



**Decision in Relation to  
a Notice of Requirement  
to Designate Land to  
Upgrade a Section  
of State Highway 1**

**ENVIRONMENT COURT  
Wellington  
New Zealand**

IN THE MATTER

of the Resource Management Act 1991

AND

IN THE MATTER

of five appeals under sections 120 and 174 of the Act

AND

IN THE MATTER

of a decision in relation to a notice of requirement to designate land to upgrade a section of State Highway 1

BETWEEN

PORIRUA CITY COUNCIL

(RMA1000/98)

AND

A and F MIDDLETON and OTHERS

(RMA1006/98)

AND

TRANSMISSION GULLY ACTION COUNCIL

(RMA 1013/98)

AND

PAREMATA RESIDENTS ASSOCIATION  
INCORPORATED

(RMA 1015/98)

AND

PLIMMERTON RESIDENTS ASSOCIATION  
INCORPORATED

(RMA 1016/98)

Appellants

BETWEEN

TRANSIT NEW ZEALAND

Respondent

BEFORE THE ENVIRONMENT COURT

Environment Judge S E Kenderdine presiding  
Environment Commissioner F Easdale  
Environment Commissioner J R Mills

HEARING at WELLINGTON on the 28<sup>th</sup> day of August – 1<sup>st</sup> day of September 2000, 4<sup>th</sup> – 8<sup>th</sup>  
days of September 2000: Final Documentation on the 10<sup>th</sup> day of November 2000

COUNSEL/APPEARANCES

Mr D Laing and Miss N Muir for Porirua City Council  
Mrs F Middleton for A and F Middleton and Others  
Mr A R Morrison for Transmission Gully Action Council and Paremata Residents Association  
Mr J Lambie for Plimmerton Residents Association  
Mr J Hassan and Ms S Boardman for Transit New Zealand

## TABLE OF CONTENTS

Chapter 1:	Introduction (p3)
Chapter 2:	The Site and Existing Roading Arrangements (p4)
Chapter 3:	Background To The Transit Urban Section Upgrade Proposal (p6)
Chapter 4:	The Reduced Upgrade Proposal (p10)
Chapter 5:	The Parties (p12)
Chapter 6:	Legal Framework (p15) <ul style="list-style-type: none"> <li>• Statutory Framework (p15)</li> <li>• Jurisdictional Issue as to the Legality of the Notice of Requirement (p15)</li> </ul>
Chapter 7:	Matters To Which Particular Regard Is To Be Paid (p21) <ul style="list-style-type: none"> <li>• Reasonable Necessity for Designation [s.171(1)(a) and s.168] (p21)</li> <li>• Alternatives [s.171(1)(b) and s.168] (p24)</li> <li>• Planning Instruments [s.171(1)(d)] (p32)</li> </ul>
Chapter 8:	Sustainable Management and Efficiency [s.5(1), s.5(2) and s.7(b)] (p35) <ul style="list-style-type: none"> <li>• RMA (p35)</li> <li>• Planning Instruments (p35)</li> <li>• Managing Traffic Sustainably (p35)</li> <li>• Property Impacts (p49)</li> <li>• Earthworks and Construction Issues (p50)</li> <li>• Provision for Cyclists (p50)</li> <li>• Costs and Benefits of the Reduced Upgrade as a Measure of Efficiency (p53)</li> </ul>
Chapter 9:	Health and Safety [s.5(2)] (p58) <ul style="list-style-type: none"> <li>• RMA (p58)</li> <li>• Planning Instruments (p58)</li> <li>• Road User Safety: The Present Traffic Climate and Accident Patterns (p59)</li> <li>• Access Safety and Amenity (p64)</li> <li>• Pedestrian Safety and Amenity (p69)</li> <li>• Air Emissions (p73)</li> <li>• Noise (p76)</li> </ul>
Chapter 10:	Landscape Amenity Values [s.5(2) and s.7(c)] (p86)
Chapter 11:	Further Conditions (p92)
Chapter 12:	Summary (p93)
Chapter 13:	Determination and Confirmation of Designation (p94)
Appendices:	
Appendix A -	Site Overview - State Highway 1 in the Broad Landscape Context
Appendix B -	Map of Accident Patterns on the route of the <i>Reduced Upgrade</i>
Schedules:	
Schedule 1 -	Environment Court Consent Order recording conditions under which Shell New Zealand Ltd and McDonald's System of NZ Ltd, s.271A parties, withdrew their notices.
Schedule 2 -	Conditions

2.2.11

DECISIONChapter 1: Introduction

- [1] Transit New Zealand (Transit) is a statutory authority established under the Transit New Zealand Act 1989 (**Transit Act**). It was originally established with the primary focus on the provision of an integrated and safe roading network. An amendment to the Transit Act has resulted in Transit's role being focussed on its state highway activities. Section 5 of the Transit Act now states that the principal objective of Transit is "**To operate a safe and efficient State Highway system**". State Highway 1 (SH1) is the primary national strategic highway route out of Wellington - combining motorway, rural highway and urban road over its length.
  - [2] Transit is a requiring authority pursuant to s.167 of the Resource Management Act 1991 (RMA). In August 1997 Transit gave notice of its requirement (**NOR**) for designation(s) for the Full Urban Section Upgrade of the section of SH1, from Plimmerton to Paremata (**the Urban Section**), north of Wellington.
  - [3] These five appeals arise from Transit's decision to reject the recommendation of the Hearing Commissioners acting under delegated authority for the Porirua City Council (PCC) to withdraw the requirement for the designation for the *Full Upgrade*. Transit did not accept the Commissioners' recommendation that inadequate consideration was given to the alternatives and in particular a two lane two way bypass option.
  - [4] As it was mindful of the concerns raised by the Commissioners however, Transit commissioned further investigation and a further review of three bypass options. Transit revisited the *Full Upgrade design* of the Urban Section of SH1 and a "*Reduced Upgrade*" design was consequently developed.
  - [5] The *Reduced Upgrade* is therefore Transit's response to the safety and congestion issues which currently exist on the Urban Section of SH1. It is this upgrade we primarily address in this decision.
- 

7.2.14



## Chapter 2: The Site and Existing Roading Arrangements

- [6] The land to which these appeals relate is located within the area of Porirua City. It extends for a distance of about 4.1 kilometres between a point approximately 300 metres north of the northern end of the weigh station at Plimmerton, south along the route of the existing SH1 and a point approximately 250 metres south of Paremata Roundabout (at the southernmost footbridge), but excluding the coastal marine area.
- [7] The land use along the existing route of SH1 is largely residential, mixed with some suburban commercial activities. Land usage at the northern end of the proposed works is largely rural on the eastern side of SH1 and on the west, from Plimmerton weigh station to the south, the land is in light industrial/commercial use. This area is referred to as the Plimmerton Industrial Estate.
- [8] SH1 is called St Andrews Road as it passes through Plimmerton to Goat Point and Mana Esplanade from Goat Point to the Paremata Bridge. South of the Plimmerton Industrial Estate is the Plimmerton Domain which accommodates a Croquet Club, Pony Club, rugby field and Bowling Club. A Shell truckstop and a small group of commercial buildings are situated south of the Plimmerton Domain. St Theresa's Church and School are located on the eastern side of SH1 on the corner of James Street. From here to Goat Point the land use is predominantly residential except for the site occupied by Plimmerton Motors and the Spinnaker Motel.
- [9] From Goat Point to the Paremata Bridge the adjacent land use is largely residential with the exception of the Mana retail area located at the northern end of Mana Esplanade. This retail area (on the western side of SH1) includes McDonalds, a Shell service station, Palmers Garden Centre, Mana Court retail/business area, New World and various retail shops. To the east of the Paremata Roundabout above Paremata Crescent, the predominant land use is residential.
- [10] The site falls within the rohe of Ngati Toa, which is represented by Te Runanga O Toa Rangatira, an iwi authority defined under s.2 RMA. Ngati Toa is the recognised tribe with tangata whenua status within the wider Porirua area.
- [11] There are a number of important Ngati Toa sites located within the general area which are highly valued for their cultural and/or spiritual significance. These include Ngati Toa Domain (parts of which are considered to be waahi tapu), Taupo Swamp and its environs (regarded as waahi tapu) and an ancient urupa (burial ground) located just north of Pukerua Bay which is traversed by SH1 (considered to be waahi tapu despite almost complete obliteration due to the highway's construction).
- [12] The Plimmerton Weigh Station ("the weigh station") is located on the western side of SH1, just south of the Taupo Swamp. South of the weigh station, the carriageway is one lane in each direction through to Plimmerton. The two lane carriageway of SH1 continues from Plimmerton around Goat Point. For some 200 metres no properties have physical access and parking is prohibited on both sides through this section. Mana Esplanade currently provides two way traffic movement from Goat Point to the Paremata Bridge. The carriageway includes kerbside parking facilities along both kerbs and a central painted median.
- [13] Mana Esplanade continues towards the two lane Paremata Bridge. The single southbound lane over the Paremata Bridge expands to two southbound lanes before joining the Paremata Roundabout. The northbound lanes from the roundabout merge into a single lane on the approach to the Paremata Bridge. Grays Road provides a connection between State Highway 58 at Pauatahanui and SH1 at Plimmerton and carries substantial volumes of traffic from the Hutt Valley northbound on SH1.

- [14] The section of SH1 from Plimmerton Drive south to the Paremata Roundabout is a two lane highway with kerbside parking lanes in front of the residential area and a 1.5 metre painted median. It is the most strategically important inter-regional highway link serving the Wellington region. The daily flow patterns across Paremata Bridge show heavy peak hour flows southbound each weekday morning with a similar northbound peak flow each weekday evening. These peak flows are larger on Monday and Friday, reflecting the weekend traffic flows out and back into Wellington. There is also a significant rise in heavy vehicle traffic during the early morning.
- [15] Congestion and queuing occur where the road capacity is exceeded during the peak hour flows. In the northbound direction the queues occur where the two lanes of the Paremata Roundabout merge into a single lane to cross the Paremata Bridge. These queues can extend southwards for up to 1 kilometre delaying traffic. Off peak, free flow traffic conditions are experienced through this section. The free flow conditions result in few gaps in the traffic for side road and frontage traffic to join. In contrast, during peak hour conditions, the traffic is slow moving, allowing frontage and side road vehicles to join the SH1 flow.
- [16] Under the *Reduced Upgrade* proposal, the land comprises:
- The road reserve for the existing SH1<sup>1</sup>, including the land shown in the Porirua City District Plan (the **PDP**) as designated for "Limited Access Road" and for "Road (State Highway)";
  - Specified additional land adjacent to the existing SH1, including land contained within the boundaries of various properties with frontages to SH1;
  - Specified additional land in the vicinity of the approaches to a new bridge proposed to be constructed in the vicinity of Pauatahanui Inlet near Paremata to the west of the existing SH1 bridge;
  - Specified additional land of the Taupo Stream and in the vicinity of Taupo Stream, in Plimmerton and various specified roads and streets including Plimmerton Drive, James Street in Plimmerton and portions of various other streets in the vicinity of their intersections with the existing SH1, including Steyne Avenue, Pope Street, Pascoe Avenue and other land.

A plan taken from the evidence of Mr J R Hudson, Landscape Architect and Consultant to Transit, is attached to this decision marked **Appendix A**.

### Chapter 3: Background To The Transit Urban Section Upgrade Proposal

- [17] **Mr D R Rendall**, as Transit's Wellington Regional State Highway Manager, provided an overview and historical summary of events leading to the upgrade proposal. Material for this chapter was also provided from the evidence of **Mrs C A Foster**, PCC's Planning Consultant and former Planning Assistant and then Planning Director for the PCC.
- [18] The traffic congestion experienced through the Urban Section of SH1 is not a new phenomenon. There are reports of congestion and delay as early as the 1960s. Transit's *Full Upgrade* proposal occurred against a background of numerous studies and investigations to determine the appropriate long term transportation strategy for this part of the Wellington Region.
- [19] Extensive studies were undertaken of options for improving SH1 between Paremata and MacKays Crossing in the 1980s. These included a coastal upgrading and a new inland alignment.
- [20] The historical context is in fact dominated by debate over whether the Transmission Gully Motorway (TGM) or an upgraded (four laned) coastal route is the appropriate strategic route for SH1. The current position is that the TGM is endorsed in the Wellington Regional Council's (WRC) Regional Land Transport Strategy (WRLTS) as the long term strategic route.
- [21] In 1990 the Parliamentary Commissioner for the Environment (PCE) evaluated a report written by the WRC to assess the environmental effect of routes to the north of Wellington. The conclusions of this report, entitled the *Future State Highway No 1 Route Environmental Impact Report*, were endorsed by the PCE. In a responding report, *Audit of the 'Future Highway Number One Route' Environmental Impact Report*, the Commissioner addressed options for a four lane motorway north of Wellington and recommended that such development should be on the inland route known as Transmission Gully. Her report also recommended a number of actions including the following:
- That [the Wellington Regional Council and Transit New Zealand] cooperate with and support the Wellington City Council in seeking to limit the provision of permanent carparks and discourage low occupancy car commuting to the Wellington central business district, exploring such methods as a peak hour bus/carpool lane and/or a differential toll on State Highways One and Two entering Wellington.*
- That interim works to improve traffic (that will not compromise an eventual Inland Route) be investigated promptly in consultation with local communities at Paremata/Mana/Plimmerton.*
- [22] In March 1992, Transit resolved to act as lead agency in initiating appropriate procedures under the RMA to make provision for the TGM. Further investigative work was carried out, including feasibility work on financing the TGM as a toll road. Transit resolved in September 1994 to immediately start the remaining investigation work and obtain a designation. Accordingly, Transit lodged a NOR for the TGM in April 1996.
- [23] Meanwhile in 1994 Transit engaged Traffic Design Group (TDG) and Beca Carter Hollings & Ferner Limited (BCHF) to consider earlier reports and investigations, then develop options for dealing with traffic flows on SH1 north of Wellington. These options were developed on the basis and against the background of the TGM being the preferred longer term route north of Wellington.

- [24] The capacity improvement studies for SH1, undertaken between 1994 and 1995, investigated three basic options for the Plimmerton to Paremata Section Upgrade. In summary, these were:
- To upgrade the existing State Highway;
  - To provide a two lane bypass to the west of the existing highway and retain two lanes on the existing highway; and
  - To provide a four lane bypass to the west of the existing highway.
- [25] These options were also considered separately in respect of the Plimmerton Section (north of Goat Point) and the Mana Section (south of Goat Point). A number of combinations of the use of the existing highway and bypasses were considered for these two areas.
- [26] Concept designs were developed for these options and were used as a basis for public consultation and the Assessment of Effects on the Environment (AEE) undertaken in 1995. As a result, two reports were prepared, the *Capacity Improvement Study Options Evaluation Report (Reference 2)* and the *Capacity Improvement Study Options Evaluation – Assessment of Effects on the Environment (Reference 3)*. The study covered SH1 from Paremata to the coastal section north of Pukerua Bay and was premised on the basis that Transit would not render SH1 to the north of Pukerua Bay four lanes. To do so would have been inconsistent with Transit's long term objective of constructing TGM as the "motorway" route north of Wellington and the PCE's conclusions from her 1990 audit.
- [27] These reports were considered by Transit officers and a submission was presented to the Transit Authority in October 1995. The Authority resolved to adopt a strategy for improvements to SH1 between Pukerua Bay and Paremata including the following:
- Staged replacement of Paremata Bridge;
  - Clearways in the peak direction at peak periods on Mana Esplanade and provision of traffic signals at some or all of the Pascoe Avenue, Mana View Road and Acheron Road intersections, plus staged introduction of right turn bays at those intersections;
  - Upgrading the existing alignment through Plimmerton to four lanes;
  - A bypass of Pukerua Bay; and
  - Four laning the rural section (between Pukerua Bay and Plimmerton to address safety issues).
- [28] Transit's objectives for the Urban Section Upgrade project are described in the NOR. It is the intention to relieve existing congestion problems associated with this section of the SH1 route and to assist in ensuring that during the construction of the TGM, there is a sufficient level of service afforded on the existing coastal highway route by enhancing traffic capacity between Plimmerton and Paremata.
- [29] In accordance with the procedures under the RMA, Transit gave an NOR for designation(s) to provide for:
- The construction, operation, maintenance and repair of road forming part of SH1 of which parts are to be "Road (State Highway)" and parts are to be "Limited Access Road" and carrying out of ancillary works and activities (including earthworks, excavation, demolition, erection, maintenance and repair of bridges, retaining walls, anchor supports and other structures, vegetation clearance including for sight planes and planting); and
  - The imposition of various restrictions on the use of specified adjacent areas of land in order to protect and maintain sight planes ("Sight Plane Restrictions") and various retaining walls and anchor supports ("Building Line Restrictions") for the safe or efficient functioning or operation of the Project or Work.

