9.3.3 This arrangement is not dependent upon leaving a deep hole in the ground or building against quarry walls. Instead, it enables the fill level to be raised to a level that achieves the “best fit” with the surrounding topography.

9.3.4 This typology can produce an intensive urban development which is joined to the city plan, contributes to the social fabric of the community and is scaled appropriately to the ONF, open space and the community.

The RRA Plan Housing Yield

9.4.1 As stated, my practice has been engaged by Puketapapa Local Board to “investigate the potential housing yield of an urban and landscape design which builds upon the principles of their Three Kings Plan.”

9.4.2 Potential housing yields were estimated for the RRA Plan as well as intensification for the wider Three Kings Plan area including the town centre and some Housing New Zealand properties. The wider yield is a work in progress so the estimate is provisional until further analysis. The number cited (min. 3000 dwellings) is likely to be a conservative figure.

9.4.3 The RRA Plan (2016) provides housing only on the land that FRL owns and does not include any housing on public land agreed to be exchanged between FRL and Auckland Council.

9.4.4 Our initial analysis reveals the RRA Plan (2016):

i) produces a housing yield of up to 1250 dwellings covering an area of 7.27 hectares (ha) compared to FRL’s stated yield of up to 1500 dwellings covering an area of 13.25 ha
ii) foresees a minimum of 3000 new dwellings being created from intensification of the Three Kings Plan area, including on the FRL site. Neither Auckland Council or Fletcher has investigated the potential yield or other implications from intensification of the wider area
iii) has a building footprint of 2.9 ha compared to FRL’s 4.49 ha
iv) has a road reserve area of 1.97 ha compared to FRL’s 4.59 ha
v) has 13.3 ha of public open space compared to FRL’s 7.83 ha

vi) provides c.1000m² of communal open space per apartment building compared to FRL's zero m²

vii) provides 7 vehicle dispersal points to the surrounding arterial roads compared to FRL's 3

See Appendix 8 for the full report.

9.4.5 My housing yield analysis for both the RRA Plan and Fletcher apartment typology has been independently verified by Jan McCredie who is a recognised expert in apartment design and planning in Australia. Ms McCredie provides a review of her analysis of the housing yield as part of her evidence.

9.4.6 My analysis of these measurements suggests the RRA Plan is more efficient, productive and better connected than the FRL proposal. The RRA Plan provides up to 80% of FRL's overall yield with a much lower residential zoning coverage, building footprint and roading area while at the same time nearly doubling FRL"s proposed area of public open space.

9.4.7 I consider the RRA Plan will enhance the ONF without creating adverse effects on the surrounding community. As a consequence, I believe the RRA Plan's compact urban form is likely to deliver better social and environmental outcomes.

9.4.8 Furthermore, if only FRL's land was developed for housing, then all the dwellings FRL provides on its land added together would still be less than the RRA Plan which uses only part of the FRL site: Riu Precinct (400), SHA (100), five cascading apartment buildings (c.520) and a THAB north of the SHA (≈36) add up to c.1050 dwellings compared to up to 1250 dwellings from the RRA Plan.

9.4.9 This suggests that if a more efficient housing typology and compact site arrangement were adopted for FRL's land then the Riu Precinct would not be necessary for housing and could be replaced with public open space. This arrangement would create significant benefits for the ONF which is adjacent to the Riu Precinct. The RRA Plan provides for this site arrangement. I recognise that there may be other alternative designs that also create a more efficient layout.

Inappropriate use of natural and physical resources

9.5.1 I have already commented upon the inefficiency of Fletcher's apartment typology, the relatively low yield it produces for their site and the consequent need to use adjacent reserve land to improve the yield. I have also assessed the adverse effects from the apartment typology in terms of its scale, extent and location.

9.5.2 The Fletcher masterplan and concept plan require the excavation of a considerable area of Three Kings Reserve which is a volcanic reserve adjacent to the most prominent remaining part of the ONF, Big King Reserve. This excavation conflicts with the protection and where practicable, enhancement of volcanic reserves which are adjacent to or part of an ONF under the RPS.

9.5.3 Firstly, the Barrister Ave and Fyvie Ave bluffs will be lost with Fletcher proposing to build in front of the Barrister Ave bluff with Superlot G, concealing the bluff); and diminished with Fletcher proposing significant modifications to the Fyvie Ave bluff in order to build a universal access ramp to Big King Reserve from Western Park.

