Before a Board of Inquiry
MacKays to Peka Peka Expressway Proposal

under:	the Resource Management Act 1991
in the matter of:	Notice of requirement for designation and resource consent applications by the NZ Transport Agency for the MacKays to Peka Peka Expressway Proposal
applicant:	**NZ Transport Agency** *Requiring Authority*

Statement of evidence of **Marc Baily** (Urban Planning) for the NZ Transport Agency

Dated: 7 September 2012

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STATEMENT OF EVIDENCE OF MARC BAILY FOR THE NZ TRANSPORT AGENCY

QUALIFICATIONS AND EXPERIENCE

1 My full name is Marc Nicholas Baily.

2 I am a Director of Boffa Miskell and an urban planner with more than 20 years in practice in the Wellington area. I have a Bachelor of Regional Planning (Massey University; 1986) and Certificate of Proficiency in Urban Design (Victoria University School of Architecture; 1996). I have completed two urban design Executive Education courses at the Harvard University Graduate School of Design (2003 and 2005). I am a Member of the New Zealand Planning Institute and have been elected by my peers to the Committee of the New Zealand Urban Design Forum.

3 I have assisted clients with urban developments throughout the lower North and upper South Islands and have developed, as a result, an understanding of the conditions that influence the design of residential, commercial and industrial developments. I have assisted Councils throughout New Zealand to prepare structure plans for urban growth areas, which requires an understanding of the interaction of development activities and the statutory planning processes that both enable and seek to manage such activities.

4 I have provided urban design inputs to several NZ Transport Agency (*NZTA*) projects, including the preparation of the Urban and Landscape Design Framework for the State highway (*SH2*) interchange with SH58 (Haywards), and the design options for the upgrading of the interchanges at the Melling and Kennedy-Good Bridges on SH2 in Lower Hutt.

5 Both projects included design consideration of grade separated interchanges (i.e. bridges), integration with an urban context and assessment of the way in which people move from one side of the state highway corridor to the other. I am currently assisting the NZTA with rewriting its Bridge Manual to incorporate improved urban design processes and outcomes.

6 I am experienced with addressing the city scale spatial interrelationships of land use and transportation as well as conditions required to make a healthy, attractive and economically sustainable urban environment in response to significant change. As an example of this, I note that I led the urban planning work for the development of the blueprint for the rebuilding of Christchurch's central city for the Canterbury Earthquake Recovery Authority.

7 My evidence is given in support of the Notice of Requirement (*NoR*) and applications for resource consent lodged with the Environmental

Protection Authority (*EPA*) by the NZTA for the construction, maintenance and operation of the MacKays to Peka Peka Expressway (*the Project*).

8 I am familiar with the area that the Project covers and the State highway and local roading network in the vicinity of the Project.

9 I am the author of the Urban and Landscape Design Framework (*the ULDF*),[1] and of the Assessment of Urban Planning and Design Effects Technical Report (*TR6*),[2] which formed part of the Assessment of Environmental Effects (*AEE)* lodged in support of the Project.

10 I have read the Code of Conduct for Expert Witnesses as contained in the Environment Court Consolidated Practice Note (2011), and I agree to comply with it as if this Inquiry were before the Environment Court. My qualifications as an expert are set out above. I confirm that the issues addressed in this brief of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

SCOPE OF EVIDENCE

11 My evidence will deal with the following:

11.1 Background and role;

11.2 Urban planning and design principles for the Project;

11.3 The development and role of the ULDF;

11.4 Urban design effects of the Project on:

(a) Amenity Values;

(b) Connectivity; and

(c) Urban Form and Land Use.

11.5 Response to submissions;

11.6 Response to section 149(3) reports;

11.7 Proposed conditions; and

11.8 Conclusions.

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[1] Technical Report 5.

[2] Technical Report 6.

EXECUTIVE SUMMARY

12 My opinion is that the Project has been designed from the outset of our involvement to respond to best practice in urban design (detail) and urban planning (wider spatial) principles. The practice of urban design and planning has had a significant and meaningful role throughout the Project development and this is reflected in the design responses.

13 In my view, suffcient design work has been undertaken and provided in the lodged documentation to satisfy requirements for Outline Plan Waiver,[3] as has been sought. The Project's design development that is to follow has clear guidance from the ULDF as to what matters remain to be attended to. Conditions that reference the ULDF are important to ensure these matters are attended to and incorporated into what is typically required for site specific aspects of the Project.

14 It is my evidence that the proposed Expressway will provide people and communities with improved regional and sub-regional connectivity benefits, particularly between Paraparaumu and Waikanae, being the two major urban areas of the Kāpiti District. This benefit is described in detail in the evidence of **Mr Andrew Murray**.

15 Connectivity (and consequent amenity) is also improved for pedestrians and cyclists by the provision of a walking and cycling path, parallel to the Expressway, with good connections to local roads.

16 The local area east to west connectivity provided by the existing local roads will be maintained or reinstated. The bridging (of the proposed Expressway over the local roads) that enables this connectivity has been designed to maintain and in some instances improve the quality of the amenity at these locations for local users. In addition, two new connections will be provided by pedestrian and cycling bridges at locations where the existing local roads are spaced at distance.

17 Particular attention will be required to the site specific developed design of the interchanges at Kāpiti Road and Te Moana Road, where in each case the on and off ramps connect with local roads. These intersections need to (and will) provide for local walking and cycling movements. There is the breadth of space at Te Moana Road and traffic signals at Kāpiti Road to enable good outcomes in the detailed design for the Project.

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[3] However, I note that outline plan waiver is not being sought for the two pedestrian bridges proposed as part of the Project.

18 In my opinion, the quality of the environment and amenity at the town centres of Paraparaumu and Waikanae will be enhanced by the removal of the highway from these centres. The relocation of the highway allows improved interaction between the east and west sides of the two centres, including people moving to the public transport provided at the railway stations.

19 The Expressway's development will allow the existing SH1 road corridor to be reorganised so the surface provides for cycle and walking along its length, amenity improvements such as trees, more sustainable stormwater management systems, as well as more frequent accesses (with better capacity utilisation of the adjoining land) and better access safety for those already living or operating businesses on the highway. Any future changes to the existing SH1 will be determined jointly by NZTA and the Kapiti Coast District Council (*KCDC*), and in consultation with the Kapiti community, following the planned revocation of the existing SH1's State highway status.

20 Some economic adjustment is expected from the loss of through traffic business in these centres, which is addressed in the evidence of **Mr Michael Copeland**. However, there is also an opportunity for improved environmental outcomes and amenity along the existing highway, including through the town centres.

21 In my opinion, considering the existing form of both the Waikanae and Paraparaumu town centres, the urban form and growth opportunities and the effects on existing development along the State highway edges means that an Expressway corridor (in the location proposed) is the appropriate response in urban planning and design terms. I consider this preferrable to the alternatives considered.

22 There will be effects from the Project in the area north of Waikanae where much of the district's urban growth is proposed. The effects will be the loss of some growth area due to the footprint of the Project designation. The growth area still maintains a substantial potential for redevelopment however, and with replanning it can respond to the Expressway with a successful revised layout.

23 Consideration has been given to the future movement needs of the northern growth areas across the Expressway. It is my opinion that, with the proposed Smithfield Road and Ngarara Road overbridges and connections back to Te Moana Road in place, the connectivity provided is sufficient.

24 I have read the submissions lodged on the Project relevant to my area of expertise. Nothing raised in those submissions causes me to depart from the conclusions reached in my technical assessment of the Project, as presented in the ULDF and Technical Report 16.

BACKGROUND AND ROLE

2009 Urban Design Panel

25 By way of background, I note that in December 2009 I was involved as one of a group of four urban designers providing an independant review to the NZTA about the then options for a Kapiti expressway.

26 The review was undertaken at a high level (i.e. with little detail) over two days. The conclusion of the panel was that an eastern option that followed the rail corridor would be preferable. I note that the panel only considered urban design considerations.