5.2.2

- [30] At the time of the NOR, it was expected that funding for construction of the TGM would be available around 2014. Accordingly, the *Full Upgrade* was designed to provide adequate capacity up until that time.
- [31] Mr Rendall's view was that the objectives identified in the NOR recognised that the additional present and future capacity that should be provided should be no more than "sufficient". In particular, Transit is very aware of the need to take appropriate account of the interests of local communities, tangata whenua and the environment.
- [32] The Commissioners appointed by the PCC to hear the case for the *Full Upgrade* recommended that Transit withdraw its requirement. They considered Transit's proposed upgrade "*too tight a fit*" within a narrow corridor and this would result in permanent and unacceptable adverse effects on the residential environment of Plimmerton and Paremata. The Commissioners believed that further consideration of a two lane bypass option may have been appropriate.
- [33] Transit rejected the recommendation in its Notice of Decision under s.172 RMA dated 7 March 1998. It agreed, however, to re-investigate three bypass options and whether a bypass would be effective, viable and preferable to the *Full Upgrade* in the NOR. Accordingly, a re-evaluation of bypass options and a re-investigation of the upgrade was undertaken by an appointed Peer Review Team, comprised of **Mr A Bradbourne, Planner and Chairman, Mr D Heine, Traffic Engineer, Mrs N Barton, Planning Consultant, Ms M Buckland, Landscape Architect and Mr K Ballagh, Acoustic Engineer.**
- [34] The bypass options which were re-investigated extended between Goat Point and the Paremata Bridge. Bypass options to the north of Goat Point through to Plimmerton were not re-investigated as Transit's analysis of the Commissioners' recommendations showed that, in the case of the Plimmerton section, the issues were more confined and capable of resolution within the boundaries of the NOR. It was considered that a bypass running between the fronts of properties and the coast may be less preferable to those affected residents.
- [35] In addition to the bypass re-evaluation, a full re-investigation of all features of the design of the *Full Upgrade* project was undertaken. Transit however, did not revisit the premise that congestion relief was required until the TGM was constructed under normal funding criteria (2014). It was Transit's objective to ascertain whether the proper course for the Mana section was to confirm the NOR or to pursue a new notice.
- [36] The re-evaluation and re-investigation confirmed Transit's decision on the Commissioners' recommendation while recommending improvements.
- [37] Meanwhile, Transit promoted the designation of the TGM (subject to resolving outstanding appeals) to secure that route. Before and during the hearing and whilst this decision was being written, sources of funding were being explored some of which will require legislative change. Transit recently tested its long term strategy of constructing TGM against the alternative strategy of providing a four-lane highway along the coast from McKays Crossing to Paremata. A study of the two alternative strategies showed the TGM strategy to be superior strategically, economically, and in environmental and social terms.
- [38] A *Willingness to Pay Survey* and a review of the corridor strategy based on the coastal four laning study was also underway. The survey was commissioned by WRC and Transit in order to gauge the willingness or otherwise of those in the Wellington region to pay for early construction of the TGM. The review, requested by Transfund and conducted by Transit, was intended to test the assumption that the upgrade of Orin would be to provide only sufficient capacity until such time as the TGM could be constructed, against the

alternative strategy of providing a four lane highway along the coast from Paremata to MacKays Crossing, rather than the TGM.

- [39] Against all these activities Transit considered the outcomes of the peer review process, the *Willingness to Pay Survey*, the coastal four laning investigation, an updated analysis of the benefit/cost ratio (**B/C ratio**) of the TGM and representations made by the appellants, and decided to explore options which would provide adequate capacity only until 2005 (at the time of hearing the earliest possible construction date for the TGM). Transit was particularly concerned with the environmental impacts of the *Full Upgrade* on residents, especially in the Mana Esplanade area, and the perceived risk of delay to construction of the TGM, by virtue of the design life of the *Full Upgrade* (15 years as opposed to 5 years).
- [40] Transit's upgrade strategy for SH1 in the Wellington region thus has both a long term and a short term focus, which can be summarised as:
- Transit's long term preferred route for SH1 is what is known as the Inland Route, or "Transmission Gully" and its preferred project for this route is the TGM.
  - The TGM may not be constructed for a number of years. Applying present funding criteria this may not be until 2015, although earlier construction could be possible, if legislative authority and funding can be secured.
  - Transit has a strategy to address the existing congestion and safety issues on the present coastal SH1 corridor through targeted projects, but not in a way that would compromise the early construction of the TGM.
- 



#### Chapter 4: The Reduced Upgrade Proposal

[41] In response to PCC's, WRC's and the Residents' concerns, Transit focused on developing a *Reduced Upgrade*. Transit is of the view that this is a superior development to the *Full Upgrade* as it:

- reduces the physical interference with private property by removing the driver sight plane restrictions from various properties adjacent to SH1;
- restricts the top end capacity of this section of road and thereby caps the level of impacts at a level below those which could have occurred as a result of the upgrade;
- introduces for specified periods a High Occupancy Vehicle (HOV) Clearway lane and accordingly reduces the impact of traffic;
- is almost entirely reversible once the TGM is opened and the need for capacity in excess of today's situation is removed;
- has a relatively limited design life at which time construction of the TGM will be close or complete if funded externally. If not, then Transit is committed to reviewing the situation no later than 5 years hence; and
- makes efficient use of an already existing road resource.

[42] Mr P McCombs, Traffic Design Consultant to Transit, identified the following specific traffic engineering features of the *Reduced Upgrade* as follows:

- providing indented bus bays on both sides of SH1 near James Street, near Acheron Road (southbound), near Station Road (northbound) and on both sides of the highway near Mana Marina Village;
- providing two southbound and northbound lanes for through-traffic at the Grays Road and Steyne Avenue intersections and around Goat Point to the vicinity of Acheron Road;
- providing one through lane in each direction along Mana Esplanade plus the peak-direction Clearway to provide a second through-lane available to the HOV-qualifying vehicles in the major direction at peak times;
- providing traffic signals and controlled pedestrian crossings at intersections together with computer-controlled linking to achieve smooth co-ordinated "green-wave" flows for through traffic;
- providing a 3.5 metre kerbside and 3.0 metre central lane in the peak direction and a 2.0 metre painted central median;
- increasing in the result the lateral clearances available to cyclists and manoeuvres at driveways;
- the addition of 2.5 metre footpaths on both sides completes the generally available 20 metre width of the existing designated road reserve;
- at off-peak times, a 2.0 metre kerbside parking lane is provided along Mana Esplanade leaving a 1.5 metre "shadow" width beside parked cars, and a 3.0 metre marked travel lane beside the 2.0 metre painted median;
- providing at intersections, footpaths narrowed to 2.0 metres and the median width increased to allow a 3.0 metre wide central turning lane;
- prohibiting parking through a 55 - 60 metre length of both arterial approaches to the controlled intersections so as to enable two through-lanes and a central opposed turning lane to be provided at the traffic signal stoplines;
- each side road approach is arranged to provide two approach lanes;
- widening the eastern footpath on the existing Paremata Bridge to provide a greater width for pedestrians and other users of the footpath, in recognition of perceived residents' safety concerns;
- replacing the existing Plimmerton pedestrian overbridge immediately north of Grays Road if practicable to provide an additional route for travel by pedestrians across SH1;



- removing the central raised islands at the intersections of Mana View Road, Station Road and Pascoe Avenue (avoiding the need to designate land from adjacent frontage properties along Mana Esplanade);
- retaining the existing alignments of Pope Street and Station Road (removing the need to designate land on the corners);
- retaining the existing left turn slip lane arrangements to and from Mana Retail Centre (removing the need to designate land on the opposite side of Mana Esplanade); and
- frontage modifications will be generally limited to matters such as reconstructing boundary fences, providing driveway crossing places and replacing or relocating hedges and some garages.

[43] In particular Transit considers the implementation of the HOV lane (through Transit's bylaws) will keep trucks in the centre lanes through Mana and maximise the volume of traffic using the centre lanes during peak flows. This in turn will maximise the distance between most of the traffic and the adjoining residential and commercial properties.

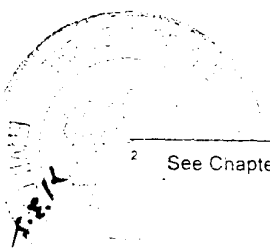
[44] At Paremata the existing two lane bridge will be duplicated with a new two lane bridge, south from which the road will be four lanes through the redesigned Paremata Roundabout. Resource consents have been obtained for these.

[45] Funding for the SH1 upgrade has not been confirmed by Transfund. Therefore, there is no certainty that the *Reduced Upgrade* will proceed, even if the designation is approved by the Court, although there is an indication that it meets the benefit/cost criteria.<sup>2</sup>

[46] In the event, Transit seeks now to designate only the *Reduced Upgrade*.

---

<sup>2</sup> See Chapter 8, post at page 55.





## Chapter 5: The Parties

### • *Porirua City Council*

[47] PCC is the territorial authority and made recommendations to Transit in respect of the NOR under s.171 RMA to withdraw its NOR in relation to the Urban Section *Full Upgrade*.

[48] The PCC's position as an appellant was in a number of contexts: as a territorial authority which made the recommendation to Transit in respect of its NOR; as a territorial authority having responsibility to administer its operative district plan which includes objectives and policies relevant to the future upgrade of SH1 and the TGM project; as a territorial authority having overall responsibility for the strategic direction and future of its district including as a roading authority in its own right; and as an affected landowner principally in respect of Plimmerton Domain but also certain other land affected by the development.

[49] The PCC appealed against Transit's decision to confirm the NOR because it had concerns about the adequacy of Transit's consideration of alternative routes or methods for achieving its objective. It also had concerns relating to the degree of adverse effects upon the environment, including the effects upon the residents along the urban section of the upgrade.

[50] It has been the PCC's more recent decision to co-operate with Transit (following the filing of appeals) in the further investigation of alternative routes and thereafter, in terms of negotiation towards an agreed position which followed the announcement by Transit of its intention to pursue the *Reduced Upgrade*.

[51] In the event the PCC entered into an agreed position with Transit as to the desired outcome of the appeals. This agreement is reflected in an **Agreed Memorandum** filed with the Court dated 17 August 2000 with attached draft conditions and in a "Heads of Agreement".

[52] Accordingly, the PCC now seeks that Transit's NOR for the *Reduced Upgrade* proposal be confirmed, subject to the detailed terms and conditions attached to the Agreed Memorandum.

### • *The Wellington Regional Council*

[53] The WRC is a party to the appeals pursuant to s.274 RMA. It has an interest in these proceedings as the body responsible for the administration of the Wellington Regional Policy Statement (RPS), the relevant regional plans and the WRLTS. This includes, as at July 2000, the Western Corridor Implementation Plan. The WRC is also the body responsible for purchasing public transport services within the region. These responsibilities are important as parallel road and rail services interact with the performance of the existing SH1. It also has had a strategic role in terms of carrying out various studies including participating in the *Willingness to Pay Survey* to further the TGM project.

[54] The WRC initially had concerns about the *Reduced Upgrade* project, principally in relation to the potential impact of such a proposal on the timing of the TGM. These concerns have now been satisfied.

[55] The WRC accordingly also entered into an agreed position with Transit as to the desired outcome of the appeals. WRC now seeks that Transit's NOR for the *Reduced Upgrade* be confirmed, subject to the detailed terms and conditions attached to the Agreed Memorandum. It is satisfied that the adverse effects of the *Reduced Upgrade* are significantly mitigated by the draft conditions and that the residual adverse effects are outweighed by the positive effects of the proposal.

7.8.8.

• ***The Residents***

[56] At the time of hearing only the Residents groups ("the Residents") remained as appellants. Much of the Transit and PCC evidence was not challenged by them and the focus of the hearing became directed to specific issues like noise, vibration, severance, access, parking, fumes, HOV lanes, pedestrian issues, and the four laning of St Andrews Road. Over-arching these concerns however, was the Residents' concern that TGM might not go ahead as a result of the *Reduced Upgrade*, should we uphold the designation.

[57] Other concerns, relating to the impact on residential properties of land taken and sight plane restrictions, have largely been omitted from the *Reduced Upgrade*.

[58] The Residents were made up of the following groups:

(a) ***A & F Middleton and Others***

[59] Mrs F Middleton gave her evidence on behalf of her family and others. Their objection was to a four lane highway from the Paremata Roundabout to north of Plimmerton. They view the *Reduced Upgrade* as a "quick fix" solution which may, for uncertain reasons, become permanent if the Residents are not alert to the fact. The group believes that given the uncertainty of the TGM proposal, through-traffic should be diverted away from Mana Esplanade to a bypass road alongside the railway on railway reserve.

[60] Mrs Middleton provided detailed objections on issues such as pedestrian amenity and safety, severance, access and noise, which we refer to elsewhere. The group suggest that if the *Reduced Upgrade* HOV/Clearways option is approved it be given a limited life of perhaps 5 years.

(b) ***Transmission Gully Action Council (TGAC), and the Paremata Residents Association Incorporated (PRAI)***

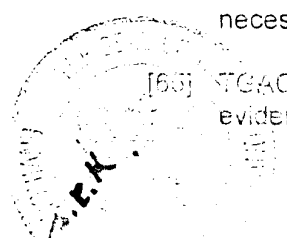
[61] These two Residents groups jointly presented their case through Mr A R Morrison. Mr Morrison's submissions and the evidence of Mrs H Balham, local historian and resident, gave the historical context to the appeals.

[62] Mrs Balham identified the road through Paremata/Plimmerton was originally developed by the local residents to improve access to the coastal communities of Mana, Plimmerton and Pukerua Bay (the land being donated by a local landowner). Long-time residents in the area recall paying off the bridge loan in their rates until around the 1960s. It was put to us that the community has continued to "share" the road with the nation ever since, without the broader public being aware of its localised history.

[63] Mr Morrison detailed how the longer distance traffic along SH1 has become a real problem for the communities in more recent years. The result has been that the community has become "shell shocked" with the many rounds of consultation, public meetings, hearings, and submissions over how best to mitigate the effects of a state highway through its residential environment.

[64] This group of Residents are opposed to the *Reduced Upgrade's* presentation as an interim solution, because if the TGM was in existence the upgrade would not be necessary at all.

[65] TGAC and PRAI called a number of experts and residents to support their case, the evidence of which we refer to elsewhere.



(c) *Plimmerton Residents Association Incorporated*

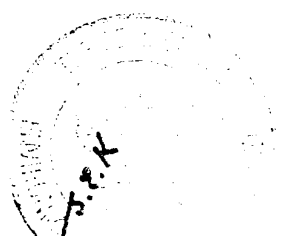
- [66] The case for the Plimmerton Residents was in agreement with that of the TGAC and PRAI but its particular focus is the St Andrews Road section of the upgrade route. The Residents were represented by Mr J Lambie, Chairman of the Association. It was his overall submission that the Plimmerton Residents do not want the upgrade, instead seeking an earlier start on TGM.
- [67] A number of local residents and representatives of local businesses were called to support this group's case. Their evidence we refer to elsewhere also.

(d) *I Barlow*

- [68] Mr Barlow presented a comprehensive review of a bypass alternative which we consider later in this decision.

(e) *Shell New Zealand Ltd and McDonald's System of NZ Ltd*

- [69] These parties filed section 271A RMA notices. Their concerns have been resolved by consent and a record of those resolutions is attached to this decision marked **Schedule 1**.
- 



## Chapter 6: Legal Framework

### *Statutory Framework*

[70] The statutory framework for considering issues in respect of designations under the RMA is as follows:

- Sections 166, 175, 176 and 176A which set out the legal effect of a designation and outline the plan procedures;
- Section 168 which sets out the matters to be included in the NOR;
- Section 171(1) which sets out the matters to which regard and particular regard should be had by the territorial authority (and the Court);
- Part II to which s.171(1) is subject;
- Section 171(2) which sets out the territorial authority's discretion in determining the requirement;
- Section 172(2) which sets out a requiring authority's power to modify its requirement; and
- Section 174 which sets out the appeal process and confirms the Court's discretion in determining the appeals.