9.5.4 Secondly, the Fletcher masterplan will destroy the symmetry and prominence of the bluffs. Fletcher proposes to excavate the whole of the Grahame Breed Drive bluff as part of excavating Southern Reserve back to Grahame Breed Drive. It will then build apartment lots A-04 and A-05 where the bluff stands. The Barrister Ave bluff will be concealed by Superlot G. Furthermore, without the bluffs, the southern end of the quarry is absorbed into the huge space of the quarry. The focus is shifted from the space between the bluffs which are in front of the town centre away towards the east and Mt Eden Road. The structure provided by the volcanic landscape is lost.

9.5.5 Thirdly, these connections and inter-relationships will also be lost.

9.5.6 The subtlety and sensitivity of these residual ONF features and their important inter-relationships have been missed by Fletcher and Council. This may be because to date Fletcher has never provided in evidence an-depth landscape assessment of the existing environment. A previous study by DKO/Surface Design (for the plan change hearing) was confined

to identifying the constraints and limitations of the existing environment which needed to be overcome rather than its qualities which need to be protected and enhanced.

9.5.7 Instead, Fletcher will replace this volcanic landscape with buildings. It gives a prime value to the residential potential of this location and not to protecting and enhancing the residual features of the ONF.

9.5.8 The Decision accepts this approach. It states in 8.3.16: "*the majority of witnesses concluded that the rezoning of this land will enable residential development of a design and intensity that could be appropriately serviced and accommodated within the surrounding environment*."

9.5.9 The Decision gives its Reasons for the Decision (p3):

> *(b) Any actual or potential adverse effects on the environment from the plan change will be less than minor and have been appropriately managed by the modifications we have made to the plan change provisions.*
> *(c) there will be significant positive effects on the environment from the plan change in relation to the enhancement of views and visual connections to Te Tātua a Riukiuta, the opportunity to provide for residential growth adjacent to an existing town centre in a location along major transport corridors, the provision of additional quality open space and sportsfields and the opportunity to create a quality built environment.*

Summary

9.6.1 The Fletcher plan change cannot be accommodated within the existing environment without the significant modification of the existing environment. The Fletcher apartment typology and site arrangement are inefficient and externalise their impacts on the existing environment. This is an inappropriate and inefficient use of the site and an inappropriate and inefficient use of natural and physical resources.

9.6.2 In contrast to the Fletcher masterplan and concept plan, the RRA Plan fits within the volcanic landscape and enables the residual volcanic features from Three Kings Volcano to continue to strongly define the volcanic

landscape and shape the built environment (see Fig. 52-59). I have incorporated this symmetry into the RRA Plan and have planned development centred between these landforms. The potential housing yield from the RRA Plan is approximately 80% of the Fletcher yield and in my opinion will not create adverse effects on the environment.

10 Sightlines

Fletcher plan change

10.1.1 The sightlines the plan change provisions have identified are effectively gaps in the Fletcher masterplan rather than especially created for viewing Big King. The sightlines do not provide new views to what exists currently.

10.1.2 The only view Fletcher has modified its design to include, the plaza at the Grahame Breed Drive end of the site, is public reserve land which enjoys much wider and better views of Big King (if and when the viewing area is cleaned up) than what will be provided by Fletcher. I understand Fletcher's civic plaza is publicly accessible rather than public so full access may be constrained or controlled in future.

10.1.3 The other sightlines provided are mostly compromised by the proximity and scale of apartment buildings.

10.1.4 One of these, View 2 from the boundary with Mt Eden Road, is shown to be already infringed by Building A-09. Although Council indicates infringement of the sightlines will be a discretionary activity, it appears Fletcher will seek from Council it will not enforce the sightline rule rather than the building be compromised.

10.1.5 View 5 is a view between A-01 and Superlot G. This view has little if any value. If this sightline is changed to below on the extension to Grahame Breed Drive, it will also have limited value. Both positions are coincidental and opportunistic rather than planned.

10.1.6 Providing a number of views is meaningless if the quality of them is poor.

RRA Plan

10.2.1 The RRA Plan proposes only two sightlines (Fig. 60). One of the two sightlines is from the present car park terrace in front of Grahame Breed Drive. This position enjoys the best views of Big King. The terrace offers a very wide viewing plane.