27 The panel's review and weighing of the advantages and disadvantages of the railway corridor option was contingent on significant factors, including that:

27.1 In addition to an expressway being constructed along the rail corridor, there would be construction of the whole of the Western Link Road (*WLR*);

27.2 Detailed urban and infrastructure design to mitigate impacts at existing town centres (which would have been at a considerable cost) would be undertaken; and

27.3 The WLR would be revised to encourage multi-modal use, improved urban edge conditions and local activity centres along it to generate a new urban form.

28 Also of note is that:

28.1 The review did not recognise the social and economic cost for the significantly larger number of residential and commercial properties that would be required for the rail route option, as compared to a 'Sandhills' (now the preferred option) or WLR option;

28.2 At that time, the 'Sandhills' option involved only one interchange (at Otaihanga) and thus provided far less connectivity than that proposed between the centres as part of this Expressway Project;

28.3 There was no design development within the 'Sandhills' route that secured, for example, opportunities for town centre improvements, walking and cycling infrastructure, retention of wetlands and local road and bridge connections;

28.4 The 'Sandhills' route option proposed at that time only followed the existing WLR designation in part (i.e. from north of Paraparaumu). It used much less of the existing designated land, as compared to this Project. There are

resulting benefits of the approach adopted here including, for example, providing connectivity at the west side of the town centre at Paraparaumu; and

28.5 There was no scope to suggest alternative options or option improvements within the review.

29 In summary, the design for the now proposed Project route is considerably different in nature, to that examined by the panel in 2009. Furthermore, the support given to the rail line corridor option was contingent on several relatively extreme factors, in terms of their cost implications and the District's urban planning.

Involvement in the current Project

30 Turning now to the current Expressway Project, I was the author of the ULDF and coordinated the inputs of the other urban and landscape experts into this document.

31 As part of the preparation of the ULDF, I liaised with the NZTA's Urban Design advisors and teams undertaking urban and landscape design for other Wellington Roads of National Significance (*RoNS*) projects to ensure a coordinated approach and consistency in design principles.

32 I was involved from the outset of the Project in workshops to determine route options and interchange locations and the assessment of these through the multi-criteria assessment (*MCA*), which enabled many potential adverse urban design and planning effects to be avoided.

33 I developed a method - the Local Area Movement Survey (*LAMS*) technique - for understanding the way in which local people move about the district by walking, cycling and horse riding.

34 I also worked closely with Boffa Miskell GIS and visualisation specialists to model working graphic representations of the structures being tested as options. This has enabled a good understanding of the effects of the structures on the quality of the environment and the amenity of the locations where these structures are proposed to be located.

35 This modelling was used throughout Project development, to ensure that potential effects could be addressed through the design process. The Project, as lodged, accordingly avoids many effects which could otherwise have arisen.

36 I also worked closely with the landscape architects and bridge architects in the design of the local road crossing points to ensure the bridge and abutment designs will provide good quality environments.

37 I have been involved in preparing the consultation materials and in all of the community engagement "expos". I have also attended several meetings with special interest groups and fed back concerns and ideas into the design process, which have been addressed as appropriate.

38 These included the groups involved in the management of Queen Elizabeth Park regarding cycleway provision, Kāpiti Coast District Council (KCDC)'s walking and cycling reference group regarding the proposed cycle and walkway and its design, Waikanae Christian Holiday Camp (El Rancho) regarding the Expressway proximity and mitigation, and the Waikanae On One group regarding the interaction of the Expressway with the Te Moana Road area.

URBAN PLANNING AND DESIGN PRINCIPLES

39 The terms 'urban planning' and 'urban design' are not used in the Resource Management Act (RMA). However, in my understanding, urban planning and design matters are relevant considerations under Part 2 of the RMA.

40 Specifically the urban planning and design approach taken in the development of the Project can have relevance in each of the following respects:

40.1 In considering how effectively the Project assists to enable people and communities to provide for their social, economic, and cultural well being and for their health and safety, while sustaining resources, safeguarding life supporting elements, and avoiding, remedying or mitigating effects (s5);

40.2 As a factor in assessing whether the Project represents an efficient use and development of resources (s7)(b);

40.3 As a factor in assessing whether the Project would assist in the maintenance and enhancement of amenity values (s7(c)) – that is the qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes;

40.4 Similarly as a factor in assessing whether the Project will contribute to the maintenance and enhancement of the quality of the environment (s7(f)) – including a range of attributes that relate to the urban environment, such as amenity, accessibility and connectivity.

41 I have developed with the design team a set of urban design principles for the Project that reflect NZTA policy[4] and the relevant provisions of the KCDC District Plan. These are described in full in the ULDF (pages 6-12) and the structure of that document is outlined in the following section of my evidence.[5]

42 The focus of my evidence is an assessment of whether the Project (with the ULDF measures in place), satisfies the RMA Part 2 matters I have just described in relation to urban design and planning.

THE ULDF

43 The ULDF is a Technical Report prepared to demonstrate how the Project fulfils the NZTA's Urban Design policy. The overall purpose of the ULDF is to ensure that the urban and landscape design concepts of the Project are appropriately defined, developed and implemented.

44 The ULDF is not an assessment of the effects of the Project in terms of the requirements of the RMA. Although the ULDF is cognisant of RMA requirements, a separate Assessment of Urban Planning and Design Effects (i.e. TR6) has been prepared to address the specific matters relevant to consideration under the RMA. A ULDF is prepared for all NZTA development projects of any reasonable scale.

45 To ensure the Project concepts are developed and implemented, the ULDF describes:

45.1 Design implications which are important considerations for the Project;

45.2 Design objectives which also relate to the other Wellington RONS projects; and

45.3 Design principles that relate to specific elements of the Project (e.g. bridge design landscape design, noise design).

46 In my opinion, these design objectives and principles have been already provided for in the Project's design. In my view, a sufficient level of detail has been provided to satisfy the requirements for Outline Plan Waiver (under section 176A(2)(c) of the RMA).[6] Management Plan processes proposed for the Project are intended to enable necessary development and refinement of the Project's

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[4] NZTA Environmental and Social Responsibility Policy (2011), and Urban Design Policy (2007). NZTA is also a signatory to the New Zealand Urban Design Protocol.

[5] The Design Principles for the Project are set out at sections 5.7 to 5.13 of the ULDF.

[6] Although, as noted elsewhere, an outline plan will be sought for the two pedestrian bridges proposed as part of the Project.

design to address site-specific aspects, including through input from KCDC.

47 Many of the principles though will need to be further considered in the Project's developed and detailed design phases. It is critical at this time is to ensure that the Project's parameters (through conditions and reference to the ULDF) have sufficient breadth to see these principles realised, recognising that the principles will need to be integrated with other discipline inputs. I have proposed a framework for a condition which will govern further refinement of the design to reflect the ULDF, during the Project's developed design phase. I suggest that conferencing with KCDC could determine the exact wording of that condition. This would include the best format of documentation to describe the developed design outcomes and how they represent the ULDF principles.

EFFECTS ASSESSMENT

Amenity values

48 Amenity values are defined in the RMA to mean those "*natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes*".

49 In urban design terms, I have concentrated on the effects of the Project in relation to:

49.1 The pleasantness of local road and other east-west links (such as Waikanae River and Wharemauku Stream), and at town centres where people come together for social and cultural reasons;

49.2 The aesthetic coherence of Expressway structures and the way in which these are designed;

49.3 The recreational attributes in regard to horse riding (which is a significant recreational activity in Kāpiti), cycling and walking and how provision can be made for these activities; and

49.4 The experience of Expressway users in terms of appreciation of its pleasantness, aesthetic coherence and cultural and recreational attributes.

50 There are of course close associations in these matters with noise, cultural, social and visual effects. These effects are addressed by other experts respectively being **Ms Siiri Wilkening**, **Mr Amos Kamo**, **Ms Julie Meade Rose**, and **Mr Boyden Evans**.