[71] In terms of background to the designation process, s.166 provides that a designation is a provision made in a plan to give effect to a requirement made under s.168. Under s.175, where a designation is confirmed by the Environment Court, the territorial authority is to:

include the designation in its district plan and any proposed district plan as if it were a rule in accordance with the requirement as issued or modified. ...

[72] Once in place a designation has the following effects, pursuant to s.176(1):

- it removes any requirement to obtain resource consents otherwise required under the relevant plan;
- it gives the requiring authority consent to do anything in accordance with the designation;
- it prevents any use of the land which would prevent or hinder the work without written permission of the requiring authority.

### *Jurisdictional Issue as to the Legality of the Notice of Requirement*

[73] Section 172(2) sets out a requiring authority's power to modify its NOR. It reads:

s.172. Decision of requiring authority-

...

- (2) A requiring authority may modify a requirement if, and only if, that modification is recommended by the territorial authority or is not inconsistent with the requirement as notified.
- (3) Where a requiring authority rejects the recommendation in whole or in part, or modifies the requirement, the authority shall give reasons for its decision.

[74] It is Transit's submission that the reference to the "requirement" in s.172 RMA, is the requirement as modified by Transit in its decision, pursuant to s.172(2), the subject of the appeals. Transit maintains that the modifications made to the requirement in its decision are relatively minor, including the addition of some conditions and minor adjustments to some plans. Account must be taken of these modifications, therefore, bearing in mind that it is Transit's decision which is the subject of the appeals.

*J.P.K.*

- [75] With regard to the power to modify a requirement under s.174(4)(b), Transit considers that the scope of this power is as described by the Court in Quay Property Management Limited v Transit New Zealand<sup>3</sup>. That is, the Court may make changes to the requirement that do not alter its essential nature or character. In that case the Court held that a NOR does not delineate a requiring authority's proposal in a way which then requires it to be undertaken according to the NOR provisions from the outset. Under the RMA, the assessment of the project is ongoing and not limited by statements in the NOR itself. Accordingly, in exercising its powers under s.174(4)(b) RMA, the Court is not confined by the parameters of the *Full Upgrade* project as described in the original NOR, or in Transit's decision. Instead the Court has jurisdiction itself under s.174(4)(b) to modify the requirement so as to provide for the *Reduced Upgrade* HOV/Clearways proposal.
- [76] It was the PCC's case that although the *Reduced Upgrade* is somewhat different from the proposals embraced within Transit's original NOR, Transit has not lodged any different or changed NOR. Instead, Transit has clearly signalled its intention to scale down the scope of the *Full Upgrade* Clearways proposal to the *Reduced Upgrade*.
- [77] In Mrs Foster's opinion for the PCC, the process of consultation followed by Transit leading up to the lodgement of the NOR was thorough. Having said that, she acknowledged the practical difficulties created for Transit in undertaking consultation in a climate of uncertainty surrounding the TGM. In this context, much of the feedback from consultation (and many of the submissions on the upgrade issue) focussed on a preference for the TGM rather than focussing on the effects of the *Full Upgrade* Clearways proposal.
- [78] However, she considered the consultation in respect of the earlier proposed sight plane restrictions was not adequate but identified that these restrictions are now in fact not a feature of the proposal.
- [79] Mrs Foster also highlighted the difficulty which became apparent during the 1998 hearing that, because Transit had described the *Full Upgrade* Clearways solution as an *interim* one, many people assumed that it was going to be in place for only a short time and then removed. This was not Transit's intention. However, in her view, this problem is now overcome by the *Reduced Upgrade*, provided it endures for only an estimated short period of time.
- [80] With regard to the amended proposal, Mrs Foster acknowledges that Transit had undertaken only limited consultation about the details of the *Reduced Upgrade* targeted at the appellants as representative community groups. But she concluded this was appropriate given the planned short term (interim) nature of the proposed works. She also considers further consultation with the PCC, the WRC and the community is required to determine the appropriate long term transportation solution for this part of the corridor and to address any ongoing environmental effects of the operation of SH1 through the community. Mrs Foster therefore supported the commitment by the PCC, the WRC and Transit, expressed in the draft Heads of Agreement, to undertake a review of the effects of the *Reduced Upgrade* prior to 2005, and involving a public process.
- [81] The Resident groups PRAI and TGAC submit that their appeals relate to the original NOR dated 28 August 1997 (as modified by the inclusion of the conditions set out in Transit's Notice of Decision of 7 August 1998). But they consider it is now apparent that Transit is no longer pursuing the proposal outlined in the notice. They say that they were advised of Transit's alternative proposal at a meeting on 30 March 2000 and sketches were received on 14 April. As far as they are aware, there has been no public notification of the alternative proposal. Nor are they aware of any move by Transit to amend the NOR.

Rather, Transit is asking the Court to modify the notice in order to provide for an alternative proposal.

[82] Accordingly, they ask the Court to consider whether Transit's alternative proposal can appropriately be catered for by modifying the original notice under s.174 – or whether this would entail an *alteration*, and therefore a new notice.

[83] The Residents also consider that Transit's original NOR is insufficient in that:

- The designation now being sought is different from that in the notice (e.g. no sight planes are required and the land purchase requirements are different);
- The reasons why the designation is required are different (because the expected time span of the works is much less) (s.168(3)(a));
- The site description, the nature of the work and the proposed restrictions are all different (e.g. the works now include HOV lanes and different lane widths, and the proposed hours of operation are different) (s.168(3)(b));
- There will be different effects on the environment (e.g. different safety and amenity impacts) with different mitigation possibilities and the extent to which alternatives have been considered – indeed, the alternatives now relevant – have changed (e.g. lesser (two lane) alternatives are now even more relevant) (s.168(3)(c));
- The new proposals have not been the subject of consultation with most of the persons likely to be affected (only with the appellant groups and after decisions had been made) (s.168(3)(e));
- The proposals have not been included in a notice which has been served on affected parties, publicly notified or the subject of a hearing.

[84] In respect of the final point, PRAI and TGAC argue that public submissions to the PCC hearings were made (or not made) on the basis of a notice which was for an "interim" solution to the congestion problems. "Interim" was described in the notice as a period of 10-15 years up to the expected time of construction of the TGM. The solution now being proposed is still "interim" but for a period of 5-6 years up to 2005/06, including the planning and construction period.

[85] It is the Residents' contention that if the original notice had been in relation to an interim period of only 5-6 years, the public attitude toward it – and therefore the nature and number of submissions – would have been significantly different. There were members of the public who were prepared to accept the justification for the original *Full Upgrade* in view of the expected 10-15 year time span before construction of TGM but would not be prepared to accept the justification for a *Reduced Upgrade* for only 5-6 years.

[86] Furthermore, the public as a whole has had no opportunity to voice their opinions on Transit's claims that the adverse effects of the *Reduced Upgrade* are likely to be less than those of the original upgrade proposal. In fact, the changes are few but significant, for example:

- The potential extension of the Clearway hours will increase social severance even more by further preventing parking at more inconvenient times for residents, caregivers, visitors, delivery people etc;
- The removal of the sight plane restrictions (considered essential for safety reasons) and the narrowing of the centre traffic lanes will make it even more dangerous for vehicles to access and egress many properties;
- The use of HOV lanes will make the situation even more confusing and dangerous with more lane changes required and potential disruption with enforcement measures; and

2.2.2.

- Requiring land to be taken near the intersections is largely at the expense of footpaths which are even more narrow, making it even more difficult and unsafe for pedestrians.

[87] The PRAI and the TGAC argue that generally, the public is unaware of Transit's alternative proposal and has been denied the rights normally afforded them under the RMA in respect of the *Reduced Upgrade*. This includes the ultimate right to appeal. They therefore ask the Court to consider whether the NOR (as modified by Transit's notice of decision) properly describes Transit's alternative proposal in terms of s.168.

### Evaluation

[88] Section 290 RMA sets out the general power of the Court in regard to appeals and inquiries. Relevant to appeals, s.290(1), (2) and (4) provide as follows:

- (1) The Environment Court has the same power, duty, and discretion in respect of a decision appealed against, or to which an inquiry relates, as the person against whose decision the appeal or inquiry is brought.
- (2) The Environment Court may confirm, amend, or cancel a decision to which an appeal relates.
- ...
- (4) Nothing in this section affects any specific power or duty the Environment Court has under this Act or under any other Act or regulation.

[89] Section 290(1) provides the Court with the same power in respect of a decision appealed against as a person or entity against whose decision the appeal is brought (Transit). Section 290(1) must be read with s.290(4). In this regard, subsection (1) should not be read to limit or affect the scope of the more specific power of the Court under s.174(4) to confirm, cancel, modify or impose conditions on the requirement as it sees fit. Section 174(4) states as follows:

- (4) In determining an appeal, the Environment Court shall have regard to the matters set out in section 171 and may –
  - (a) Confirm or cancel a requirement; or
  - (b) Modify a requirement in such manner, or impose such conditions, as the Court thinks fit.

[90] Section 171 refers to the recommendation of the territorial authority and s.171(1) states as follows:

- (1) Subject to Part II, when considering a requirement made under section 168, a territorial authority shall have regard to the matters set out in the notice given under section 168 (together with any further information supplied under section 169), and all submissions, and shall also have particular regard to –
  - (a) Whether the designation is reasonably necessary for achieving the objectives of the public work or project or work for which the designation is sought; and
  - (b) Whether adequate consideration has been given to alternative sites, routes, or methods of achieving the public work or project or work; and
  - (c) Whether the nature of the public work or project or work means that it would be unreasonable to expect the requiring authority to use an alternative site, route, or method; and
  - (d) All relevant provisions of any national policy statement, New Zealand coastal policy statement, regional policy statement, proposed regional policy statement, regional plan, proposed regional plan, district plan, or proposed district plan ...

[91] The Court on any appeal therefore is required to revisit all the issues under s.171(1) as well as those arising from Part II RMA.

[92] Meanwhile in terms of s.172(2), Transit is able to modify its requirement only if this was recommended by the territorial authority (PCC) or only if what is proposed is not inconsistent with the requirement as notified. In so doing, Transit is required to give

reasons for its decision. We therefore looked carefully at the PCC's Recommendations and Transit's Notice of Decision dated 7 August 1998.

- [93] In Transit's Notice of Decision we observe that in terms of the Residents' concerns about the removal of sight planes, Transit's conditions in Appendix B of its decision record at Clause 12 that sight plane restrictions are to be deleted from a number of properties along Mana Esplanade. And in Clause 15 it is recorded that where it is demonstrated by the affected owner to Transit that the site restrictions are no longer required for the safe egress of vehicles, Transit is to give notice for the removal of that designation to the PCC.
- [94] The evidence disclosed that what has occurred since Transit's Notice of Decision of August 1998 was issued, is close examination of every property along the upgrade route in relation to access issues by Transit's traffic engineers and in particular Mr McCombs who gave evidence on the specifically affected properties to the Court.
- [95] Meanwhile, the PCC's Recommendations at Clause 10.6 to the Hearing Commissioners, indicated in evidence by Mrs Fletcher, included such matters as construction of new vehicle access lanes from SH1 for numbers 75 - 91 St Andrews Road, repair to a vehicle bridge over the Taupo Stream and new road crossings at 91 St Andrews Road. Where access is to be constructed along the frontages 75 - 91 St Andrews Road, any new fencing or hard paved areas are to be designed by a registered landscape architect. In addition, Transit has made various commitments to all residents whose properties may be affected along the length of the *Reduced Upgrade*.
- [96] Collectively, all of these issues have come through to Transit's *Reduced Upgrade* proposal in terms of s.172(2). None of these modifications made are therefore inconsistent with the NOR.
- [97] The fact that it is Transit's decision which is appealed therefore does not prevent it as a requiring authority from further modifying or refining its proposals if the refinements or modifications are found to have lesser adverse effects when the proposal is about to be assessed by the Court. Indeed the Court itself has the discretion to modify a requirement or impose conditions which reflect the best evidence placed before it under its clear powers in s.174(4)(b) RMA.<sup>4</sup>
- [98] Transit identifies the life span of most of the benefits of the *Reduced Upgrade* are long-term (e.g. the Plimmerton Roundabout and overbridge, acoustic treatment of dwellings, pavement renewal etc). In fact, the benefits can be achieved without recourse to any physical works, by amending the Transit bylaw which allows them to take place, and through proposed condition 55 of the Heads of Agreement (**Restrictions on the Operation of Kerbside Lanes**) subject to public process under s.181 RMA which provides for alterations to designations.
- [99] As to the expected time span of the *Reduced Upgrade*, Mr McCombs explains the regulation of the operation through the HOV/Clearway is in response to residents' desire for early construction of TGM. It shortens the period for which the *Reduced Upgrade* will provide congestion relief. Should the TGM construction occur later than 2005/2006 however, further years of capacity up to 2014 may be secured by modification of the regulation of the HOV/Clearway. To this end Transit has undertaken to consult with the community about the issue and this decision records that fact as a condition of consent.
- [100] With respect to sight lines, the nature of these restrictions in the light of safety concerns is to limit the ability of the residents to deal with their properties as they wish. They were the subject of concern to the PCC and the Residents. The sight plane restrictions in fact continue in place until the Court determines such a modification should be made to the



NOR. Transit found in its re-evaluation of the *Full Upgrade*, that as a safety aspect of the work they are no longer necessary. And in fact no traffic expert considered they should be retained. Instead Transit has provided site specific arrangements for each resident should they be required. In addition, the traffic management systems put in place - the combination of the HOV lane and light controlled intersections, and lack of parking on the Clearways will, as we identify later, provide sufficient time for residents to access their properties safely at peak hours.

[101] As to the different lane widths proposed by the *Reduced Upgrade*, Transit argues it is not credible to argue that any potential submitter would be influenced as to whether to make a submission on the NOR by the marginal changes in the lane widths proposed which in effect are largely of benefit to the local community. We accept that argument given the fractional extensions that have been made. The extensions increase the lateral clearances available to cyclists and vehicle manoeuvres at driveways. We discuss this issue further elsewhere under "Safety Issues".

[102] In respect of the argument that the proposed condition 55 amends the Clearway hours, Transit identifies it is noted that the AEE in the NOR specified that the hours "*may be varied depending upon future traffic and driver behaviour ...*" and did not propose that the hours be limited by a condition. Condition 55 specifies hours bearing in mind a reasonable expectation of some variance over time, as the AEE signalled.

[103] Finally, we observe that the existing highway is an existing physical resource owned by the Crown and controlled by Transit for the Crown under the Transit Act. There can be no inference that it is somehow "*owned*" by the local community and that it is the only party affected by the changes.

[104] SH1 is the Wellington region's strategically most important link. It is essential that it continues to provide a safe and efficient link for the benefit of all.

### Findings

- It is open to Transit to modify its proposal after the Notice of Decision on the Commissioners' Hearing has been released in order to further mitigate perceived adverse effects on the environment.
- The HOV/Clearway lane and its management in the way proposed, manages capacity and at all times leaves the way open for the TGM to be built. It is a modification to what was proposed in the NOR which was a Clearway along Mana Esplanade at peak hours. The traffic management arrangements are designed to keep heavy traffic in the centre lane away from the Residents and to their benefit.
- The Court has the power under s.174(4) RMA to modify all the issues arising from the NOR in the light of the most up-to-date evidence in such manner or impose such conditions as it thinks fit.



## Chapter 7: Matters To Which Particular Regard Is To Be Paid

### (a) *Reasonable Necessity for Designation*

[105] Section 171(1)(a) requires the Court to have particular regard to:

Whether the designation is reasonably necessary for achieving the objectives of the public work or project or work for which the designation is sought.

[106] It was submitted by Transit that the enquiry under s.171(1)(a) is to whether the *designation*, as a form of RMA approval, is reasonably necessary to give effect to the proposal (not as to the necessity of the *project* itself)<sup>5</sup>. Whether the location of the chosen route is appropriate or not is a matter for examination under s.171(1)(b) and it is important the respective roles of these provisions are not confused.