10.2.2 The other viewing position is not a point; rather it is a viewing line or plane which extends along the whole length of the infrastructure terrace in front of the open space overlooking Big King. I have designed the terrace and street here for this purpose. The terrace is the place to stand in front of the maunga.

10.2.3 The RRA Plan also offers unrestricted views to the volcanic landscape from each street off Mt Eden Road. The view of the volcanic landscape changes with each street.

10.2.4 I foresee only one potential viewshaft in this area in the future. The main access to Antipodean's property off Mt Albert Road offers an excellent view aligned with Maungawhau. If this private road was provided to Council at any time or as part of the town centre redevelopment, it would open up the possibility of a dedicated viewshaft. The RRA Plan has planned for this eventuality.

Looking from Big King

10.3.1 I consider views from the public path which runs from Duke Street to Western Park above the quarry are important. The vegetation along this line (shrubby weeds like cotoneaster) should be managed so that the current views which are largely unrestricted are maintained (Fig. 13).

10.3.2 The actual or potential views from the summit need further review. The reserve needs to prepare a vegetation management plan in which views outwards are considered in an integrated way with other management concerns.

10.3.3 The design of any development in the quarry should consider the views of the development from public walkways on Big King Reserve. I believe the Fletcher plan change will provide poor viewing experiences which I

have already discussed in my evidence. A poor design outcome is not reason to recommend more planting on the maunga to screen the development.

11 Consideration of alternatives

11.1.1 In my opinion, the Applicant has not demonstrated the plan change is the most appropriate way to achieve the concerns outlined above. Fletcher has not identified and tested reasonably practicable options for achieving the objectives. Nor has it adequately assessed the efficiency and effectiveness of these alternatives. This is especially important when the plan change is adjacent to an Outstanding Natural Feature and Regionally Significant Volcanic Feature and generates significant adverse effects.

11.1.2 Successive stages of Fletcher's masterplan have failed to adequately consider alternative methods which would lead to acceptable RMA Part 2 outcomes. Fletcher's approach appears to maximise the development opportunity of the quarry without adequate consideration of the values of the ONF or how the final fill level might best relate to the surrounding topography, open space network and residential community.

11.1.3 Precedents exist for appropriate development of land adjacent to or surrounding volcanic ONF's in Auckland. I have illustrated many examples in my evidence (Fig. 33-40) which included small-scaled buildings on private land (typically single family houses) and recreational reserves on public land. Big King Reserve is relatively small when compared to other volcanic reserves in Auckland. It is also a very small remnant of a much larger volcanic feature, the Three Kings Volcano. Both shortcomings are due to the proximity and size of the quarry. Yet the rehabilitation of the quarry offers the potential to significantly increase its area and enhance its values, thus correcting the decades of exploitation of its resources.

Fill level

11.2.1 Fletcher provided an Alternative Elevated Proposal (Master Plan 15H-1 Appendix II) at the plan change hearing as a demonstration of the rigour of its analysis; as a gauge to test the validity of the proposal; and as a

benchmark for the development potential of any proposal.

11.2.2 In my opinion, this Alternative Elevated Proposal does not constitute an adequate consideration of alternatives and nor is it an adequate demonstration of rigorous analysis or development potential.

11.2.3 Fletcher used an identical street network and building pattern as its masterplan for the consideration of an alternative proposal which fills the quarry to the top of Mt Eden Road. This is a deficient methodology for testing both proposals.

11.2.4 A filled quarry would enable a completely different typology which does not need long and circuitous roads leading into the complex. One would also expect a finer grain and more permeable street pattern because linkages to the surroundings are more direct and easily accessible.

11.2.5 Fletcher should have been able to develop reasonably practicable options which tested the ground levels and connections between people and places which different fill levels enable. Although this was the very point of Condition 77 from EC214 (2008), it appears Fletcher or Council have not undertaken this work.

11.2.6 Fletcher states that the Alternative Elevated Proposal does not enable a development outcome which is “required to maintain housing density.” Fletcher uses the quarry development proposal as a benchmark when it does not comply with, in fact greatly exceeds, the Residential 8b zoning for height.

11.2.7 My analysis of the ‘cascading’ apartment typology has revealed it is inefficient and relatively unproductive in yield in comparison to alternative apartment typologies. The ‘cascading’ apartment typology is an inefficient use of the site, an inefficient use of the natural and physical resources which are unique to the site and creates unnecessary and inappropriate adverse effects.