Local Road and East-West Crossings

51 As described in detail in TR6, the amenity at the many local road crossings has been very carefully considered.[7] The consideration of alternatives during the scheme design process, in particular as to the advantages and disadvantages of having the Expressway run over or under local roads, has been well canvassed. I am of the opinion that the most appropriate configuration has been proposed.

52 The range of benefits which have influenced the choice of configuration include the:

52.1 Maintenance of existing local road levels which means walkers, cyclists and other active mode users do not have to make a 6 metre level change (2 storey building) at all the crossing points to get over the Expressway;

52.2 Use of the existing landform on which to locate the Expressway, given that in many instances the corridor has a dune topography and so the land is naturally higher than the surrounding area which has been levelled by urban development or where road 'cut throughs' have occurred (e.g. Raumati Road, Mazengarb Road);

52.3 Maintenance of the existing local road pattern and form which reflects existing character; and

52.4 Maintenance of access to the properties which front the local roads, would not be possible if the local roads went up and over the Expressway. Significantly additional widths of existing properties frontages along the local roads would need to be acquired in order to provide parallel access road driveways to existing residential and commercial properties.

53 The key to a successful urban design outcome will be in the quality of the spaces beneath the bridges (i.e. the bridge space where the local roads cross under the Expressway). The design proposal (described in the ULDF (sections 5.7 and 5.8)):

53.1 Enables light to reach the space below the bridges where there are higher pedestrian counts;

53.2 Has abutments positioned to provide a sense of space;

53.3 Keeps bridge piers out of the way of the walking path;

53.4 Has bridge forms which are aesthetically pleasing;

53.5 Keeps direct line of sight through and to the local road, and

[7] Technical Report 6, section 6.2.1.

53.6 Treats the materiality of the spaces carefully.

54 With these design measures in place, I am of the view that these crossings will be safe and people will continue to comfortably use the local roads to move east-west across the Expressway corridor.

Town centres

55 The town centres at Waikanae and Paraparaumu have grown, as many centres have historically done, around an intersection point on a transport route. For both centres, that intersection point is between SH1 and the local road connections west to what were historically holiday settlements on the coast.

56 As the highway has become busier and urban growth has occurred, the centres have expanded, but the amenity of those centres has been reduced.

57 This amenity reduction has been due in large part to traffic congestion and highway changes needed to address this, so leading to increased barriers to movement across the highway to the destinations on each side of the highway (such as the railway stations), and the loss of pleasantness in the public environment as a place for social interaction and other community functions.

58 The challenging environment generated by the at-grade highway has also tended to influence the quality of the adjoining built environment. Large scale signage, traffic control structures, surface car parking areas, a lack of green infrastructure (such as trees), and low quality buildings are typical.

59 The Project creates a significant opportunity to rehabilitate the town centre areas currently given over to high volume traffic movement, to make them more comfortable places and to improve east to west connections across these centres.[8] The same opportunities do not exist from alternatives, such as the upgrading of the existing SH1 to operate as an Expressway or the development of the WLR. In either case, the existing SH1 would continue to present a challenging urban environment and poor quality town centre conditions as its capacity for moving traffic would need to be maintained at the higher levels.

60 As **Mr Murray** describes in his evidence, the development of a lesser WLR would not address the wider issues of SH1 traffic capacity. Substantial upgrading to the State highway would still be required including grade separated interchanges and on and off

[8] The urban design implications of the Project on the town centres and the existing State highway through them are discussed in Technical Report 6, Sections 6.1.3 to 6.1.6 and Figures 6 to 9.

ramps in very constrained locations and with substantial effects on surrounding properties and further loss of amenity.

61 Once the Expressway becomes the new SH1 alignment, and the existing SH1 is revoked to become a local road, opportunities for the town centres' redesign to generate major improvements will open up. These opportunities could include utilisation of existing road width for cycle lanes, tree planting, improved connections between railway stations and commercial, retail and civic areas, opportunities for better access to existing properties, improvement potential for new edge development, and residential intensification. None of these could occur in such a positive way without the Expressway being located on the new route, as proposed. Any changes to the ultimate form of the existing SH1 will be a matter for KCDC, following revocation of the current SH1's current State highway status. I note that revocation should it be recommended by the NZTA, is a decision for the Chief Executive of the Ministry of Transport.

62 Although changing the location of the main highway route will result in changed business conditions, this is expected to recalibrate over time as the evidence of **Mr Copeland** explains. The proposed interchange at Kāpiti Road will mean that the (relocated) State highway will continue to serve the Paraparaumu town centre from the west side. The proposed interchange at Waikanae is more distant from that town centre. However, the Waikanae town centre will continue to operate as a destination for, in particular, local people to access the supermarket and other retail, civic and public facilities.

63 The current SH1 can, in time, be retrofitted to take on a more informal character, such that with appropriate legibility and signage orientation at Peka Peka and Poplar Avenue for example, it offers local people and visitors to the region a tourist route experience. Development for new tourist or local benefit activities along the current State highway in the existing urban areas can be made possible by improved frontage access and improved overall amenity that is currently not feasible.

Structures

64 The bridges and other structures which are associated with the Expressway will all influence the amenity of the area. The visual impacts of these structures are addressed by the evidence of **Mr Evans**.

65 In urban design terms, the bridges and structures have been considered for their propensity to contribute to the aesthetic coherence, identity and 'comfort' for the users of the local road or off road corridors (e.g. pedestrians or cyclists).

66 This 'comfort' (i.e. feelings of safety and pleasantness) is related to connectivity in that, if those places where the Expressway crosses the east to west local network feel unsafe, or unpleasant, then this may inhibit the willingness of people to cross.

67 The bridge designs have been conceptualised with the assistance of a bridge architect[9] with the primary objective of ensuring that the spaces beneath the bridges work for people who are walking and cycling or driving on the local roads. The amenity of the Expressway users has also been considered (as I will expand on shortly), but the principle has been that, at bridge crossings, first priority has been given to amenity for people on the local roads.

68 This has been achieved by considering the design of the bridges, abutments and the spaces beneath as one. This has enabled a visually integrated design to be produced.[10]

69 Noise mitigation structures can also make it problematic to achieve good urban design outcomes for roading projects. For this Project, I collaborated with **Ms Wilkening**, in assessing the urban design effects of the various noise mitigation options she initially proposed. I worked with her to select best practicable options that mitigated noise, whilst also enabling the best practicable urban design outcome.

70 Accordingly, the Project utilises elevated ground to create 'naturally' shaped bunds to buffer noise wherever possible.[11] Where this is not possible and "engineered" noise structures are needed, these will be integrated into the landscape through placement of earth on the side away from the road, and planting.[12] Noise fences on some boundaries will be required (near Kāpiti Road mostly) and these will be timber and of a normal residential type in appearance.[13]

71 Design development and refinement will need to focus on ensuring that these structures are carefully considered especially where the spaces between the noise structures and Expressway are publically accessible. These spaces need to be aesthetically pleasing as well as safe. The ULDF principles direct attention to this matter (sections 5.9 and 5.10).

72 It is also important that Expressway user amenity is considered as this will be the main route used by people driving in and out of

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9 Dean McKenzie of Warren and Mahoney Architects.

10 Technical Report 6, Section 6.2.1(d).

11 Technical Report 6, Section 6.2.3.

12 With the exception of the 1.1m height concrete safety barriers on bridges.

13 Technical Report 6, Section 6.2.3.

Wellington.[14] The Expressway is one section in a much longer highway route that will eventually be developed through the RoNS programme. In recognition of this, there has been design co-ordination with the urban designers who are responsible for the other sections of the Wellington RoNs. Consistency in median widths and furniture types has been developed.

73 **Mr Evans** will describe in his evidence the approach to the landscape along the route which will be a significant part of the experience for Expressway users.