[107] Transit submits that confirmation of the requirement to enable the *Reduced Upgrade* is appropriate with regard to s.171(1) considerations. The objectives of the project are set out in the NOR and explained in Mr Rendall's evidence as follows:

- *To relieve existing congestion problems associated with this section of the SH1 coastal route; and*
- *To assist in ensuring that, during the interim period pending construction of the Inland Highway route, there is a sufficient level of service afforded in relation to the existing coastal highway route by enhancing traffic capacity between Plimmerton and Paremata.*

[108] A designation can function both in authorising the activity by the requiring authority (the "project or work") and restricting activity by others that would "prevent or hinder" the project or work. The designation is necessary, subject to the ability to exclude the sight plane restrictions and to reduce the designation footprint - as proposed in the *Reduced Upgrade*. The building line restrictions remain necessary so as to restrain land use and/or development of these few properties that might otherwise prevent or hinder the work. The designation serves to identify the project or work in the PDP to give the public a clear indication of the work intended and its conditions.

[109] Finally, Transit submits that the project will address the pressing need to provide relief from the congestion issues affecting this section of SH1. By so doing, the project will assist in enabling people and communities to provide for their social, economic and cultural wellbeing and their health and safety, in terms of s.5 RMA (to which s.171(1) is subject).

[110] In Mrs Foster's view, the question at issue is also not whether the *project* is necessary but whether the *process* of designation, under the RMA, is necessary to achieve the project objectives. Neither is the question concerned with whether or not the project objectives are correct. In this PCC concurs with Transit. Mrs Foster identifies that the designation is intended for two purposes:

- Identification of land to be acquired by Transit for road widening; and
- Identification of areas of land affected by a building line restriction.

[111] In the short term, Mrs Foster argues, Transit needs to be able to identify the land which is required for its project and to protect it from activities which might hinder the future work until such time as Transit acquires that land for the work. There are few alternative mechanisms which can secure Transit an equivalent means of identification and interim protection of land. The process of designation ensures that the land's intended future use

appears in the district plan and is clearly understood by all present and future owners. The designation will enable Transit to operate, maintain and repair the state highway consistently throughout for its stated road purpose more appropriately than district plan zoning or resource consents could do.

[112] Given the project objectives, Mrs Foster considers the designation is a necessary and appropriate means of securing the land and restrictions sought by Transit to give effect to the project.

[113] The Residents submit that due to the project's limited design life, the designation in the NOR is no longer appropriate. Any delay in TGM beyond 2005 will mean that there is not a sufficient level of service in the interim period pending TGM. Conversely, if TGM is significantly advanced, they argue that a sufficient level of service (with less risk of compromising TGM) could be achieved without Transit's proposed upgrade.

[114] In interpreting the objectives, therefore, it seems that the objectives themselves, the appropriate design life for the project, the level of service deemed to be sufficient and the reasonable necessity for any particular designation, are all dependent on the timing of TGM – a factor which is currently completely unknown.

[115] Mr W J Barclay, as Traffic Consultant to the Residents, asserts that Transit's strategy envisages that the proposed Clearways will be in operation for a 5 - 6 year period only. He considers this translates into a service life of 2 - 3 years and concludes for that period, the *Reduced Upgrade* is not worth the cost or disruption from the construction works. Nor is the *Reduced Upgrade* worth the impact overall on the Residents.

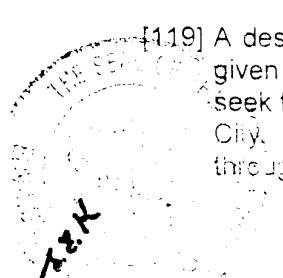
[116] Accordingly, the PRAI and the TGAC conclude the designation in the NOR is not reasonably necessary. Its use would be reasonably necessary to enable Transit to undertake the particular project now proposed *but* the reasonable necessity for any particular designation for achieving the objectives of the work is dependent on the feasibility and timing of TGM, the timing of the proposed upgrade and the interests of local communities, tangata whenua and the environment. The particular designation sought for the *Reduced Upgrade* is therefore likely to compromise the objectives by compromising the establishment of the Inland Route. Taking into account the adverse effects of Transit's *Reduced Upgrade* proposal, a reasonable person would conclude that a sufficient level of service in the meantime can be afforded without this particular designation.

### Evaluation

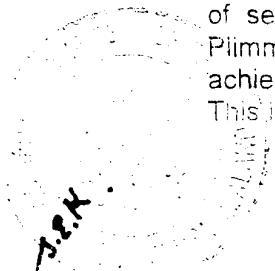
[117] A designation under Part VIII RMA is defined in s.166 as a provision made in a district plan to give effect to a requirement made under s.168 for a project or work: s.168(2)(a). It is a form of consent mechanism (as opposed to a resource consent) for large scale utility operations affecting the public interest.

[118] As the Court has found in a number of Transit cases, the issue is whether the designation *as a form of approval or authority* is reasonably necessary. It is not whether *the work* is reasonably necessary. This approach is reinforced by the wording of s.168(3)(a) which also refers to the reasons *why the designation* is needed - not reasons *why the work* is needed.

[119] A designation is a powerful planning tool because land under a designation is, in effect, given its own planning regime within the district plan. We note the PDP (Policy C7.1.4) seek to protect the corridors of the existing and proposed major transport routes in Porirua City. And the principal method for protecting future road routes and work on them is through designation.



- [120] As noted there is no need to take private property to benefit the wider public interest. Sight line restrictions are able to be lifted from private properties due to the reduced nature of the upgrade. The traffic management solutions as opposed to road building ones are themselves able to be altered solely within the existing designation.
- [121] The designation allows Transit to undertake the project in accordance with the conditions on the designation. It allows land for the project to be identified in the PDP to give a clear indication to others of the intended use of the land should they wish to locate its proximity. It will restrain land uses or development that would otherwise prevent or hinder the project. In narrow terms therefore, the designation as a form of approval is reasonably necessary.
- [122] We note (in any event) all of the proposed *Reduced Upgrade* between the Paremata Roundabout and Acheron Road may be undertaken within the scope of the existing designation contained in the PDP, with the exception of an indented bus stop on the west side of Mana Esplanade to the south of the Mana business area.
- [123] Therefore the redesigned Paremata Roundabout, the new Paremata Bridge and the kerb reconstructions throughout the length of Mana Esplanade, footpath reconstruction, the installation of traffic lights and pedestrian crossings, and the introduction of the HOV kerbside lane in fact may take place as of right.
- [124] Should then the designation be confirmed as the appropriate mechanism to achieve the objectives of the project?
- [125] The evidence suggests there are significant safety and congestion problems which the upgrade route and work is intended to alleviate. On broader terms therefore, the designation is reasonably necessary to achieve the objectives of the project.
- [126] In that Transit's specific objective is to provide a safe and efficient highway system north of Wellington, then our analysis of sustainable management issues and effects later in this decision shows that the *Reduced Upgrade* achieves just that. The objective of this particular work is not dependent on the feasibility and timing of TGM. In safety terms and congestion relief on SH1, the *Reduced Upgrade* is required now.
- [127] The AEE (background environmental assessment to the proposal) explains how Transit has developed a strategy for upgrading SH1 from Paremata to beyond Pukerua Bay and eventually building TGM thus:
- In the interim, the Plimmerton/Paremata Section Upgrade is one of three upgrade projects intended to relieve current safety and congestion problems and continue to provide a sufficient level of service (but without compromising the establishment of the Inland Highway route).*
- [128] Transit's objectives as identified in the AEE are also thus to relieve the existing congestion problem associated with this section of SH1 in the interim before TGM is built; and to assist in ensuring, during the interim period pending construction of the Inland Highway route, that there is a sufficient level of service afforded by enhancing traffic capacity between Plimmerton and Paremata.
- [129] With respect to the particular project objectives for upgrading SH1, we note that the level of service afforded only has to be "sufficient" by enhancing traffic capacity between Plimmerton and Paremata. The evidence of Transit experts indicated this is also achievable under the *Reduced Upgrade* through implementing the HOV/Clearway lane. This leaves intact Transit's policy to secure an inland route at some time in the future.



[130] We note too over-capacity on the subject route such as four laning along Mana Esplanade or any bypass alternative would not support the operation of a toll system on the TGM route (as an example). As the evidence demonstrates sufficient traffic capacity is able to be achieved through to about 2014 by changing how the proposed Clearway/HOV is operated.

[131] The *Reduced Upgrade* is both a short term strategy and one that may be made to last effectively until the TGM is commissioned, whenever that may be. It is generally agreed that the *Reduced Upgrade* Clearway option should be reviewed in five years time, and depending if other traffic options proceed, most of the significant changes under the upgrade may be reversed at that time. Removal of the HOV lane and the allowance of kerbside parking at all times are but two examples of the effects of such reversal.

[132] Meanwhile the designation as a form of approval preserves all these options.

### Findings

- There is currently a state highway designation along this route.
- Transit's objectives are to provide a safe and efficient state highway route from the Paremata Roundabout to Plimmerton, to relieve existing traffic congestion, and to provide a sufficient level of service by enhancing traffic capacity conservatively – without compromising the TGM.
- The *Reduced Upgrade* because of its modified nature and scope may take place in part within the existing designated road reserve in the PDP.
- The required designation is a reasonably necessary method to achieve the objectives of the work under s.171(1)(a).

### **(b) Alternatives**

[133] Section 171(1)(b) requires particular regard to be had to:

Whether adequate consideration has been given to alternative sites, routes, or methods of achieving the public work or project or work.

[134] Section 171(1)(b) requires consideration of whether the requiring authority has acted arbitrarily or given only cursory consideration to the alternatives.<sup>6</sup> It is not necessary to establish that the chosen alternative is the best of all available options.

[135] Before the Court, Transit identified:

- A number of alternatives were considered before a decision on the proposed *Reduced Upgrade* was made. Those options included "Do Nothing", various two lane and various bypass options (both for Plimmerton and Mana) and various lesser options for upgrading the existing route (e.g. tidal flow, painted median or centre lines through Mana).
- Investigations during options assessment, and when the chosen Clearway option was developed, involved multi-disciplinary consideration of engineering, traffic and environmental factors.
- The peer-reviewed re-investigation and re-evaluation of options which was undertaken following Transit's decision on the Commissioners' recommendation affirmed Transit's initial findings, namely that the Clearway upgrade was an appropriate choice.

[136] Mr McCombs' firm undertook different studies of alternative routes, before and after TGM was proposed.

<sup>6</sup> *Waimairi District Council v Christchurch City Council* C30/82, pages 24, 25; *Estate of P A Moran v Transit New Zealand* W 55/99 ("CBC"), page 34, QPM, page 35.

[137] Options considered within Mana during the original 1994-1996 investigations for route selection ("SH1 – Paremata to Pukerua Bay – Capacity Improvement Study – Summary Report" 1995) included:

- Relocation of lengths of railway, with a two lane bypass at the rear of residential properties facing Mana Esplanade;
- Similar, but with a four lane bypass;
- Further options, various combinations of two lane bypass and Mana Esplanade, including operating them as a two way pair;
- Morning and afternoon Clearways option, upgrading existing roadway using traffic signals at main intersections, kerbside parking during day (recommended design).

[138] In all, nine different Mana bypass options were assessed and two Clearway options. The *Full Upgrade* option was initially selected as most appropriate by Transit.

[139] Mr McCombs in his evidence-in-chief outlined in some detail an individual "*lesser design*" option – lesser than the *Full Upgrade* – that was considered before finally opting for the *Reduced Upgrade*.

[140] In addition he outlined the consideration (and reasons for rejection) of:

- (a) a larger (250 m) weigh lane (northbound) from the new duplicate two lane bridge coming to a single lane prior to Pascoe Avenue intersection.
- (b) "seagull island" treatment at either or both of the Steyne Avenue and Grays Road "T" intersections.

[141] **Mr B Julyan, a Consultant Planner**, employed by BCHF and who gave planning evidence for Transit, had this to say in respect of the applicant's consideration of alternatives:

- *both the initial options investigation, which preceded Transit's decision to lodge its NOR, and the subsequent options re-investigation, were informed by consultation and environmental investigation;*
- *both investigation processes were undertaken so as to enable Transit to consider and weigh up the alternatives with an open mind;*
- *in neither case could the investigation have been described as either arbitrary or cursory. In initial options investigative process was perhaps to a lesser level of detail than the re-investigation, but both outcomes were consistent.*

[142] We note that Mr Julyan was not cross-examined and so his evidence remains unchallenged. Mr Bradbourne, Town Planning and Resource Management Consultant to Transit, also affirmed that:

*More than adequate consideration has been given to other routes to achieve Transit's objectives ...*

[143] Mr Bradbourne was not challenged either on this conclusion.

#### The Reduced Upgrade

[144] It was Transit's case that the proposed upgrade and operation of the highway as a high occupancy vehicle (HOV) Clearway during peak hours is an effective means or method of overcoming the chronic deficiency in the transport facilities of the wider highway network.

J.R.H.

It affirms this solution was arrived at after extensive consideration of alternatives. Findings are:

- The Plimmerton to Paremata upgrade is needed now to alleviate congestion;
- Proper consideration has been given to alternatives;
- The reduced form of upgrade with operation of Clearways restricted to HOVs is an effective means of removing congestion and delays even pending the earlier construction of Transmission Gully; but it will also last longer in case, for example, Transmission Gully is delayed.

[145] Transit emphasised that a key factor is that both through and local traffic needs must be met, since inadequacy on either issue leads to congestion. Peak flow rates occur in the peak period, approaches from the north in the mornings and from the south in the late afternoons. Long queues develop upstream of the recognised capacity restraints at Plimmerton (southbound) and Paremata Bridge (northbound). Evening traffic backs up and affects unrelated traffic movements. Delays have worsened in some cases, but have not worsened in others as drivers divert through local suburb streets, causing new sets of delays. Congestion, delays and associated adverse effects are expected to grow worse.

[146] Transit therefore consider the use of the *Reduced Upgrade* Clearways as an option is effective and economic, minimises the use of private land; is an effective use of existing road resource; and the road can be returned when TGM is complete. In Mr McCombs' words "*the nature and form of the Reduced Upgrade design is by itself well suited to what is needed in a short to medium term project*".

#### Do Nothing

[147] This, says Transit, cannot be an option, because:

- Morning and afternoon peak periods will continue to lengthen by a further hour within the next 6 to 8 years;
- Individual delays would expand from about 11 minutes (weekday mornings) to beyond 30 minutes, and weekday afternoons from 16.5 minutes to beyond 45 minutes;
- Delays of around 16 to 20 minutes are tolerated, with drivers making choices to shift travel time or take alternative routes off the state highway.

Safety is also an important issue.

#### Do Less

[148] Mr Barclay raised the issue of small scale alternatives. He was not satisfied that Transit had made strenuous efforts to optimise operations within the present two lane regime. They also include signal controlled intersections, merge modification and increased capacity. We assess his suggestions under sustainable management and efficiency matters in considering the *Do Less* alternative but they are not of sufficient scale to address the obvious problems.

#### Transmission Gully

[149] The Residents' submission on s.171(1)(b) generally considered that the various means of reasonably meeting the objectives (indeed the objectives themselves) depend on the feasibility and timing of TGM. Because of the uncertainty about this, the consideration of alternatives should ideally cover at least the following possibilities:

- (a) TGM is completed in 2005/6 and any upgrade is completed by 2003;
- (b) TGM is completed in 2005/6 and any upgrade is completed around the same time;

- (c) TGM is completed significantly later than 2005/6;
- (d) TGM is abandoned.

[150] Transit's consideration of alternatives was initially based on possibility (c) – the likelihood that TGM would be completed around 2012 or later (and the upgrade could be completed earlier).

[151] The Residents consider that Transit's revised proposals are based on possibility (a), i.e. the expectation that TGM could be completed by 2005/6 and the planned *Reduced Upgrade* could be completed by about 2003. However there is no indication in Transit's evidence that lesser alternatives have been seriously considered. For instance, although the WRC's technical analysis suggests that a do minimum option (replacement bridge only) would have a higher B/C ratio, it is not seriously discussed as an alternative. Nor is a do-nothing alternative or the various options proposed by the Residents groups.

[152] Similarly, the Residents contend there has been no consideration of alternatives based on an expectation that possibilities (b) or (d) could prevail.