11.2.8 From a development point of view, both the depth of the quarry and building heights must be maximised in order to overcome the inefficient design and location of buildings set against the side of the quarry. Yet the deeper the quarry floor and greater these buildings’ height (nine to ten

storeys), the more these generate actual and potential adverse effects on the ONF, open space, amenity and quality of the environment.

11.2.9 The buildings at Three Kings do not need to be high rises in order to provide significant intensification of Fletcher's land. A more efficient housing typology and compact site arrangement can provide a similar or increased housing yield with half the floor levels and a much smaller use of their land, as well as provide a considerable amount of open space adjacent to the ONF.

11.2.10 A more efficient housing typology and compact site arrangement can meet the city's need for residential intensification and satisfy policy imperatives which seek to protect, and where practicable, enhance the values of the ONF.

11.2.11 It is possible the principles and strategies for the masterplan can be achieved by other means. In reviewing each principle and strategy I came to the conclusion they can be achieved with alternative options, including options which fill the quarry:

i) Environment/Biodiversity: This can be achieved by alternatives, including options which fill the quarry
ii) Water: This can be achieved by alternatives, including options which fill the quarry
iii) Recreation and Community Facilities: This can be achieved and improved upon by alternatives, including options which fill the quarry
iv) Transport, Access and Circulation: This can be achieved and improved upon by alternatives, including options which fill the quarry
v) Culture and Heritage: Here I acknowledge the constructive relationship developed between the Applicant and iwi representatives. I personally know the importance of this relationship and do not underestimate its value. I have read Rau Hoskins' evidence for the PC372 hearings and note his use of and the support for Te Aranga Māori Design Principles in the proposal. Based upon my professional experience and my past collaborative work with Ngati Whatua o Orakei, I sincerely believe the same principles could be adopted for alternatives, including options

which fill the quarry. For any proposal however further information and input should be sought from mana whenua around landform and design

vi) Character and Visual Amenity: This can be achieved by alternatives, including options which fill the quarry

vii) Building and Architecture: This can be achieved and improved upon by alternatives, including options which fill the quarry

RRA Plan

11.3.1 My practice's alternative proposal (the RRA Plan) is attached as Appendix 9 to my evidence (see Fig 61-70 for a selection). Richard Reid & Associates was engaged by the Puketapapa Local Board in 2015 and 2016 respectively to develop an alternative design to the Fletcher masterplan which builds upon the principles, objectives and key moves of the Three Kings Plan. The RRA Plan has endeavoured to:

i) create an appropriate relationship with the Three Kings Volcano ONF and avoid adverse effects

ii) protect and enhance Big King Reserve's relationships with the wider volcanic landscape features associated with the Three Kings Volcano

iii) enhance the ONF's multiple values by providing significant open space opportunities and a suitable and efficient open space network

iv) build upon the underlying structure of the volcanic landscape and city plan in an integrated development of the quarry with its surrounds

v) provide significant residential intensification efficiently

vi) support Te Aranga Māori Design Principles

vii) future-proof the potential requirement for additional recreational and community activities through residential intensification of the Three Kings area

11.3.2 The key theme of the RRA Plan (2015) was "People around the Maunga". Residential development, roads and open space are planned <u>around</u> the ONF with the focus on the ONF rather than filling the space of the quarry. This reflects Key Move 5 from the Three Kings Plan: "Develop a sense of local character and identity around the presence of Te Tātua a Riukiuta".

This was achieved by adopting the following key moves:

i) linking new open space adjacent to the ONF with Western Park to maximise the opportunities for enhancing the ONF and Three Kings Reserve

ii) linking Smallfield Avenue to Grahame Breed Drive and extending Grahame Breed Drive northwards through the FRL site to join the western and eastern sides of the Three Kings residential areas together and offer the most efficient and effective form of integration for all components of the Three Kings area, including the Town Centre. This will strengthen the town centre's relationship with these areas and maximise business opportunities from them

iii) create a finer grain for both new and existing areas through improved connections and dispersal points to Mt Albert Road and Mt Eden Road

iv) use EC214 Condition 77 as the basis for investigating raising the fill level of the quarry, including raising the fill level of the southern council reserve to bring it closer to the level of the town centre, Western Park and Mt Eden Road.

Richard Reid

06 May 2015