Connectivity

74 For this urban planning and design assessment, connectivity means the physical conditions facilitating access between the multiple places people need to access for their use and enjoyment of the area.

75 A spatial understanding of the common routes used by pedestrians and cyclists to move about the district has been gained by the LAMS and more traditional counting methods. It is clear from this work that the east to west local roads and off road corridors (e.g. Waikanae River and Wharemauku Stream) are important routes for local connectivity. It is also clear that connectivity between Waikanae and Paraparaumu is severely constrained by the existing highway and river bridge being the only vehicular connection north-south.

76 I consider that physical connectivity will be enhanced by the Expressway.[15] This includes the connectivity gains for walkers and cyclists using the new cycle and walking path that will extend through Queen Elizabeth Park to Paekakariki (as a result of a separate Project Agreement between the NZTA, KCDC and GWRC) and along the length of the Project to Peka Peka Road. The Expressway has been carefully designed to ensure that at ground level the current local street network and off-road paths can continue to operate as they do now.[16]

77 The most sensitive locations for connectivity are at Kāpiti Road and Te Moana Road where the interchange on and off ramps join the local road network. Site specific design refinement will be required to ensure these connections enable good functionality for walking

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[14] Technical Report 6, Section 6.2.5.

[15] Technical Report 6, Section 6.3.

[16] The one exception to this is Leinster Avenue, which will lose a vehicular direct connection to the existing State highway (vehicles need to route via Poplar Ave). However, pedestrian and cycle links will continue to be provided to the new cycle/walking path on the west side of the Expressway. Furthermore, there is a Project Agreement between KCDC and NZTA regarding a future road bridge from the Leinster Ave area to connect to the current State highway, if warranted by urbanisation of rural land here in the future.

and cycling across them in accordance with the provisions of the ULDF (sections 5.7, 5.8 and 5.12). The traffic lights at Kāpiti Road will be helpful in this regard.

78 The Te Moana roundabout presents challenges to walking and cycling, but there is sufficient space to work a solution. The design development and refinement of the roundabout will need to be integrated with the Te Moana walking and cycle paths to ensure that the local road walking and cycle users are safe and uninhibited by the existing and entering Expressway traffic.

79 Particular consideration should be given to the north side of Te Moana Road as having a safe walking and cycle path as this is the side favoured by people currently moving through the area currently, including school children. This is noted in the ULDF (section 6.4).

80 The addition of a new bridge crossing of the Waikanae River provides significantly better north–south vehicular connectivity not only for the region as a whole, but also for the two local communities of Waikanae and Paraparaumu. The new bridge crossing includes a combined walking and cycling path, which will provide significant benefits to the district's pedestrians and cyclists. Its width (3m) is sufficient to facilitate easy two way passage.

81 The bridge with its additional walking and cycling path section also adds a further option for cyclists, in particular those moving the moderate distances between Waikanae and the amenities provided to the south of the River (such as colleges and shops).

82 It is noted that an existing cycle and walking bridge in the lower reaches of the Waikanae River is well used for this 'commuting' purpose and noticeably for college students. For the cyclists or any pedestrians undertaking the mid-range distance movements between Waikanae and Paraparaumu, the new bridge is likely to provide higher levels of benefit as it will seamlessly connect to the cycle path that parallels the Expressway. This allows cyclists the option to avoid the many more road intersections, parked cars, and on road vehicle traffic of the local road network in moving between the two centres.

83 The decision to include full interchanges at Waikanae and Paraparaumu was an important one in urban planning terms as it has enhanced direct vehicular connection of people between the two urban centres, generating local as well as regional and national benefits. Alternatives were considered including a single interchange mid-way (at Otaihanga Road for example), but although cheaper, this would not have provided the same connectivity benefits.

84 The current pattern of east-west local road distribution is an historical function of the holiday settlement locations strung along the coast. In some locations, there is considerable distance between these east-west roads which currently acts to limit pedestrian movement through the local areas. The Project will provide a pedestrian bridge from Makarini Street to Te Roto Drive in the Kāpiti Road to Mazengarb Road section of the Project route, to secure greater local connectivity than currently exists.

85 There are informal pathways in some places across the designation corridor in this same section. The Makarini Street bridge substitutes these with one mid-block connection. It is noted that the informal pathways are opportunistic and have no long term or permanent status. Typically these connections have formed in response to land uses changing over time.

86 As noted, there are potentially other east-west connections that will aid east-west connectivity for future urbanisation in the north Waikanae area and at Leinster Avenue. At the appropriate time, these can be investigated and provided for by the relevant parties involved, as appropriate.

Urban Form and Land use

87 Placing a new and substantial infrastructure intervention such as an Expressway through an existing urban area will inevitably have urban planning effects.

88 In my opinion, the potential adverse effects on urban form have been considered, and then avoided, remedied or mitigated in the Project's design. I also consider that the Project will have some positive effects for the District and its future.

89 There is a key point in the consideration of the Project's effects on urban form. This is that the current interaction of SH1 and the urban areas of Parapauarumu and Waikanae is not working well. The functionality of the existing highway and the effects on the urban areas through which it passes, are heavily compromised.

90 The alternative routes considered for the highway have been well canvassed and are described in evidence by **Mr Roderick James**. The proposed Expressway generally follows a long designated route for a new road (i.e. the WLR and predecessors).

91 The nature of the proposed road within the designated route has changed in its form several times since its initial placement and meanwhile the urban area has grown up around it. In some places, such as between Makarini and Mazengarb Roads, the urban edge (which is residential along its east side and various uses on the west) abuts the designation boundary.

92 The width of the designated corridor sought through this NoR is sufficiently broad that it enables some mitigation of its effects within the urban areas it interfaces with, but the Project will be visible and audible from places along its length and **Mr Evans** and **Ms Wilkening** address the visual and noise effects respectively.

93 In terms of the lateral intergration of the Project the key will be the way in which the east-west bridge crossings are configured to support local road use by drivers, walkers, cyclists and others in active transport modes. The ULDF directs attention to these matters in sections 5.7 and 5.8. The nature of these effects is described in earlier parts of my evidence which discuss amenity and connectivity.

94 At the broader urban scale, the Expressway sets up a spine – the west side beach communities (Raumati Beach, Paraparaumu Beach, and Waikanae Beach to one side, and the inland communities (Raumati, Paraparaumu and Waikanae) to the east). There are east west links across the spine which recognise the inter-connectedness to facilities at both sides. One particular urban form and land use benefit is the improved conections between the two urban areas north and south at Waikanae and Paraparaumu.

95 As the main district centre, Paraparaumu town centre is planned to grow on the east side of the Expressway, adjacent to the civic buildings. This area has long been planned as a town centre with better social and community amenity than that currently provided at Coastlands. The new swimming pool, upgrade of the civic buildings and relatively new library signal this as the direction of the future for this centre.

96 With the proposed interchange at Kāpiti Road adjacent to the west side of the town centre, there are excellent opportunities for regional and district Expressway traffic to connect directly to the Paraparaumu town centre and its civic centre, library and new swimming pool. Those connections can be designed with the relatively 'clean slate' offered by the vacant land to the west of the existing civic centre. This interchange is also very well located to provide access to the large new mixed use commercial area and airport further west of the Expressway.

97 At Waikanae town centre, the location of the proposed interchange away from the town centre generates a different dynamic than at the much larger Paraparaumu centre. In urban form terms, the Waikanae town centre is much more a village scale.

98 In my opinion, this village scale and the characteristics this suggests such as walkability, quietness, low speed traffic and public spaces quality will be enhanced by the Expressway.

99 As discussed elsewhere, the Project will enable the removal of the highway status for the existing SH1, in time. The traffic, including heavy vehicles, will reduce through this area. This will allow for improved connectivity across the highway and general amenity improvements to take place, including tree planting, cycle and walking provision, signalled crossings frequencies and the like.

100 The Waikanae town centre will see some loss of through traffic that is likely to affect some of the business on the current highway edge. Mr Copeland provides evidence of these economic effects.