[153] The Residents identified that they appreciate that Transit is in an unenviable position because of the uncertainties regarding TGM and that it is difficult to cover all possibilities, but believe that consideration of alternatives has been inadequate in that:

- under both alternatives (particularly the original), dismissal of any two laned, grade-separated bypass alternative without further investigation was, in their view, arbitrary (citing what became known as the *Barlow Option*);
- under both scenarios (particularly the revised), consideration of alternatives involving more minor improvements within a two lane configuration (or no improvements) has also been either arbitrary or an oversight.

[154] Transit responded to those submissions by observing that whether TGM is constructed early or late, the proposal will deliver a much improved highway asset which will sit better with its urban environs and be capable of further adaptation in response to changing needs over time. Transit's strategy, contrary to what Mr Barclay indicates, is not to provide for Clearways for a 5-6 year period. The Clearways will remain in operation until construction of TGM.

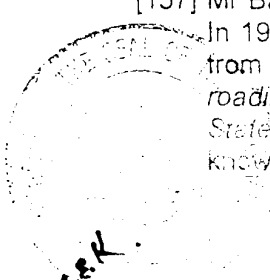
[155] Nor will there be a service life of only 2-3 years. The *Reduced Upgrade* provides for a number of permanent benefits including the new roundabout for the entry to Plimmerton and safer arrangements for school buses with the new James Street link, and traffic lights on Mana Esplanade.

#### The Barlow Option

[156] We do not intend to traverse the nine bypass and two Clearway options (reconsidered for Transit) in any detail, with the exception of the *Barlow Option* because:

- (a) Mr Barlow presented evidence to the Court on this proposal;
- (b) The indication from the Hearing Commissioners was that Transit did not fully consider this option in their re-evaluation process.

[157] Mr Barlow is a local resident/ratepayer living at Mana View Road and is a Civil Engineer. In 1992, in response to a Roading Authority Consultants public invitation for suggestions from local people, Mr Barlow offered a suggestion to "*try and solve existing and predicted roading and social severance problems for the Paremata to Plimmerton urban section of State Highway One*". This suggestion has been modified over the years and has become known as "*The Barlow Option*".





[158] Mr Barlow's proposal is for a two lane grade separated bypass using the existing rail corridor. The important features of this proposal include the following:

- Paremata north slip lane veers to left. Paremata south single lane overbridge enters Porirua motorway after crossing motorway lanes. The existing pedestrian overbridge may have to be relocated;
- All local traffic plus drivers wishing to visit/stop in Mana/Plimmerton, go straight ahead to unaltered Paremata Roundabout. Through traffic (60% of total flow) is further away from Paremata School. Only local traffic (40% of total flow) use existing Paremata Roundabout and Bridge;
- North Island Main Trunk (NIMT) Railway would be shifted approximately ten metres to the west. A new two or three line railway bridge to be built over the Paremata Inlet. The new two lane bypass would use the existing railway bridge. The new road reserve (contained within the existing railway corridor) would be 2 x 3.5 metre lanes plus 2 x 1.5 metre shoulders and room for an acoustic barrier and landscaping on the eastern edge. There would be no intersections on the bypass;
- An overbridge for vehicles and pedestrians would be installed at Pascoe Avenue. This bridge gives about a 1 to 15 grade, does not affect Ngati Toa Domain fields, and grade separates the intersection with bypass and the railway. The existing rugby club pavilion is lost with this proposal, but it can be reconstructed, again, without affecting fields on the domain, at either Pascoe Avenue/Cruising Club intersection or off the western end of Pascoe Avenue;
- The Mana railway station will have to be relocated;
- The relocated railway would meet the existing NIMT line at Shell Mana at the north of Mana Esplanade, bypass and railway would follow around Goat Point per the BECA<sup>7</sup> designs;
- Steyne Avenue intersection would be closed but a pedestrian subway would be installed here to give access between St Andrews Road and Steyne Avenue;
- The bypass runs through part of Plimmerton Domain to a new grade separation structure over the top of a roundabout at Plimmerton Drive.

[159] There are a number of positive aspects of the Barlow proposal, such as:

- No traffic lights;
- Reductions in travel time;
- Reduction in pollution and noise due to smooth flowing traffic;
- Will leave The Esplanade/St Andrew Road exactly as they are, giving the community a substantial reduction in existing community severance;
- Roadside residents have safer access to their properties;
- Pedestrians and cyclists have wide safe footpaths and substantial parking/buffer lanes on The Esplanade;
- Enhanced access to community facilities;
- Room for extensive landscaping, appropriate lighting and acoustic protection on The Esplanade, Steyne Avenue and Plimmerton Drive entrance and on the bypass;
- Little construction disruption or modification required to private property.

[160] The Commissioners' report considered that a bypass running between the fronts of the properties and the coast may be less preferable to those affected residents. But they noted that Transit already owns some of those properties.

[161] In a report put before the Court by Transit entitled "Mana Bypass Re-evaluation Options, Definitions and Issues, June 1999", the following was said about the *Barlow Option*:

*The proposal set out in Mr Barlow's 1998 submission is shown in Concept 14. It would be expected to be effective in traffic terms but its feasibility is dependent on the traffic engineering acceptability of complex bridging arrangements around Paremata roundabout and the Pauatahanui Inlet. These matters are discussed in the TFER.<sup>8</sup> Transit concluded that the extent of bridging and rail relocation would be inconsistent with its objectives to :*

- *Provide only sufficient capacity to complement the coastal section;*
- *Avoid delay in the construction of Transmission Gully by virtue of over capacity through Mana;*
- *Ensure the level of expenditure on the project is consistent with the long term future of the proposal.*
- *However, elements of the proposal have been incorporated in the bypass options located to the east of the relocated railway line that have not been eliminated.<sup>9</sup>*

[162] In a Transit document put in evidence headed "Appendix 2C; Bypass Re-evaluation and Clearways Reinvestigation", it was stated:

*Transit advised that it did not wish to have further evaluated, options involving a grade separation at Paremata roundabout, as these options would provide greater capacity than Transit's roading strategy for the area requires, involve a greater scale of cost than Transit was prepared to incur in addressing the congestion issues and could potentially delay the TGM project (by provision of over capacity).*

*On that basis, the MEAC<sup>10</sup> proposal (as presented in Appendix D of Reference 7) was not considered further because it required grade separation over Paremata railway station and Paremata roundabout. Similarly, the components of Mr Barlow's proposal (set out in Appendix C2 of the Traffic Feasibility and Effectiveness Report (Reference 6)), south of Pauatahanui Inlet were not evaluated further (although other aspects north of the Inlet that were consistent with Transit's objectives were considered).*

[163] A further reason for not pursuing the *Barlow Option*, or any other bypass option related to the viability of TGM as a toll road. According to Transit the viability of TGM as a toll road depends on the reversibility of any increased vehicle capacity provided on the existing coastal route prior to the commissioning of TGM and this would not happen under the *Barlow Option*.

[164] Meanwhile Mr Julyan in his rebuttal evidence for Transit believes that the *Barlow Option* is sufficiently characterised in the two lane options considered and the document in the AEE carried out in 1999.

[165] **Matiu Nohorua Te Rei, the Executive Director of Te Runanga O Toa Rangatira Inc** gave evidence on behalf of the Ngati Toa tribe. Mr Rei's evidence (which was not the subject of any cross-examination) demonstrated a preference for the "*Clearways option*" (*Reduced Upgrade*) over any bypass option. He said:

*We believe that these bypass options will seriously impact on Ngati Toa domain. Apart from the impacts on the physical facilities, there will be a significant impact on the spiritual level. ... The realignment of the railway tracks and construction of a bypass would be an unnecessary intrusion and impact more severely on its Mauri.*

<sup>8</sup> TFER, page 16, para 4.3.4.

<sup>9</sup> Mana Bypass Re-evaluation Options, Definitions and Issues, June 1999, page 6, para 2.1.

<sup>10</sup> Mana Esplanade Action Committee.

### Evaluation

[166] Mr Julyan's view was that Transit's obligation to provide a safe and efficient highway network would make it "difficult" for Transit to accept a *Do Nothing* option. The Court heard evidence from all parties describing the adverse impacts of the present traffic situation and for that reason we are more than satisfied that the *Do Nothing* option was given adequate consideration. The only support for this option came from the Residents groups concerned that any improvement in this section of the state highway system may compromise an early start to TGM. Transit's submission to the *Do Nothing* option advises:

*Doing nothing in the hope that this may advance the cause of TGM would worsen the highway/urban interface and conflict between the interests of local and regional communities. In this regard, such a cause is at odds with sustainable management.*

[167] Despite the view of some of the Residents that they would be prepared to accept the present traffic situation until the completion of TGM, we do not see the *Do Nothing* option as any way acceptable or sustainable in RMA terms and we discuss this further in the chapters which follow.

[168] As to the *Barlow Option*, prima facie there are a number of defects in Mr Barlow's proposal which are evident from presentation of evidence and cross-examination.

- It is inconsistent with the WRLTS, as it could delay the construction of TGM;
- It would not meet Transit's objectives in respect of the scale of cost as noted in Dr Ramsay's evidence (**Dr G Ramsay, Geotechnical Engineer and Team Leader for BCHF Resources**, employed on the upgrade project);
- It requires the use of and construction on TranzRail land (TranzRail having a veto under s.12 of the Railway Safety and Corridor Management Act 1992) the outcome of which is uncertain;
- It would affect the Plimmerton Domain over and above the extent to which it is already affected;
- It would cause further severance effects for residents in Plimmerton, intervening between the coast and houses, a number of houses being oriented towards the coast (although we note that some of these houses are owned by Transit);
- It is in conflict with the wishes of the Ngati Toa tribe.

[169] It is Transit which submits that the *Barlow Option* would result in further social severance problems associated with Ngati Toa Domain. We are not clear how this will be, given that the Domain is already adjacent to the NIMT Railway, itself a major contributor to social severance. And any increase in social severance contributed by the addition of the proposed bypass must be weighed against the reduction in social severance which would occur on Mana Esplanade as a result of the majority of "through traffic" using the bypass.

[170] Transit submits also that the bypass would create a significant adverse effect at Goats Point, with a "spaghetti junction" of elevated structures. But we are not clear how this can be either. As Mr Barlow states "*this is grade separated at each end and a bridge at Pascoe Avenue. Otherwise the total development is at or near grade*".

[171] Nevertheless we concluded the irreversibility of the *Barlow Option*, its cost, and the uncertainties surrounding TranzRail preclude any further exploration. It is inconsistent with Transit's objective for this particular work.

[172] As to the TGM, while clearly important to all parties to these proceedings, TGM is also an issue clouded in uncertainty. No evidence disputed the earliest that TGM could be constructed would be 2005/6. It remains an important part of Transit's overall roading strategy as well as that of WRC and the evidence at the hearing confirms this. But TGM

A.E.N.

is not an alternative to the upgrade. And it is misleading to describe it as such. Its scale, function and effect are very different from what is proposed with the *Reduced Upgrade*.

[173] It is worth bearing in mind also, that the TGM is already before the Environment Court and is in the process of mediation. There is nothing in evidence before us therefore to indicate that all parties in favour of the *Reduced Upgrade* see this as an alternative to the TGM. And even if TGM were to proceed earlier, its unpredictability would indicate that the positive effects Transit would achieve under the *Reduced Upgrade* and the fact that some of its aspects may be reversed to the benefit of the Residents if TGM proceeds, helped confirm in our minds that TGM has been given adequate consideration and that Transit has not acted arbitrarily.

[174] As to the other alternatives, we are satisfied they have been explored thoroughly as witnessed by the evidence of the Transit witnesses.

[175] In more specific terms the Clearway option of the *Reduced Upgrade* is to be reviewed. If that review shows the removal of the Clearway is appropriate at a later date and physical changes are needed to restore the kerbside parking lane to full time, then the works would be minimal.

[176] Nor do we see as the Residents do that the *Reduced Upgrade* will have a service life of only 2-3 years. It would clearly be adequate with minor physical changes for an extended period depending on the timing of TGM's construction. And in the meantime it provides many prominent specific benefits.

[177] As noted, the enquiry under this provision is as to the adequacy of consideration that has been given to alternatives. Following Waimairi District Council v Christchurch City Council<sup>11</sup>, the test of "adequacy" is assessed in terms of whether that consideration has been more than cursory and whether the requiring authority has acted arbitrarily. It is not necessary to establish that the chosen alternative is the best of all available options, although the evidence shows that the *Reduced Upgrade* is the best balanced solution of all available options considered.

## Findings

- We do not find the "*Do Nothing*" option or *The Barlow Option* as valid options in terms of s.171(1)(b).
- The *Barlow Option* and other bypass options create uncertainties as to whether they would obtain resource consents and they would conflict with the common objective of securing early construction of TGM and with the WRLTS Western Corridor Implementation Plan.
- *Do Less (The Barclay Option)* will, as the evidence demonstrates, be ineffective in relieving congestion and not alleviate safety issues.
- TGM is not an alternative option to the *Reduced Upgrade*. It is to be achieved during the lifetime of the *Reduced Upgrade* and is of a different scale and effect.
- The *Reduced Upgrade* has a narrow specific function for a limited period in time with many of its aspects reversible. Other aspects provide permanent specific benefits.
- The *Reduced Upgrade* is an appropriate option in the circumstances where the timing of TGM is uncertain. It is of a form and nature which allows other options to remain open.

Transit has given adequate consideration to *alternative sites, routes, or methods of achieving the public work or project or work* - and has therefore satisfied the assessment in terms s.171(1)(b).

<sup>11</sup> C30/611 at pages 24, 25.

(c) *Planning Instruments*

[176] Section 171(1)(d) requires that particular regard be had to:

All relevant provisions of any national policy statement, New Zealand coastal policy statement, regional policy statement, regional plan, proposed regional plan, district plan or proposed district plan.

[179] The appropriate provisions of the relevant planning instruments were fully evaluated in Mrs Foster's evidence for the PCC. The designation is not required to be consistent with the planning instruments but the Court is nevertheless required to give them particular regard.

[180] The Residents through Mr Morrison submitted the planning instruments are "*notoriously*" open to differing interpretations. Provisions are both consistent in some regards or inconsistent in other regards within the same planning document -- which it was submitted is the case here. Instead of pursuing those provisions therefore Mr Morrison focussed on two matters in the WRLTS with which the Residents took issue.

[181] The first was in reference to the WRLTS in providing *other safety and capacity improvements of SH1 between Paremata and McKays Crossing appropriate to the timing of TGM*. Whilst this was explained to the WRLT Committee as "*low cost and reversible*" the Residents consider neither would appear to apply to the *Reduced Upgrade*.

[182] Secondly, the explanatory note to the draft addition to the WRLTS was not intended to form part of that document and in fact no amendments were made to the WRLTS. The Residents consider it is therefore not appropriate for the PCC to use the explanatory note in Mrs Foster's evidence in the way it has.

*Evaluation*

[183] Because they were not challenged by the Residents, we do not evaluate the PDP provisions in any depth, identifying only the relevant ones where issues are raised.

[184] With respect to the WRLTS, we note it is not a planning instrument under s.171(1)(d), but its role in strategic transport planning is recognised in the WRPS and the PDP (under s.74 RMA), and in an indirect way it has relevance. In response to Mr Morrison's concerns about the statement on "*low cost and reversibility*" being unintended in the document, we note that in his evidence-in-chief **Mr A W Brennand, Manager of Transport Policy** for WRC, observed that the WRLT Committee did not place any constraints on the interim highway improvements in terms of design, other than they should be appropriate to the timing of TGM. The precise words in the Western Corridor Implementation Plan are to "*provide other safety and capacity improvements on State Highway 1 between Paremata and McKays Crossing appropriate to the timing of Transmission Gully*".

[185] We note too that at Attachment 6 to Mr Rendall's evidence for Transit "*Western Corridor Implementation Plan*" that it is the plan which expresses the fact that the requirement is not inconsistent with the WRLTS and will not compromise the agreed strategy for the ultimate construction of the TGM. As submitted by Transit, the fact that the *Reduced Upgrade* accords with the WRLTS is a relevant indicator of the fact that the option will assist to meet wider regional needs in accordance with the sustainable management purpose of s.5 RMA.

[186] As to public access in the Regional Coastal Plan, no part of the requirement is within the coastal plan. In terms of public access issues within the Coastal Marine Area, apart from temporary disruption during construction, public access will be maintained.

5.2.1

[187] In terms of the Proposed Regional Air Quality Management Plan, the proposal is consistent with those objectives and policies as we shall see in the discussion on air emissions later in this decision.