101 At Waikanae, the growth to the north at Ngarara will be well served by the proposed Te Moana interchange. However, an effect of the Expressway on the form of this planned growth is to reduce the available land area. Within the Ngarara area the footprint of the existing designation (i.e. the WLR) is 36ha and in comparison the Expressway footprint is 55ha. This is out of a total 282 ha available at Ngarara.

102 I acknowledge that, as a result of the Expressway, the structure plans for this Ngarara area, which were developed through a lengthy process, will now need to be reconsidered. It is noted that the Expressway routing that has affected the structure plans for Ngarara have done so largely to avoid wetlands there. Despite the changes, Ngarara will still be able to provide for substantial urban growth. Perhaps fortunately there has been no land development in terms of houses, roads and other infrastructure in the growth area (except Ferndale which is wholly on the east side of the Expressway).

103 The need for additional east-west connectivity across the Expressway (i.e. additional to the proposed Ngarara Road and Smithfield Road overbridges) as a result of an urbanising land use in the broad Ngarara area will require consideration in the future. Although the land at Ngarara is zoned for redevelopment, at this time the form of any development at Ngarara and timing of that is such that adding new connections now would be premature. Those connections (in the form of bridges) would have no purpose until such time as people were resident there.

104 The NZTA and KCDC have a separate Project Agreement (which sits outside this consent process) which provides a process for considering the need for additional bridges over the Expressway at an appropriate time in the future.

105 KCDC's plans for urban growth (as represented in the District Plan and Plan Changes 69, 79 and 80) seek to generate an urban form which has the two main bodies of urban development of Paraparaumu to the south and Waikanae to the north, separated by the semi-rural Otaihanga area.

106 The Project design supports this growth plan by locating interchanges in the two urban areas to the north and south and not in Otaihanga, where an interchange would have likely induced urban development contrary to the aim to maintain a more open rural break.

107 There are clearly some benefits that can derive from allowing better forms of urban development at the town centres and where urbanisation exists. In sections of the existing State highway where KCDC considers urban development to be undesirable (such as in the Otaihanga stretch or at the north and south intersections at Poplar Avenue and Peka Peka Road) then the District Plan and limited access road/frontage requirement tools can be applied to inhibit development potential.

108 In respect of the north and south ends, the intersection at Peka Peka Road is purposely limited as to its multidirectional connectivity to inhibit the potential for urban growth pressures at this point (noting also that value for money considerations are also a factor). Urban growth at Peka Peka would be contrary to KCDC's District Plan for retention of this area as a rural location.

109 Urban growth at the southern end of the Expressway is not out of step with the existing urban land uses in the wider Raumati area. However, a full interchange at this location is unwarranted. On one side of the Poplar Avenue Interchange is Queen Elizabeth Park, which cannot benefit from an interchange in terms of servicing an urban area or even the Park which has its main entrance at MacKays Crossing. Furthermore, a full interchange would require additional loss of park land to accommodate. I consider that such an interchange is not required, particularly given the close proximity to the more useful full interchange at Kāpiti Road.

110 I consider that it is unlikely that the Project would result in significant urban growth inducement in unwanted locations.[17] There are in any event tools that can be applied by KCDC to control this potential if required.

RESPONSE TO SUBMISSIONS

111 I have read the submissions lodged on the Project which raise urban planning or urban design matters.

112 In reviewing submissions, I have identified several recurring themes that relate to urban design and planning matters. As previously noted, many of these matters have a relationship to other experts' evidence and I have noted those accordingly.

[17] Technical Report 6, Section 6.1.8.

113 My approach in responding to the submissions has been to comment on each of the themes in turn under corresponding headings. General submissions are addressed as a group and any detailed or specific matters raised under that same theme I have dealt with individually.

Connectivity and Severance

114 A frequently raised issue from the submissions in opposition is 'severance'.[18] Typically those concerns are raised in terms of the community being 'severed' by the Expressway. I note that NZTA has a policy on severance (Environmental and Social Responsibility Policy 2011) and **Ms Meade-Rose** comments on this.

115 There is a difference between severance and connectivity and to assist clarification I refer to the following definition of community severance as:[19]

> *"Separation of people from facilities, services and social networks they wish to use within their community; changes in comfort and attractiveness of areas; and/or people changing travel patterns due to the physical, traffic flow and/or psychological barriers created by transport corridors and their use."*

116 In terms of connectivity, I consider the following definition to be appropriate:

> *"The physical conditions facilitating access within a region, city, town or neighbourhood."*[20]

117 In responding to submissions on this issue, I have commented on connectivity, as distinct from community severance. The evidence of **Ms Meade-Rose** (social effects), **Ms Wilkening** (noise effects), **Mr Murray** (traffic effects), and **Mr Evans** (visual effects) amongst others, will all contribute to the sum of the effects in relation to the extent of community severance.

North-South Connectivity

118 In this regard then my opinion is that there are connectivity enhancements being gained from the development of the

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[18] Including submissions by A Douglas [173], S & C Hori [224] S Ansell [229], N White [255], D&D Waterson [267], D Moger [275], A Bowman [301], l Pomare [309], N Saxby & B Mountier [327], P Sisarich [328], C Lenk [329], W Sissarich [331], P Aregger [382], J Leighton [454], R Love [470], J & R Roos [586], B & E Couchman [587], J Nisbet [649], J Staple [662], I Wilson [702], E Jones [709].

[19] Community Cohesion and Community Severance: Definitions and Indicators for Transport Planning and Monitoring Report to New Zealand Transport Agency [June 2011], Prepared by Robert Quigley and Louise Thornley, Quigley and Watts Ltd.

[20] From *The Value of Urban Design*, Ministry for the Environment [2005].

Expressway (as discussed in TR6 and my evidence already).[21] There are significant benefits to be gained by the physical connections provided through the District between south and north (Paraparaumu and Waikanae), and across the region between Wellington and areas north of Waikanae to Otaki and beyond. Submitters also recognise this benefit.[22] Some submitters have also recognised these benefits in terms of emergency vehicle access.[23]

119 There are no existing physical connections lost from the Expressway[24] as all existing local roads remain connected as do the non-street connections at Wharemauku Stream and Waikanae River.

Town Centre Connectivity

120 There are significant improvements to be gained also from connectivity at the town centres of Waikanae and Paraparaumu in enabling easier movement from one side of the existing State highway to the other. As discussed above, the development of the Expressway will allow the existing SH1 to act as a local road arterial that provides a slower and more informal route with provisions for active modes (walking and cycling) along its length. This will facilitate access to amenities that exist on either side, including importantly the rail stations that support public transport use within the district and region. These benefits are recognised by some submissions.[25]

121 KCDC [682] seeks in its submission that the design for the existing State highway is addressed as an integral part of the Expressway to ensure that the result is fit for purpose as a local arterial road passing through the town centres.

122 As noted by **Mr Andrew Quinn**, NZTA together with KCDC, has consulted with Kāpiti residents on the future for SH1 at a series of public open days. Since that date, NZTA has entered into further discussions with KCDC on the scale of the works necessary to achieve a "fit for purpose" road, should it recommend to the Minister of Transport that the existing SH1 become local road. My understanding is that those discussions will continue as part of the Project and that further consultation with the community will occur.

123 I note that the KCDC submission supports the connectivity provided by the interchanges at Te Moana and Kāpiti Roads.

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21 Paragraphs 74 to 86.

22 Including submissions by I Basire [179], R & J Bardsley [308], L Welch [342] D Page [473], J Edgar [556], St Heliers Capital Ltd [644], Kāpiti Chamber of Commerce [665], K Dreyer [681], Kāpiti Coast District Council [682]

23 Including submission by P Franssen [155], NZ Fire Service [515].

24 The exception, as noted above, being Leinster Avenue.

25 Including submissions by Kāpiti Chamber of Commerce [665], W Morrison [250], St Heliers Capital Ltd [644], Land Matters Ltd [686], and R. Halliday [639].

Pedestrian Overbridges

124 As I have noted previously, connectivity is also provided by a walking and cycle path along the entire length of the Expressway which connects at local roads and existing cycle and walking paths. KCDC supports the cycle and walking path in its submission [682], but seeks clarification (p32) on the specific location of the pedestrian over bridges. These are proposed to be located:

124.1 At Leinster Avenue to mitigate the lost walking and cycling connectivity to the current State highway; and

124.2 In the middle of one of the longest blocks in the existing urban area (between Kāpiti Road and Mazengarb Road), so improving on the existing connectivity at that location.

125 These two bridges are marked on the ULDF plans.[26] The exact final location and design of these bridges will be subject to an Outline Plan process (under 176A of the RMA). KCDC will be able to request changes to the Outline Plan submitted by the NZTA. In my opinion, sufficient work has been completed at this time to ascertain the positive effects of the bridges and there is sufficient breadth in the concept to account for refinement. I also understand that provision has been made by NZTA in its project budget to provide them.

Informal Connections

126 The loss of the informal connections across and within the current designated corridor is raised by some submitters.[27] These connections have been able to form due to the fallow-ness of this land for some 60 years and will be lost in part. However, these connections were always 'on notice' and subject to that designated land being used some day for new north–south roading infrastructure.

127 Furthermore, and to replicate the informal connections using this designated land, a cycleway and walkway is proposed along the full length of the Expressway and a new pedestrian and cycle bridge is proposed in the longest urban area block between Kāpiti Road and Mazengarb Road (at Makarini Street, as discussed above).

East-West Connectivity

128 In the context of the connectivity matter, KCDC has also submitted that it supports the proposed configuration of the local roads at grade and the Expressway over for east-west connectivity. It also supports the design of the bridges, side walls and piers and treatment of the local roads under the Expressway bridges.

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[26] See Section 6 Sector Design page 78 and page 84.

[27] Including submissions by K. Whibley [482], M. Edbrook [488], W & D Lattey [466], and KCDC [682].

129 However, KCDC does not support the design proposal at Mazengarb Road, where high retaining walls are proposed. This is a matter that may be best addressed in conferencing to determine an appropriate design response that addresses the constraints presented by the width of the road corridor and the wall height required.

130 I note that there is a process in place to determine the need for other future east-west connections. KCDC and NZTA have agreed by Project Agreement a process to determine the need for a road bridge north of Leinster Avenue and two other potential east-west road connections at Ferndale and Ngarara (currently a paper road). The parties have agreed that these crossings are not required for mitigation for the Expressway. Rather, these are influenced as to their need by broader urban planning outcomes and timing of any further urban development.

Te Moana Road

131 KCDC is concerned (p30) as are other submitters[28] about the roundabouts at Te Moana Road and the safety of pedestrians, cyclists and horse riders. KCDC submits this would be improved by the use of traffic signals. I agree that traffic signals would provide the best conditions for cyclists and pedestrians on Te Moana Road. Having said that there are design measures that can (and will be implemented in this Project) to provide safe walking and cycling passage through the roundabouts. Moreover, KCDC's suggestion will introduce reduced levels of service for drivers and the relative benefits need to be weighed. Again, as noted above, this may be a matter that can be addressed in conferencing to consider options that are mutually satisfactory to both KCDC and NZTA.

132 I note (and perhaps these can be a useful starting point for conferencing discussions) that the safety of roundabouts for cyclists and pedestrians is optimised where:

132.1 There are single lanes (as this reduces the visual confusion to the cyclist and pedestrian interpreting driver lane changing behaviour);

132.2 The speed of vehicles is relatively slow which influences pedestrian and cyclist ability to interpret movements of vehicles into and out of the roundabout;

132.3 There are refuges provided at the crossing points if these are across two lanes (neither of the proposed on or off ramps is two lanes);

[28] Including submissions by P Areggar [382], Waikanae Property Development [474], J Nisbet [485], Kapiti Cycling Inc [601].

132.4 There are clear markings that show where people are to cross where sight lines are best;

132.5 There are gaps in traffic flow that enable safe pedestrian crossing to occur; and

132.6 It is also considered beneficial that pedestrian crossings (i.e. zebra crossings) are marked.

133 The evidence of **Mr Murray** will address this matter also.

134 I also suggest that an alternative cycle and walking path option could be considered that follows the Waimeha Stream edge. This would provide a short diversion option for people that follows the stream side beneath the short spans of the on and off ramps (and main Expressway bridge) so avoiding the roundabouts altogether.

135 This short diversion route would provide a choice for users less comfortable negotiating the roundabout. A Te Moana Road side cycle and footpath would still be provided as this will be the most direct route, and in the event the Waimeha Stream is in flood the alternative route may be impassable. An example of this type of stream side under pass is evident in New Plymouth. Considerable care would need to be taken with the way this diversion path is treated to ensure it does not become unsafe, or vandalised from antisocial activities such as tagging. The principles that would apply here are referenced in the ULDF (section 5.12).

136 This is a matter that could be explored further as part of conferencing with KCDC on the Te Moana interchange design.

Walking and Cycling Connectivity

137 The Project includes the provision for a continuous walking and cycling path within the Expressway corridor generally, but separated from the road. In addition, a walking and cycling path is also proposed to be provided from Paekakariki to Raumati (i.e. through Queen Elizabeth Park). This path is being provided pursuant to a side Project Agreement between KCDC, GWRC and NZTA. The provision of this connection is not part of the NoR for this Project and will remain as part of the Park with its ownership and management undertaken by GWRC, on behalf of the Department of Conservation as land owner.

138 Various submissions support provision being made for walking and cycling.[29] However, I have also identified the following concerns from submissions:

[29] Including submissions by KCDC [682], I. Basire [179],L. Petherick [435], P Canvin [234].

138.1 The Expressway will make walking and cycling less desirable generally;[30]

138.2 The loss of the quiet and natural setting at the Waikanae River and Wharemauku Stream paths;[31]

138.3 The call for more recreational connections across the Expressway – east west;[32]

138.4 The loss of access for walking and cycling during construction;[33] and

138.5 The conflict with horses from the shared path and provision of bridleways generally.[34]

139 I address each of these matters in turn below.

140 I do not agree that the development of the Expressway will make walking and cycling less desirable in the District. Some of the conditions around local roads and the two watercourses will change, but there is a significant investment being made in additional high quality walking and cycling infrastructure along the length of the route and its provision for connections within the local network. This will provide (as will any changes to the current State highway to provide cycle lanes) a considerably safer and broader range of options for walking and cycling in the District and sub-regionally than exist currently.

141 In response to the effect on the existing Waikanae River and Wharemauku Stream walking paths this will not result in lost connectivity - these routes remain. There is actually additional connectivity provided from the two watercourses onto the parallel Expressway cycle and walking path. However, the environment will be changed in the immediate sections where bridges cross those waterways. The evidence of **Mr Evans** and **Ms Wilkening** addresses the visual and noise effects at these locations. The effect is for a relatively short section of these paths.

142 In response to submitters' call for additional east- west connections, these are provided in part by the proposed new pedestrian bridges (discussed above). The Expressway's adjacent cycleway/walking path also connects to other existing recreational connections, where

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30 Including submissions by S. Ansell [229], Living Streets Wellington [503], Action to Protect & Sustain Our Community [677].

31 Including submissions by W & P Sisarich [331] & [328], R Love [470].

32 Including submission by G. Allen [523] & L. Allen [524].

33 Including Kāpiti Cycling Inc [601]. J. Nisbet [485] K. Whibley [482].

34 Including Kāpiti Cycling Inc [601]), Cycleways, Walkways, Bridleways Group [646].

feasible (such as at Harry Shaw Way and Kiwi Road). Additional connections over or under the Expressway are not considered practical, given the need for grade separation between the Expressway and the local network. Also, there needs to be a network immediately beyond the Expressway corridor to connect into. Unless there is an existing adjacent network local road or path, a crossing over or under the Expressway will have no place to connect to.