[188] The PCC's PDP Transport Policy C7 states as follows:

#### **C7 Transport**

**Objective C7.1** *To achieve a safe and efficient transportation network that enables the people of the City and the wider community to provide for their social and economic well-being without creating significant adverse environmental effects.*

**Policy C7.1.1** *To use a roading hierarchy as the basis for the management of the effects of traffic on adjacent activities, and the effects of activities on the transportation network.*

**Policy C7.1.4** *To protect the corridors of existing and proposed major transport routes in the City.*

[189] The plan's chief method of implementation for protecting future road routes is through the designation of land. The principle of designation is supported by its value as a technique to secure road corridors.

[190] The objective and policies are met by most aspects of the *Reduced Upgrade*, namely they endorse a safe and efficient transport network, providing for better social and economic wellbeing and as the evidence demonstrates, potential adverse environmental effects are able to be managed or remedied through conditions.

[191] We looked carefully also at Policy C7.1.5 as follows:

**Policy C7.1.5** *To encourage the undertaking of major road improvements in a timely manner and in a sequence, location and form that reflects comprehensive economic, social and environmental assessments.*

[192] The explanation to Policy C7.1.5 states:

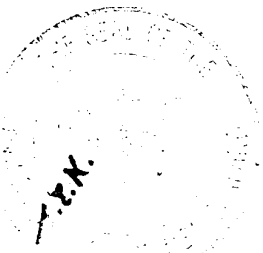
*This policy promotes a strategic approach to major road improvements so that these improvements are located and constructed in due time. Improvements that will be encouraged are those which aid off peak efficiency, address particular local, environmental and safety problems, and do not rely on additional capacity being provided on other sections of road.*

[193] Policy C7.1.5's principal method of implementation is "to continue to refine the overall strategy for the roads within and through the City, and for Transit New Zealand and Council to ensure that their programmes of road development work, are integrated, and anticipate the long term needs of the City".

[194] The principal reasons for Policy C7.1.5 are that:

*This policy seeks to ensure that the transportation network is developed in conformity with the Regional Land Transport Strategy, as referenced in the operative Wellington Regional Policy Statement.*

*The most significant roading issue for the City is the Transmission Gully highway scheme, which would comprise 21 km of new construction in the Porirua City district (9km from Rangi Heights to Pauatahanui and 12 km from Pauatahanui to the*



northern city boundary). Alternatives to this scheme include improvements such as incremental widening of the existing State highway through Mana, Plimmerton and Pukerua Bay and also the east/west cross links such as Grays Road and State Highway 58 alongside the Pauatahanui Inlet.

Council has a strong preference for the Transmission Gully route as a high priority. It is seen as having long term strategic benefit for the City and Region. However, it is acknowledged that the enhancement of the capacity of State Highway One is also necessary.

The policy seeks to encourage the agencies concerned to avoid incremental development work which might prejudice the best long term solution to the roading needs of the City and Region.

[195] We are satisfied that what Transit intends with the *Reduced Upgrade* is entirely consistent with Policy C7.1.5 and confirms what is stated in the explanation and reasons. In particular it does not compromise the timing of the TGM and is in conformity with the WRLTS. It is however an incremental work but is specifically intended to relieve peak hour congestion and will also assist with off peak efficiency. As Mrs Foster for PCC identifies, the *Reduced Upgrade* is required as a project in itself and does not rely on capacity being provided on other sections of the road. There is urgent need to improve the congestion problems and the resulting effects through the Urban Section.

\*[196] Policy C7.1.6 is also relevant, and provides:

**Policy C7.1.6** *To encourage major new developments and activities in a manner that makes best use of the City's existing and proposed transportation network.*

("Developments" in the context of Policy C7.1.6 means land use developments.)

[197] The *Reduced Upgrade* proposal does not offend this policy either. Essentially what is proposed is a traffic management system which makes best use of the existing roading network.

[198] We address other relevant provisions of the planning instruments more specifically elsewhere.

#### Finding

- The *Reduced Upgrade* proposal is not inconsistent with the relevant planning instruments, or the WRLTS.



## Chapter 8: Sustainable Management and Efficiency

### *RMA – Part II*

[198] Section 5 RMA states as follows:

#### 5. Purpose

- (1) The purpose of this Act is to promote the sustainable management of natural and physical resources.
- (2) In this Act, "sustainable management" means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while—
  - (a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
  - (b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
  - (c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment.

[199] Given the nature of the evidence, it is appropriate to also consider the issue raised under s.7(b) RMA as to the efficient use and development of natural and physical resources in respect of traffic and roading routes.

[200] Because of these provisions, to which the PCC should have particular regard under s.171(1), we are also required to assess the *Reduced Upgrade* proposal in the context of the sustainable management of the Wellington Region's resources.

[201] We assess various issues arising from the evidence which relate to the sustainable management of the SH1 upgrade route. We assess too the impact of the *Reduced Upgrade* modified proposal on the Residents and the facilities to the east and west of the upgrade route.

[202] The only issues identified are those raised by the Residents or their witnesses. Others, unchallenged, are taken as accepted. Some issues which relate more specifically to health and safety and amenity are referred to later in the decision.

### *Planning Instruments*

[203] As noted, Objective 7.1 of the PDP seeks to achieve a safe and efficient transportation network. Policy C7.1.2 states:

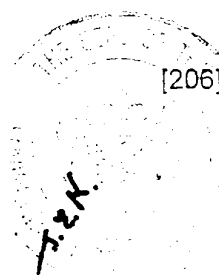
To ensure that the adverse effects of land use and development on the efficiency and safety of the transportation network are taken into account, and any intersection or frontage conflicts are avoided or minimised or remedied as appropriate.

[204] The developments along SH1 are adding their own pressures to the route. As well as providing for through traffic therefore, the urban interface has to be recognised and provided for.

### *Managing Traffic Sustainably*

[205] The nature of development and activities along the route of the upgrade serves combinations of both through and local traffic needs which escalate at peak times and particularly on Friday evenings, the weekends and public holidays.

[206] It is Transit's case that the modified design of the *Reduced Upgrade* now allows for as much of the construction as practicable to be undertaken within the width of the existing road reserve, while achieving the large majority of benefits to through and local traffic of the *Full Upgrade* design.





- [207] The result of this modification provides for much less intrusion on private property (sight line restrictions have been removed) while providing efficiency measures and congestion relief to both the local residents and the public travelling SH1. Mr McCombs said this:

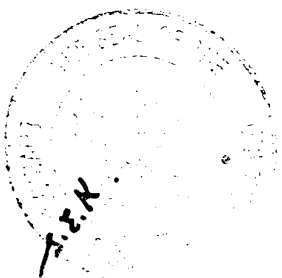
*In an overall sense, the primary strategic importance of the route as a State Highway is determined by the long distance movements. Equally, it needs to be recognised that the essential provision of adequate and convenient access to the Region generally, the port, airport, and specialist facilities, can itself only be assured if adequate provision is also made for local movements occurring along the corridor. Both needs require to be met since an inadequacy on either part results in congestion, as is occurring at present, and a resultant widening interference to the economic disadvantage of the region as a whole. The proposed upgrade is a component part of the overall strategy adopted by Transit NZ in providing effectively for the required combination of long-distance, intra-regional, and local traffic needs pending the construction of the Transmission Gully route.*

- [208] Transit's principal desired objective for the proposal is the avoidance or removal of waiting queues, and resulting shortened delays and lessened overall travel times and costs.
- [209] For local traffic, the objectives include easier access and shortened delays when turning to or from any of the individual side-roads and/or retail developments. With the degree of lengthening queues and entrapment now occurring at the Paremata Roundabout, this extends to include the desirability of improved and easier local circulation to and from Paremata and Whitby.
- [210] Other related objectives include lessening the traffic penetration from SH1 traffic now occurring within the Waitangirua and Whitby neighbourhoods (as described earlier) and the avoidance of the interference now beginning to occur at the Te Whakawhitianga interchange serving the northern end of the Porirua City Centre.
- [211] For Residents using local driveways to and from properties along Mana Esplanade itself, the immediate objectives within the *Reduced Upgrade* include maintaining the presently provided central painted median to facilitate local access and turning manoeuvres.
- [212] For pedestrians, local upgrading objectives include both maintaining and extending the ability and safety of pedestrians generally and in particular of those crossing the arterial flows.

#### Congestion Relief

- [213] Mr McCombs for Transit spelt out in some detail the effects of the current congestion on SH1. He estimated 300 vehicles in two lanes (150 vehicles in each lane) stretching 1 kilometre moving slowly over approximately the 5 kilometre stretch of road to the Plimmerton Weigh Station as having serious adverse effects. He described the situation thus:

- The congestion causes lengthening delays for commuter travellers: as at February 2000, the weekday morning period delays now average 11.5 minutes and are present from around 6.45 am – 8.15 am (90 minutes); the afternoon situation is 'complex'; the peak period waiting queues along SH1 to the south of the Paremata Bridge extend to about 1 kilometre in length averaging about 16.5 minutes delay.
- The congestion with queues and delays is a recognised feature on Saturdays, Sundays and public and local holidays.



- The congestion causes diversion of drivers through Whitford Brown Drive and local streets not intended for arterial travel; congestion is built up and time delays are experienced on these streets also.
- The congestion causes growing economic costs in terms of additional time and distance travelled, delays and queues at more distant intersections, increased penetration of neighbourhoods (with their own environmental costs).
- A significant history of accidents, including nose-to-tail collisions.

[214] If the Urban Section is left in its present form, it is Transit's case that the present morning and afternoon peak periods will continue to lengthen by a further hour in the next 6 – 7 years and individual delays will expand by about 30 – 45 minutes respectively.

[215] We had other extensive evidence from the Transit witnesses including Ms C N Johnstone, Chief Executive for the Chamber of Commerce and Mr N Hyde, Property Services Manager for Centre Port about congestion issues and the effect on the local and regional communities as a result. Mr Hyde told the Court that while supporting TGM, Centre Port also strongly supports the construction of the *Reduced Upgrade* as soon as it can be achieved. He said this:

*It is of note that 70% of goods passing through the Port either originate from or are destined for the central to lower North Island area and of these goods 30% move by road, principally over SH1. In terms of ferry passengers there are in excess of 1.2 million travellers of which an estimated 50% move to and from the Interisland ferries via SH1.*

*In an era where just in time inventory management is becoming crucial in order to keep the cost of manufacture and servicing down, the port is finding that cargoes are arriving just prior to ship loading and that imports are being removed almost immediately following discharge. This results in the movement of cargoes at all times of the day including the peak traffic periods where delays on SH1 in the Plimmerton-Paremata vicinity can result in cargoes not meeting, particularly for exports, the departure time of the vessel. Ferry passengers are also affected during peak traffic flow periods when endeavouring to meet departure times for ferries, as are the transport operators moving domestic cargoes to fixed timetable ferry services.*

[216] Mr Barclay for the Residents, too, realised the seriousness of the congestion problem although his brief was to review the investigations of others. Mr Barclay concluded:

*The seriousness of present traffic problems must be acknowledged. At peak hours the roadway has reached its practical capacity and there are delays for both through and side road vehicles. I am in no doubt about the need for an appropriate long-term solution to these problems.*

[217] Ms J Meade Rose, Consultant in Social Planning to Transit explained that the congestion identified by Transit gives rise to problems of access, safety, amenity issues and severance. Mr Brennand, for WRC, identified if there is no relief, worsening congestion will give rise to residents and businesses shifting from the area in the long term.

[218] And as will be seen under safety and amenity issues, the Residents along both Mana Esplanade and St Andrews Road also identified serious congestion difficulties and downstream effects stemming from these.

18.11.2014  
A&K

[219] Mr Barclay for the Residents approached the congestion issue as solvable in the short term, through a series of small scale operations and in particular optimisation measures within the present two-lane traffic regime. He considered, for example, the southern approaches to Paremata Bridge which involves merging two lanes into one could achieve traffic flows of 1600 – 1800 vph. He considered Transit should consider extending the length (currently at 60 metres) of the two lane section into the 90 metres one-lane length remaining on the approach to the bridge. This would, in his view, move the merge closer to the Paremata Bridge, the influence of the Paremata roundabout could be reduced and more storage space would be available for vehicles at the merge. A further advantage would be in shifting the merge from a place where there is a slight uphill grade to a slight downhill grade so that heavy trucks could accelerate away more quickly.

[220] Apart from capacity improvement, Mr Barclay considered such measures would reduce the length of time queues extended back to the Paremata Roundabout and into the high speed environment to the south. There are, he considered, corresponding benefits to traffic safety and efficiency. The witness described in detail improvements that could be made including kerblines changes to widen the approach to the bridge by an extra 1 to 2 metres, reviewing the cross-section of SH58 to obtain the extra width, and the closure of the left turn short cut from the bridge to SH58.

### Evaluation

[221] Mr McCombs' evidence identifies the cause of the current traffic problem as a lack of sufficient traffic lanes to cope with peak flows in the Urban Section of the upgrade:

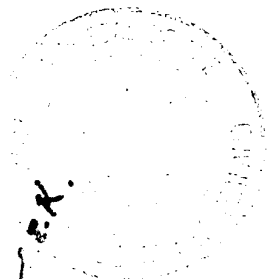
*At Paremata, the issue is simply that the levels of traffic demand exceed the capacity of a single lane flow not only across the bridge itself but also along the length of the Mana Esplanade and St Andrews.*

[222] We are satisfied from Mr McCombs' cross-examination that it is not the Paremata Roundabout and merge lanes which cause the congestion along the upgrade route but the limited capacity of Paremata Bridge itself and the highway through Mana. Mr McCombs stated that there is a curve and a merge in the road where it joins onto the bridge, which creates the congestion. He concluded that while it will be practicable to improve the merge rate slightly, with small gains being made, it would not be sufficient to clear up the up-stream queues and the present congestion would remain practically unchanged.

[223] Mr McCombs made it clear that the detailed capacity characteristics of the merge sections result from the combination of a whole series of diverse factors ranging from such matters as the width and curvature of the road, the proximity of the curves, the extent of the lateral clearances, the nature and mix of vehicle sizes, the presence or otherwise of other manoeuvres, the relative speed of vehicles, and the proportions of vehicles on either lane, to mention just a few.

[224] Both Messrs Barclay and McCombs measured the northbound flow rate as 1430 – 1550 vph. Mr McCombs considered local adjustments to kerblines and markings could be achieved to allow 1600 vph northbound onto the bridge. Mr Barclay however had identified 1600 – 1800 vph as being achievable. Mr McCombs disputed this figure stating:

*There are no examples anywhere within the environment of the Western Corridor that a two-to-one lane merge achieves a present capacity greater than the 1430 to 1550 vph that is measured at this particular location. As is plainly evident, this is wholly insufficient to meet the travel needs of the community in this area of the network.*



[225] Even if it was possible to increase the northbound flow rate across the bridge to a sustainable level, Mr McCombs identified that this would result in significant additional new lengths of standing and slow moving queues all along the length of Mana Esplanade. It would also create long delays affecting all the side roads and driveways off the Esplanade and impact on pedestrians and local access. The Transit witness described the Residents' proposal as having severe adverse effects on local circulation, property access to Mana retail businesses, and road safety issues. He stated *the queues instead of being south of the Paremata Roundabout then appear south of Grays Road and Steyne Avenue intersections and so obstruct all of Mana Esplanade through all of the evening peak.*

[226] We accept therefore it is not simply a matter of altering the length of a painted line. In this case we are dealing with a queue which is currently 1 kilometre long at peak periods. At Paremata the issue remains that the levels of traffic demand exceed the capacity of the single lane flow, not only across the bridge itself but also the length of Mana Esplanade and St Andrews Road.

[227] There was no effective rebuttal of Transit's evidence.

#### Clearways and HOV Lanes

[228] In response to dialogue between Transit and the appellants, Transit investigated the possibility of reducing, but not eliminating, the degree of extra capacity created during peak hours by the second lane along Mana Esplanade. This was to reinforce in part its commitment to the TGM. As a result of the investigations, it decided to introduce the HOV restriction on the use of the Clearways. The purpose of the modification is to keep trucks in the central lane, limiting the volume of traffic using the left hand lane during the Clearway hours, and enabling the resulting overall operating capacity of the scheme to be actively managed in a manner that more closely matches the immediate traffic carrying needs of the route, pending construction and completion of TGM.

[229] The *Reduced Upgrade* Clearways lane with HOV restrictions in place would require the additional lane provided in place of the kerbside parking during the Clearways hours to be limited by means of bylaws so that it is used by buses and other passenger service vehicles, taxis, and private vehicles carrying two or more persons. Bicycles and vehicles utilise the left lane for the purposes of left turning into or out of adjoining properties, commercial accesses or side roads. At the time of hearing the lane was to be indicated on the road surface with distinctive marking with the limits on vehicle types displayed on the sign.

[230] The HOV scheme in the southbound direction along Mana Esplanade would commence where the kerbside parking otherwise applies through the remainder of the day, just south of Acheron Road intersection and extend through to nearly opposite the Mana Marina Village. In the equivalent northbound direction, the scheme commences just north of Mana Marina Village in the vicinity of No. 5 Mana Esplanade through to about the vicinity of the Palmers Garden Centre site. During off-peak hours the initial length of this northbound section up to about Station Road would otherwise be available for kerbside parking.

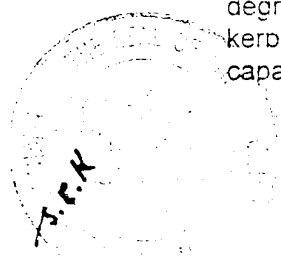
[231] The operating hours of the HOV lane would be the same as the recommended Clearway, being on weekdays 6.30 to 9.30 am southbound, and up to three hours between 3.30 to 7.00 pm northbound. Sundays and Public Holidays are identified as requiring an HOV/Clearway for a maximum continuous period up to three hours commencing 3.30 pm – 7.00 pm southbound. Proposed condition 55 relating to "Restrictions on the operation of kerbside lanes" in effect restricts Clearway operations to operate within such peak hours along Mana Esplanade.

S.R.H.

- [232] Mr McCombs identified the HOV scheme is not intended in response to a shortfall in capacity, but as a mechanism enabling an operational limit to the degree of additional traffic capacity created during peak hours by the addition of the kerbside lane. The requirement effectively limits the available capacity to around one and a half times that of just a single lane in the peak direction (approximately 30 – 35% of peak hour traffic).
- [233] Transit considered operating Clearways both ways north of Acheron Road all the way to the Plimmerton Roundabout but that proved impractical because it relied on just a single through-lane at Steyne Avenue and Grays Road in peak hours. That proposal was, Transit considered, insufficient to clear present levels of congestion leading to the inescapable conclusion that St Andrews Road required four laning.
- [234] It was the Residents' submission that the use of HOV lanes will make the traffic situation on Mana Esplanade more dangerous with more lanes required and potential disruption due to the need to carry out enforcement measures. The Residents along Mana Esplanade in particular were also concerned at the closer proximity of pedestrians to the streams of fast moving larger vehicles in the inner HOV lane.
- [235] Mr Barclay also was critical of the HOV lane in the Mana Esplanade environment and he did not view it as a trivial matter. In summary, he identified driver compliance issues, lack of experience of the Transit traffic witnesses with HOV lanes, sufficient vehicle capacity now until 2014 using conventional clearways, safety issues, possible violation rates, confusion for drivers in choice of lane, lengthy queues on approach to the lane, all as part of his concerns.

### Evaluation

- [236] We note in cross-examination, that it was acknowledged by Mr Barclay that the reason for the HOV Scheme is to reduce flows in the inside lane in order to reduce conflicts with residential access, parking and environmental impacts.
- [237] We note too that **Mr D G Heine, Principal Transportation Engineer with Opus International Consultants Limited** ("Opus") reviewed the investigation undertaken by BCHF (*Further Investigation Task: Corridor Arrangements September 1999*) which involved Clearways layouts similar to that proposed in the *Reduced Upgrade*. Mr Heine in his review of the *Reduced Upgrade* was satisfied the Clearways examples were appropriate and the assessment methodology and conclusions reached concerning the occupational characteristics of Clearways was reasonable.
- [238] Nevertheless we gave anxious consideration to the implementation of the HOV lane on the Clearways, considering like Mr Barclay, that it might introduce driver confusion on approaches, which would cause not only longer delays along the route but also significant enforcement issues. In addition, in conjunction with the Clearways system it could bring pedestrians closer to larger vehicles on the kerbside lane, possibly reducing pedestrian amenity.
- [239] Further, in respect of traffic carrying capacity, Mr Barclay considered that the HOV scheme will only make a marginal difference to the traffic carrying capacity of the highway – namely 200 vph whereas he would expect a difference of 750 – 1000 vph.
- [240] Mr McCombs pointed out however, the HOV scheme is not intended to be a response to any shortfall in capacity, but is a mechanism enabling an operational limit to the degree of additional traffic capacity created during peak hours by the addition of the kerbside lane. In essence, the HOV requirement effectively limits the available capacity to about one and a half times that of a single lane in the peak direction.



[241] This in turn results in a lesser degree of additional traffic capacity for the route as a whole. It means there will be less reduction in pedestrian amenity than anticipated for the few identified hours each day, with greater opportunity for motorists to access their properties along Mana Esplanade (with or without the assistance of the traffic lights).

[242] In our view of this evidence, there are distinct trade-offs from the system which have to be acknowledged.

[243] Mr Barclay raises the matter of the increased use of the HOV lane occurring with the addition of turning traffic, with a further allowance for 10% violations by ineligible vehicles. He estimated a potential lane – choice split of above 43.2%. And he suggests restructuring the HOV to 3+ occupants to provide a 20 – 30% estimated usage in order to give better service.

[244] Mr McCombs however said this:

*"A 3+ scheme would substantially increase the number of occasions when queues would form on the approach to the lane. In both morning and afternoon peaks, there is potential for long queues to extend back into a high speed motorway-type environment. At both Paremata and Plimmerton, the queues will be in the right-hand lane with fast-moving traffic passing on the left. In safety terms I regard this as less satisfactory than having a queue in the left lane, where drivers in the queue have good visibility of cars in the adjacent lane.*

*The queues would also complicate operation of the two roundabouts. At Paremata a third approach lane has been added to reduce the problem but this is not proposed at Plimmerton."*

[245] Mr McCombs satisfied us that the proportion of traffic using the kerbside lane will reduce, achieving a workable outcome through a range of 30 – 35% of peak hour traffic. It appears most (90%) of the trucks through the area (and which have a major impact) are estimated as the result of survey ineligible to use the bus lane. And it is considered that particular conditions in the Western Corridor that produce the relatively high vehicle occupancies now, will prevail into the future.

[246] There is thus no evidential justification that we could ascertain to alter the HOV definition to mean *"vehicles with 3 or more occupants"*. The critical factor is to provide for a consistent flow of traffic along the esplanade at controlled progression speeds, while at the same time sustainably managing capacity so as not to conflict in any way with the introduction of the TGM.

[247] As to enforcement issues Mr McCombs also satisfied us that there were adequate layby areas along the upgrade route in which to police the scheme and that following vehicles will not be held up in that process.

[248] With regard to adequate driver notification of the HOV system it was explained that the HOV signage required to be displayed in the area of St Andrews Road in between Pope Street and Goat Point, is part of providing sufficient length for drivers to adjust and change lanes if necessary. In the northbound direction, this is provided for over the 400 metre length from north of the Paremata Roundabout.

[249] There was some discussion between the Court and Mr McCombs about the short length of the HOV lane through Mana possibly creating commuter confusion. Mr McCombs acknowledged that good signage and a properly prepared publicity campaign will be required. But, he observed, because the operation is shorter in length through the series of controlled traffic signals, compliance will be more readily achieved because motorists cannot gain much of an advantage by illegally using the kerbside lanes - *travel in both lanes will occur pretty much at the same speed ... [it is] really a*

*matter of road management rather than ... providing large and obvious advantages to one particular group of drivers* he said.

- [250] And as to traffic accidents on Clearway/HOV lanes, Mr McCombs stated that the safety records of Clearways give no indication of difficulty or a reported pattern of accidents involving driveways or a related lack of inter-visibility between vehicles. He had reviewed the Clearways along sections of Great South Road, Dominion Road, Manukau Road and Balmoral Road in Auckland, having somewhat similar footpath widths (varying between 1.9 metres -- 3.5 metres). McCombs had had direct experience of the implementation of some of these. Mr Heine's evaluation of and conclusions about the system were an additional endorsement of Transit's approach.
- [251] Proposed condition 55 binds Transit to peak hours for the operation of the HOV lane. As Mr Julyan identified, if it is ever to be otherwise Transit would have to secure a change or alteration to the designation, pursuant to s.181 RMA which provides for public participation.
- [252] Finally, we concluded that for the times the Clearways with HOV are in use, at the speeds identified by Mr McCombs (29.6 km/h am and 29.3 km/h pm at year 2004 (peak direction journey speeds)), through a series of light controlled intersections, the proposal is neither unsafe nor unsustainable. We find the Residents' criticism in regard to the HOV/Clearways issue is thus unfounded.

#### Levels of Service

- [253] The network model adopted by Transit for the *Reduced Upgrade* replicates all intersections and significant commercial driveways along the length of SH1 stretching 1.84 kilometres from 200 metres north of the James Street intersection to the northern abutment of the Paremata Bridge. This is a critical area along which to provide a satisfactory level of service. Intersection Performance was also a critical part of Transit's review of Option 3A (and subsequently forming the basis for the *Reduced Upgrade*). Transit considers that it achieved the best practical balance in terms of the resulting level of service to both local and through-traffic, sufficient operating life to adequately handle projected growth in both the short and mid-term periods (until the alternative inland TGM route is constructed) and reduced property impacts.

#### Evaluation

- [254] Currently there exists a single lane at the Steyne Avenue and Grays Road intersection in peak hours with resulting limitations. It is clearly insufficient to clear the present levels of congestion. We noted in an aside when discussing accident patterns, which we describe elsewhere, Mr McCombs stated that the accident pattern at the Grays Road intersection with St Andrews Road was *not a particularly pretty story*.
- [255] Transit identified in assessing arterial route travel times and levels of service between the Paremata Roundabout and 200 metres north of James Street, that the *Reduced Upgrade* proposal would achieve northbound a range between 37.9 km/h am to 35.2 km/h pm weekdays northbound in the year 2004, and 34.3 km/h am to 36.6 km/h pm weekdays southbound. The year 2014 for levels of service are somewhat less than those. We note an appropriate level of service for urban arterials having a free flow speed of 50 kph/hour is 45 km/h (A) and 35 km/h (B). It was Mr McCombs' evidence that levels of service A to D are able to be regarded as satisfactory in peak period traffic while levels of service E to F convey increasing levels of intersection failure and delay. So we conclude that in the shorter term, satisfactory levels of service can be achieved under the *Reduced Upgrade*.

J.E.H.

[256] Mr McCombs also identified that the overall level of service provided to side road entering and crossing movements is confined in his overall route analysis as being significantly improved by the installation of traffic signals. HOV limits produce slightly higher delays but the level of service provided to all users remains within the acceptable range of C – D. Sufficient capacity will be available for side road demands to be accommodated with tolerable limits. Extremely high delays were assessed at Grays Road during the am peak, and Pascoe Avenue on Saturdays if the present priority - controlled intersection is to be continued.

[257] Mr McCombs said in relation to Option 3A:

*"The reduced upgrade design concept is shown as capable of achieving:  
(a) satisfactory overall level of service; (b) corresponding to an achieved 32 km/h journey speed with average side road delays of around 17 seconds lengthening to an assessed 26 seconds by the year 2014.  
Such a design is shown in these terms to represent and provide an effective performance and amenity in a balanced manner and meeting the needs of both through and local traffic."*

[258] Various witnesses including the Residents spoke of the excessive speed of vehicles along the upgrade route particularly at night. This had adverse effects, including vibration and noise.

[259] With the installation of traffic lights throughout the upgrade route and the urban residential section provided by the two roundabouts at either end of the upgrade route, Transit identified that it is necessary for roundabouts to be closer to the built up area so the motorists do not have to speed up after leaving the roundabouts and in particular in relation to James Street and Grays Road at Plimmerton.

[260] When asked what would happen to motorists' speed faced with a four lane highway over some 600 metres from Steyne Avenue to Acheron Road, Mr McCombs observed that Transit's expectation is that with a posted 50 kph area and surrounding urban development, motorists will be aware they are in a restricted speed area and will as a consequence be required to observe the legal speed limit. In effect this will be little different from the current situation off peak.

[261] When asked about off-peak times traffic which will be moving from a single lane through Mana Esplanade and will then be faced with a two lane section from Acheron Road to Steyne Avenue, Mr McCombs was unable to identify what is well over the posted speed limit now. But the witness considered that he did not expect the speeds will change very much from what he forecasts along Mana Esplanade. From the progression speed along Mana Esplanade between the signal gaps up to 42 km/h Transit identified that when drivers travel north through Acheron Road and round into St Andrews Road the crossing still has the same relatively controlled lane widths and central median. The resulting environment is not expected to alter travel speeds.

[262] Mr Barclay for the Residents identifies that for travel in the southbound direction signal controls of the key intersections at the Grays Road and Steyne Avenue will be of benefit in developing the full capacity of the road. He believes that whatever option is chosen, signal installation should be considered - regardless. This solution, as Mr McCombs identifies, is what is recommended within the *Reduced Upgrade* proposal. Five traffic controlled intersections are to be provided.

[263] We noted the majority of traffic demands are along the upgrade route and the majority of green time will be devoted to through traffic. But one of the key aspects of the upgrade is to give more equitable distribution of green time to side roads as well. The use of "stop" or "give way" signs would not provide satisfactory levels of service to traffic entering or crossing the highway to and from the side roads.

3.2.2.



[264] In addition there will be pedestrian controls also at the traffic lights (the button creates demand on the system and the system responds). But rather than holding up through-traffic with pedestrian demands, Transit satisfied us the average waiting time will be between 35 to 45 seconds for pedestrians crossing the highway with the largest waiting period about 80 seconds if pedestrians are unfortunate enough to arrive just as the crossing light has finished.

[265] Pedestrian crossing is in fact timed to fit in with the overall greenwave progression so that the overall interaction between both vehicle and pedestrian movements are all controlled in sequence and that sequence itself determined within the overall progression required along the route.

#### Four Laning in St Andrews Road

[266] The impacts of four laning in St Andrews Road will involve:

- 2 metre high acoustic barrier fences
- a cut in bank opposite the Steyne Avenue intersection
- a raised central median between Steyne Avenue and Plimmerton Roundabout (the low mountable kerb type rather than the solid vertical barriers)
- the removal of 1 house and relocation of 2
- a 3.5 metre kerbside and 3.0 metre right hand lane

[267] It was Mr McCombs' evidence that because of the particular characteristics of St Andrews Road, the close proximity of the intersection spacing, the volumes of through and turning traffic, the road alignment, the necessary provisions for pedestrians and the nearness of the rail level crossing, the provision of two traffic lanes in each direction along this road is necessary for achievement of the overall performance objectives for the *Reduced Upgrade*.

[268] By contrast, and if four lanes are not able to be provided, the resulting inefficiencies would produce fresh adverse effects throughout the area in the form of standing queues and delays within the central portions of the route. This will affect side roads and residential and commercial frontages across the adjoining neighbourhoods.

[269] As to the desirability of encouraging southbound traffic to keep to the centre lane further away from the residential frontages in St Andrews Road, Mr McCombs considered it practical to provide variable message signs which will actively manage traffic away from the residences particularly at night when trucks are particularly disturbing.

[270] Mr Barclay for the Residents did not give evidence on the St Andrews Road proposals apart from a reference to the need for traffic lights. But Mr Lambie, as the Residents representative, had this to say:

*"The proposal for St Andrews Rd is for a fulltime four lane highway, including a raised central median north of Steyne Ave. The only thing with any element of sustainability in this proposal is the sustained pressure from TNZ to force a four lane highway through this narrow residential area. ...*

*It is difficult to imagine how in effect doubling the width of the road, putting in a raised median to prevent cross traffic, erecting a concrete wall which will block some view of a seashore, moving traffic 2-3.5 metres closer to houses, installing traffic lights will not make residents feel more cut-off, more exposed to the adverse effects of traffic more regimented and controlled and more threatened and intimidated."*

*A.B.K.*

[271] For her part Mrs Foster for PCC did not see that Transit's proposed changes along St Andrews Road are reversible when the *Reduced Upgrade* gives way to the TGM.