143 In response to submitters' concerns about loss of paths for walking and cycling during construction, I understand there will be situations where detours will be required temporarily. However, there are conditions proposed (DC.13 & 14) to facilitate effective communications during construction (including a community liaison group) that will provide a forum for regular communication and to address any issues arising. A Construction Traffic Management Plan will also be required (DC.17), as will Site Specific Traffic Management Plans (DC.18). The latter will describe measures to maintain safe and clearly identified pedestrian and cyclist access. In my opinion the provision of information to assist with route selection by walkers and cyclists and the considered provision of alternatives in the form of detours that still provide connectivity is a reasonable outcome given the temporary nature of the effect.

144 In response to submitter concerns about horse conflicts I note that the design currently allows for a 3m wide shared cycle and walking path with a grassed berm for use by horse riders where there is sufficient space, recognising topographical constraints in some sections of the route. The ULDF (section 5.12) identifies a principle that will provide for horse riding alongside the cycle and walking path in the rural and open sections of the route. An indicative cross section of this is also shown in the ULDF (Figure 110). However, as noted above there may be sections where the steepness of topography limits the width and also at locations where boardwalks and small bridges are required to cross watercourses. At these locations the path or bridge may need to be shared. In detailed design the grassed berm provision can be addressed and optimised in accordance with the ULDF's principles.

145 Several of the above mentioned submitters seek changes to the Project's design or points of clarification. These are discussed below.

146 Submitters seek further details regarding signage, lighting, road crossings, dimensions, on road markings, and surface treatments for cycling and walking facilities. Those details relating to the pedestrian bridges can be addressed in the Outline Plans process. The other matters, as they relate to walking and cycling facilities, will be addressed in the Project's developed design phase and are addressed by conditions DC.54 & 55. Condition DC.54 requires the

preparation of a Landscape Management Plan (*LMP*). Condition DC.55(a)(i) requires the principles and outcome of the ULDF to be given effect to in the LMP. The LMP is also to be prepared in accordance with AUSTROADS standards, where these are relevant to the design of pedestrian and cycle paths. The LMP is to be prepared in consultation with KCDC, GWRC and others (DC.54(c)).

147 KCDC raises the matter of the cycleway connection through Queen Elizabeth Park and whether this is included in the Project. As noted above, it can be confirmed that this will be provided for under a separate Project Agreement between GWRC, KCDC and the NZTA.

148 One Submitter requests grade separated crossings for the parallel and separate Expressway cycle and walking path over all local roads (this is currently proposed at Raumati Road only).[35] This is not favoured, as many users of the Expressway cycle path will be connecting down to local roads, so a connection at all the local roads should be provided (which the current design does). There is a considerable additional cost to adding a 3m wide cycle/walking bridge width to all of the local road Expressway over bridges. Any such bridge would also extend the width of the shadow over the local road to the detriment of the local road users.

149 However, I do consider that the locations where the cycle path crosses the local road need to be safely designed. These crossings will need to be designed and satisfy KCDC requirements, in its role as the manager of the local roads. The ULDF also identifies principles (section 5.12) for the Pedestrian and Cycleway and Bridleway Design, so as to ensure that a safe and functional facility is provided. The requirement to satisfy the ULDF principles is addressed in condition DC.55(a)(i).

150 The same submitter as above [submitter 601] requests that a link between the cycleway/walking path over the Waikanae River and the cycleway/walking path on the north bank of the Waikanae River (near El Rancho) be provided. The link currently proposed is to the end of Kauri Road. The land beyond this point down to the river is in the ownership of El Rancho. Although I can see some merit in the requested link, the connectivity being provided by the Project bridge is improved from that currently and the link is not required as mitigation for this Project.

151 El Rancho[36] also requests that appropriate consideration be given to the north bank walking path. The path currently traverses its land and during construction, El Rancho is concerned that people will divert through its land in uncontrolled ways. This is a point that can be addressed in consultation with El Rancho as part of the

[35] Including Submitter Kapiti Cycling Inc [601].

[36] Submitter Waikanae Christian Holiday Park (El Rancho) [477].

satisfaction of Conditions DC 7, 8, 12, 13, 14 etc, as they relate to the preparation of the Construction Environmental Management Plan and the Stakeholder and Communications Management Plan (which includes communication protocols).

Noise

152 Many submitters raise concerns about noise effects and these are addressed in the evidence of **Ms Wilkening**. Some submitters raise more specific concerns about the urban design effects of the noise mitigation measures, specifically noise walls.[37]

153 The approach to noise mitigation structures is described in the ULDF (Noise Design, section 5.9). Condition DC.55 requires the principles in the ULDF to be applied specifically in the Project's developed design through the LMP and in consultation with KCDC.

154 At specific locations where noise fences are at the interface with private property such as (but not limited to) the section south of Kapiti Road, the appropriate consideration to visual amenity of those proprieties will be addressed. This could include a more visually rational extension of fence across the width of the affected property boundary, rather than the limited extent required just for the purpose of noise mitigation.[38] This can be managed through the management plan process and in discussions with residents.

155 So far, I have noted how concerns raised by submitters can be addressed by the conditions described in full in the evidence of **Mr Robert Schofield**. I also propose that an additional condition be prepared, in conference with KCDC, regarding detailed urban design matters, which recognise the interrelatedness of many of these effects. The intent of that condition I have described in paragraph 181 below.

Urban Form

156 I have already addressed the submissions regarding connectivity and why I am of the view that in terms of physical connections there are overall benefits which will accrue from the Project's construction. I turn now to the more location specific submissions on urban form.

157 With respect to the Raumati area, several submissions comment negatively on the impacts of the Expressway in terms of how it takes an alternative route to the current designation (i.e. the WLR)

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[37] Including submission by M Craig and J Anderson (678), KCDC [682].

[38] I support **Ms Wilkening's** evidence regarding the extension of the acoustic along the entire residential boundary at the dwelling of M Craig and J Anderson [678].

in this area, and therefore requires loss of existing houses and private property.[39]

158 As has been fully addressed in the ULDF (Route Adjustment Design, section 5.4) and in the Assessments of Effects (TR6, p 10-12), the rationale for the route selection at the southern end of the Project route has been a matter of weighing specific factors.

159 I acknowledge that there is a significant effect from the Project on some existing landowners in this area, through the loss of their properties. Those effects have been considered, as too have effects on schools from the proximity of the road and the generation of noise disturbance, as well as effects on the ecology of the existing wetlands, dune landscape and effects on Queen Elizabeth Park. Those effects have all been considered in determining the overall best route for the Expressway in this part of the Project route.

160 In urban design terms, the medium to longer term view of what was best for the urban form for Raumati was given primary consideration. Linked, was the interchange arrangement and the way this would best be sited relative to the urban area it serves.

161 In short and again as described in the ULDF (Route Adjustment Design, section 5.4), the proposed location of the Expressway allows a large area of vacant land to the west of Leinster Avenue, as well as the Leinster Avenue enclave to join with Raumati South. The vacant and currently rural zoned land has been in a holding pattern until the future of the roading infrastructure could be determined.

162 The use of the vacant land for residential purposes would fit well with good urban design practice of utilising for growth land contained within existing urban areas. The form of development can be planned with a structure that formalises existing informal movement routes across the land to Raumati South School, for example, and into the street networks that link to Matai Road. A 'structure plan' for this area can also ensure that values such as ecological areas and dune forms are maintained and those links are provided. This will benefit existing residents of Leinster Avenue in terms of connectivity to Raumati and the amenities that exist there. Evidence of the way in which the Leister Avenue area residents currently connect to Raumati can be seen in the tracks that have formed across this area. Future development of this vacant land can be managed by KCDC through its urban planning functions.

163 I record that some submissions[40] support the Expressway Project due to its urban form and connection benefits at this south end.

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[39] Including submission by Highway Occupants Group [542] and several residents in the Leinster Ave/Main Road area eg. C. Ashford [198], A Hager [56], D Evans [211], D. Benge [609].

164 In respect of the placement of the southern interchange, the proposed location is considered optimal given the positioning together with Poplar Avenue to which it connects, the visual cues to the turn off provided by its adjacency to an urban area, and the reduced effects this has on Queen Elizabeth Park.

165 Other specific urban form issues raised include those at the north end relating to the urban growth areas north of Waikanae.[41] In this regard I note that the Project continues to allow for this urban growth area and I have discussed this earlier in my evidence (see paragraphs 101-106).

166 Finally, I note that some submitters support the Expressway given its ability to facilitate future growth.[42]

Induced Urban Growth

167 Several submissions identify concerns about the potential for the Expressway to induce urban growth in unwanted locations/qualities.[43] There is concern that at the interchange at Waikanae (at Te Moana) there will be commercialisation and poor quality development and if the Project is approved a condition is sought to prevent this.

168 KCDC raises the concern that, at the Peka Peka interchange in the north, and along the currently rural section of the current State highway, that it does not want urban growth occurring. The District Plan is one tool for managing land uses, but additionally the use of limited access frontages can be applied to the subject roads to disallow connections and thus unwanted urban development.

169 I have addressed the matter of potential effects from induced growth at interchanges earlier in my evidence (see paragraphs 105 to 110). The District Plan zoning requirements and restrictions such as Limited Access Road notations to local roads can be relied upon to manage unwanted growth. Also at Te Moana Road, NZTA will retain areas of the adjacent flat land within its designation. This will also limit potential additional urban development at this location.

Town Centres

170 There is both opposition and support for the effects of the Expressway on the existing town centres. In opposition,[44]

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40 Including submissions by KCDC [682], Raumati South Residents Association Inc [707], B. Harrison [323].

41 Including submitter K Hunter [8].

42 Including submitter R Leggett [159].

43 Including submissions by K & S Gray [424], B. Cherry [492].

44 Including submitters L. Pomare [309], J & R Roos [586].

submitters note concern about the loss of traffic to sustain businesses in the centres.

171 In support[45] there is seen to be a benefit from reduced traffic and potential to make a better environment in the town centres. The work undertaken by KCDC to understand the potential for improvements in the centres is described in TR6[46] and in the ULDF (Section 6, Sector Design).

172 In my opinion, the Paraparaumu Town centre will see improvements from the Expressway and its interchange positioning to the west of the town centre. The opportunity this presents is to create a much improved relationship between the east (where rail and residential areas) connect to the town centre to the west. Many hundreds of people will benefit from this improvement as they daily cross from one side to the other.

173 The business on the current highway will see some reduced traffic and business adjustment, with resulting effects for those businesses. However, as the evidence of **Mr Copeland** describes from a 'whole of centres perspective' this will not affect the public amenity values of the centres. In time the current highway can provide an improved setting for businesses that can take advantage of the local traffic movements, improved amenity and increased pedestrian and cycle movements that will be able to be generated.

174 The new interchange location at Kāpiti Road is also very well placed to support the maturation of Paraparaumu as a commercial centre. The strategy of KCDC to grow the centre to the west[47] and into the currently fallow land creates excellent opportunities to plan for a visually and functionally better entrance to the main centre. The interchange is also better placed to direct traffic to the airport and its business park which has a substantial growth profile.

175 At Waikanae, the benefits can be even greater in my view. The current small village scale of the centre and presence on the east side of core community facilities (such as the memorial hall and railway station) is heavily impacted by the existing State highway. As with Paraparaumu, passing trade may be reduced, but the town can mature to a destination with a higher level of amenity and new business opportunity.

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45 Including submitters L. Cruickshank [550], R & J Bardsely [308], Kāpiti Chamber of Commerce [665], W Morrison [250], St Heliers Capital Ltd [644], Land Matters Ltd [686], and R. Halliday [639]).

46 Pages 30-37.

47 As indicated in the Kapiti Coast District Plan (1999) and the Town Centre Zone and Town Centre Concept Plan (2004).

176 As noted previously in my evidence, the NZTA has entered into further discussions with KCDC on the scale of the works necessary to achieve a "fit for purpose" road, should it recommend that the existing SH1 revert to become local road. This is discussed further in TR6.[48]

RESPONSE TO SECTION 149G(3) KEY ISSUES REPORTS

177 The section 149G(3) reports prepared by GWRC and KCDC raised the following issues:

177.1 Amenity/character/landscapes;[49]

177.2 Community severance;[50]

177.3 Town centres;[51]

177.4 Urban Form and Future Growth;[52]

177.5 Regional Form Design and Function;[53]

177.6 Built Environment and Transport;[54] and

177.7 Residential, Rural and Paraparaumu Town Centre Zone Policy.[55]

178 These issues have already been addressed in earlier sections of my evidence and in sections of TR6, as follows.

Issue	Reference in this evidence	Reference from TR6
Amenity	Paragraphs 48-73	Section 6.2
Community severance (to the extent that this is a	Paragraphs 74 – 86, 114-151	Section 6.3

48 Pages 30-37.

49 KCDC, Page 7.

50 KCDC, Page 8.

51 KCDC, Page 12.

52 KCDC, Page 12.

53 KCDC, Page 22.

54 KCDC, Page 24.

55 KCDC Pages 28-30.

matter of connectivity)		
Town centres	Paragraphs 55-63, 170-176	Section 6.1
Urban Form and Future Growth	Paragraphs 87-110, 156-169	Section 6.1
Regional Form Design and Function		Section 5.1.1 and 5.1.2
Built Environment and Transport		Section 5.1.1 and 5.1.2
Residential, Rural and Paraparaumu Town Centre Zone Policy		Section 5.1.3

PROPOSED CONDITIONS

179 Condition DC.1(a)(ii)(10) requires the Project to be undertaken in general accordance with the ULDF. Condition DC.55 requires the LMP to implement the principles and outcome sought by the ULDF.

180 I recommend that an additional condition that sits alongside Condition DC.55 (which requires the preparation of the LMP) be formulated and added to the designation conditions.

181 The details of the condition will require conferencing with KCDC but would in principle have the following intent:

181.1 To demonstrate how the principles within the ULDF (Section 5.7 to 5.13) have been provided for within the Project's developed design;

181.2 To include the process involvement of the interested parties in its preparation and inputs;

181.3 To parallel the preparation of the LMP to ensure that the linkages between management and design are addressed; and

181.4 To address the matters of detail sought by KCDC and other submitters.

CONCLUSIONS

182 In conclusion, I am of the opinion that the Project satisfies the urban design aspects of Part 2 of the RMA, provided that the ULDF principles are satisfied and given effect to in the next stages of the Project's developed design. This will be secured through the introduction of the additional condition outlined above.

183 I have considered the policy context and effects of the Expressway and although there will be a significant change to the environment, I am of the view that overall the Project will be beneficial in urban planning and design terms. This is due to:

183.1 The significant improvement to the north-south connectvity within the District and sub-regionally between Wellington and areas north.

183.2 The better urban design outcomes which will result at the Paraparaumu and Waikaane town centres, as compared to alternative options considered.

183.3 The connections between the communities at Waikanae and Paraparaumu from which the benefits will increase as the areas north of Waikanae and the Paraparaumu town centre and associated airport business park, grow as planned.

183.4 The continued provision of east-west connectivity and the ability for these connections to be later supplemented in response to urban growth in the north of Waikanae.

183.5 The significant investment in walking and cyclepath connectivity from Paekakariki to Peka Peka and the local network connections along route.

183.6 The opportunities presented at the town centres of Waikanae and Paraparaumu to mature and diversify as urban places with higher levels of amenity and improved access to the rail transport network.

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Marc Nicholas Baily

7 September 2012