[272] The residents at 83-91 St Andrews Road will not be able to turn right into their accessway from SH1, nor will they be able to turn right onto SH1 – because of the raised kerbed median.

[273] Dr G Ramsay, during cross-examination, indicated that some of those residents already parked their cars in Grays Road and walked because they are already experiencing difficulties – the proposed upgrade will present a "*safer method of access than currently exists*" for those residents.

[274] Dr Ramsay also indicated that the houses at 150-180 St Andrews Road will be closer to the kerbside (by between 2-3 metres).

### Evaluation

[275] Whilst a traffic efficiency issue, we consider four laning along St Andrews Road also has traffic safety implications as seen under the heading of *Safety and Amenity Issues*.

[276] But there are particular characteristics to St Andrews Road which have led Transit to require four lanes as follows. The road:

- carries a series of closely spaced intersections
- exhibits associated intense local turning and pedestrian movements within a 420 metre curved stretch of SH1 between James Street, Grays Road, Steyne Avenue and Pope Street
- has greater volumes of side road traffic generated in St Andrews Road at the Grays Road and Steyne Avenue intersections compared with the otherwise small side road volumes occurring along Mana Esplanade
- the existence of the railway level crossing
- has a curved road alignment around Goat Point.

[277] Mr McCombs stated:

*This has the effect in St Andrews Road through peak and off peak hours of requiring a proportionally greater amount of the green time at the traffic signals to be used by the side road and a correspondingly lesser proportion of the total available green time for main road flows. This factor is further accentuated by the need to achieve "greenwave" co-ordination between the closely spaced intersections in this section of the route.*

*The result in traffic engineering terms is that two traffic lanes are required to be available along St Andrews Road in both directions at all times of the day, and with a 50/50 split in each lane in order for the overall scheme to achieve satisfactory performance.*

[278] When we examined all these matters and saw the situation for ourselves on our site visit, we are now clear that the particular design outcome with two traffic lanes in each direction was required compared with the requirements along Mana Esplanade. If it is not carried out, the principal southbound queues would remain while along all northbound peak periods there would be standing queues within the neighbourhood and along the whole length of Mana Esplanade.

[279] The curved road alignment of St Andrews Road around Goat Point and through the intersections requires driver sight distances and operating safety measures in a difficult area. The difficulties are accentuated by the combination of volumes of turning traffic

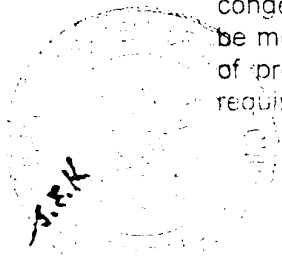
*S.R.K.*

from Steyne Avenue and the proximity of the railway level crossing which requires additional space for stacking of vehicles between the stopline and railway tracks.

- [280] We agree with Mr McCombs two through lanes are necessary if the proposal is to achieve its required overall objective of clearing the delays and enabling operations through to 2005/6 and providing a satisfactory level of service.
- [281] With regard to Mrs Foster's concerns that the four lane section north of Steyne Avenue will create some enduring environmental effects, we noted with interest Mr Julyan's rebuttal evidence. The traffic volumes turning north from Steyne Avenue are not likely to alter he stated and whilst full reversal may not be practical, it may not be desirable either. We note there are likely to be further housing developments in Camborne and Plimmerton itself in years to come which will impact on this route. There may be some wisdom in future years in leaving matters as they are, but that is for the Residents, Transit and the PCC to decide at a future time.

#### The Paremata and Plimmerion Roundabouts

- [282] The reassessment of SH1 options by Transit originally left the Paremata Roundabout in its existing form. But the re-evaluation of the local traffic related effects associated with the roundabout and the service station and inter-connections with local roads determined an upgrade of the roundabout should proceed.
- [283] It arises from consideration of the particular details of the intersection operation and the identified need to provide for and improve the amenity and convenience of traffic movements to and from the local roads in the vicinity.
- [284] Mr McCombs made it clear that the greatest gain for the area as a whole in this respect comes from the ability of the upgrade plans to remove and avoid the occurrence of extensive queuing on the approaches and the resulting entrapment of other traffic to and from the local streets and Whitby that has been the principal cause of difficulty and breakdown for the present roundabout operation.
- [285] The plans will also relieve the present patterns of intrusive behaviour by motorists experienced across the forecourt of the adjoining Mobil service station where Mobil have to put chains across to prevent motorists from using it as part of a rat-run.
- [286] Under ideal conditions, while we accept the practical flow rate around the Roundabout may well be increased, Mr McCombs made the point that the occurrence of only some trivial or otherwise almost unnoticed event in the interaction between drivers, will cause speeds to slow and trigger congestion. Currently any reduction in levels of use however apparently takes one to two and a half hours to clear.
- [287] The Residents had concerns about the safety and difficulty they have of getting out of the Paremata Railway Station. At the moment they have two lanes to cross; the new arrangement will mean three.
- [288] It was Transit's evidence that patrons travelling from Paremata, Papakowhai and Whitby will have the right of way on the roundabout and Transit does not expect there will be any difficulties with entry at peak hours. Currently motorists on SH1 travelling north who have right of way, generally give way to people exiting the carpark as traffic is often slow moving and normal courtesy applies. With the *Reduced Upgrade* the congestion on SH1 northbound will be removed and it is therefore recognised that it will be moderately difficult to exit the carpark. But Transit has identified alternative means of providing a southern exit to the carpark to the southbound traffic should it be required to alleviate any future difficulties in that regard.



- [289] A new roundabout at the northern end of Plimmerton is to be created to provide for required side road connections to Plimmerton Drive and via a new link to James Street. This roundabout, as does Paremata, also marks the transition for drivers between the fast open road sections of the route and the slower suburban characteristics of the route through Mana.

#### Parking Along The Upgrade Route

- [290] One of the concerns for both Residents and businesses along the *Reduced Upgrade* route has been the question of parking. Draft conditions 50-52 require Transit to provide carparking to replace existing carparking arrangements that will be removed with the upgrade.

- [291] We note that in relation to parking the PDP provides as follows:

**Policy C7.1.9** *To ensure that all activities provide adequate on-site visitor parking.*

The explanation to Policy C7.1.9 states that this policy *is aimed at ensuring that little or no reliance is placed on the roadside as a parking area.* This in effect means for businesses as well as for residents.

#### *Paremata Station*

- [292] The responsibility for the Paremata Railway Station carpark lies with the WRC. Six existing carparks will be lost in creating the new roundabout and these will be replaced under a condition agreed with PCC and WRC at its southern end. There is substantial room available for extending that carpark even further to the south should it ever be required.
- [293] Mr McCombs made the point that there is another carpark available to the Paremata commuters on the other side of the highway. The railway station is able to be accessed from the carpark across the pedestrian overbridge. Thus there are choices available for commuters who feel they may not access the roundabout easily because of the faster traffic flows through the area caused by the operation of the *Reduced Upgrade*.

#### *Mana Esplanade*

- [294] Along Mana Esplanade there is carparking outside the Bridge Shoppe, the dairy and medical rooms which (we were told) also affects sight distances from the Marina View intersection with Mana Esplanade.
- [295] Mr G and Mrs H Dinou live behind the Bridge Shoppe which, along with Omega 3 Seafood, is owned by them. The business shares a narrow service lane leading off Mana Esplanade and they also use Marina View for vehicle access.
- [296] With respect to the Bridge Shoppe, it was explained that 99% of the custom is from passing traffic, most of it northbound. Customers generally park outside the shop. The Dinous believe that if the parking directly outside the shop is occupied, potential customers will be dissuaded from stopping. The same will occur with Omega 3.
- [297] New recess parking bays are provided in the plans for northbound drivers in the new length of Mana Esplanade between the new bridge and Marina View. This will be before reaching and relatively convenient to the Bridge Shoppe and 65 metres away from Omega 3 across Mana Esplanade. In addition 7-8 angle parks are to be made available at Marina View (40 metres away from each shop).

- [298] Mr Julyan meanwhile identified that the *Reduced Upgrade* will provide for kerbside parking all along at least one side of Mana Esplanade at all times. Proposed condition 55 requires this.
- [299] Transit has also now, through Mr McCombs, concluded that parking along the kerbside can be permitted to extend to the southern boundary of 5 Mana Avenue. This extends to the waterfront parking area as suggested by Mr and Mrs Dinou. The parking will be available at all times except at peak periods when the southbound Clearway is operating.
- [300] Meanwhile proposed condition 50 provides for the replacement of carparking spaces in James Street whilst the on-site parking available currently at St Barnabas Church (in fact a road reserve) will change with proposed condition 52 providing for new parking in the Redoubt Lane area. This is land owned by Transit which will provide some alternative to kerbside parking otherwise not available at peak hours and for local users.
- [301] In addition, other recessed parking is provided for shop owners on the western side of Mana Esplanade for those travelling north.

#### *St Andrews Road*

- [302] No kerbside parking is allowed along St Andrews Road now. A downstream effect of four laning on St Andrews Road is that kerbside parking will remain restricted because of the insufficient physical width of the road.
- [303] After carefully traversing all the options it was Mr McCombs' judgement that whilst 2 or 3 kerbside parking spaces might be possible about the frontage of 158 St Andrews Road, their provision would not be safe. Mr Davin for the PCC confirmed this view. And when members of the Court were standing on the Plimmerton Overbridge at the time of the site visit, we saw from that vantage point the volumes of traffic discharging down this section of the intended upgrade in the mid-morning. The existing difficult situation was made very clear as we watched a car travel *down the western footpath* to access a residential driveway. The speed and the degree of the following traffic made it difficult for the driver to turn directly from the road into the driveway.
- [304] Mr McCombs identified 5 parking spaces as available for the Residents, businesses, and visitors on the open southwest corner of St Andrews Road and Steyne Avenue. He commended this option to us. A further possibility is to provide an area of up to 8 cars on part of the land owned by Transit at 77 St Andrews Road by widening and making a use of a portion of the proposed accessway leading in from Steyne Avenue. The existing footpath would remain.
- [305] We looked carefully at these proposals concluding that both sites should be provided as they are an improvement to what exists. A copy of a map taken from Mr McCombs' supplementary evidence (Attachment 3) shows the site of the 5 carparks with traffic calming measures at the open southwest corner of St Andrews Road and Steyne Avenue. The landscaping proposed may raise questions as to safety of the vehicles in that particular location but we had no direct evidence on this.
- [306] Meanwhile Mr McCombs proposed an additional condition suggesting five additional carparks with further consultation with the Plimmerton Residents – proposed condition 52A. It is a condition we have adopted because it has to be in the Residents' best interests.
- [307] Mrs Bradey, a resident, considered the four laning was going to cause major problems for parking on site. She would no longer have space to drive off the road and into the garage. She currently uses outside her house on the grass to park or along the side

7.2.1

the garage. Mrs Bradey considers that if the upgrade takes place she would have to use this space to do a very tight reverse turn to put her car into the garage "so I will have very little parking of any description anywhere". Other Residents had similar problems.

[308] Transit has offered property improvements such as the on-site turning provisions previously to various owners. The Court was informed that Transit will stand by these offers, despite the lack of any safety need for the sight plane restrictions.

### **Property Impacts**

[309] As noted elsewhere, the *Reduced Upgrade* significantly reduces the extent to which residential properties are affected by land taken or restriction on land uses. This had been of considerable concern to the Residents.

[310] Ms Meade Rose for Transit observes:

*"The removal of the site plane restrictions will simplify these issues, as less modifications to properties will be necessary. As a result, there will be greater flexibility available to attain Transit's social objective of mitigating the effects on lifestyle values and amenity."*

[311] No traffic expert argued for the retention of sight line restrictions over private property. The two peer review traffic experts (Mr Dickson called by Transit as well as Mr Heine) did not advocate their use, nor did Mr McCombs.

[312] The *Reduced Upgrade* avoids the need for taking of land along Mana Esplanade. North of Steyne Avenue however one residence needs to be removed from 75 - 79 St Andrews Road. It is the only one which is required to be demolished and is owned by the Crown and three others have been purchased by Transit.

[313] We were advised by Transit it has assessed its relationship with Residents' property on a property by property basis. It seeks a process of negotiation with individual owners in accordance with the Public Works Act 1981. If agreement is not able to be reached with the landowners at 75 and 79 St Andrews Road, Transit would purchase these properties.

[314] By contrast with the original upgrade, the *Reduced Upgrade* now considerably mitigates the extent to which private property modifications or restrictions are necessary for the proposal. Transit advises through Dr Ramsay and Mr Rendall, those modifications are now essentially confined to:

- Nine properties required to be purchased or modified north of Steyne Avenue to provide the modified and safer access arrangements.
- The effects on part of the Plimmerton Domain are to be the subject of property negotiations within the Heads of Agreement and the associated Public Works Act.
- Building line restrictions for four properties in the vicinity of the Steyne Avenue cut-face retaining wall, to protect the wall.
- Modifications to access arrangements have been negotiated and settled by consent orders with McDonalds, Shell and Mobil.
- Minor frontage modifications for various properties mainly as a consequence of the footpath renewal work, and subject to conditions requiring reinstatement.

[315] In addition, if owners who are made offers for acoustic treatment wish to have it installed, Transit will undertake this work in accordance with the detailed conditions in the agreement memorandum (proposed conditions 21-27).

28.8

[316] The Court accepts that the agreed conditions for the making of offers of acoustic treatment of dwellings and all other works, make adequate and fair provision for the interests of private property owners. We note included in the provision are rights for the owners to access independent advice.

### ***Earthworks and Construction Issues***

[317] The major earthworks required will be outside the urban area and include the Paremata-Plimmerton Roundabouts. Frontage modifications will be required for a total of 62 properties of which 49 would be for those only indirectly affected by the designation.

[318] The extent of the earthworks required in the activities relating to footpaths and property frontages extends from ½ - 1 metre in depth at a maximum and adjustments to the kerb alignment in the order of 1-3 metres. Slope stabilisation and retention opposite Steyne Avenue and regrading of footpaths will be required. This would not, in Dr Ramsay's view, constitute major earthworks, but is more in the nature of street works frequently undertaken by a local council as part of the upgrading through an area. It is not, in Transit's view (nor ours), a major engineering work in terms of complexity or the size of the plant required to make it. We agree.

[319] Draft conditions 13-20 provide for mitigation of construction impacts:

- Normal hours of construction;
- Provision for special short term operations to occur outside usual hours of construction but only in particular circumstances and preceded by notice being provided to the occupiers of nearby residential properties;
- Traffic management;
- Disruption to property access
- Construction noise (in terms of NZS 6803:1999) and a construction noise management plan including procedures for handling noise complaints.

[320] Draft condition 44 also requires Transit to ensure that all contractors involved in construction of the *Reduced Upgrade* prepare and implement a dust management plan.

[321] Mrs Foster was of the opinion that the proposed conditions are appropriate and adequate to mitigate foreseeable construction impacts and we accept her assessment.

### ***Provision for Cyclists***

[322] The existing SH1 does not make formal provision for a cycle facility. Cyclists share the road between kerbside parked vehicles and the traffic streams. The footpaths do not make formal provision for cycle use.

[323] The PDP however provides a new regime for cyclists.

**Policy C7.1.7**                      *To encourage the use of bicycles for commuting, recreation, and general access around the City.*

The explanation to Policy C7.1.7 states that *Encouraging the use of bicycles means making the use of bicycles more convenient and safer.*

[324] Dr Ramsay for Transit said in view of the low cyclist use of SH1 ascertained from surveys and the fact that additional land would have had been required, no specific cycling facility had been provided for in the NOR. Under the heading "*Implication of Reduced Upgrade for Cyclists*" he said in terms of the modified lane arrangements now proposed following reinvestigation, the wider 3.5 metre curbside

2.8.8.

lane along Mana Esplanade would provide additional room for both parked vehicles and for cyclists travelling during off peak hours.

- [325] The evidence of both Dr Ramsay and Mrs Foster for PCC established that although the proposal may provide more shared room for cyclists and for parking during off peak hours, this is not the case during peak times. Mrs Foster says:

*Given that most cycle use occurs during peak times, and although the numbers are not large, the changed environment would actually make it more difficult for cyclists to safely travel the road at peak times.*

*Overall the proposal reduces the provision for cyclists at peak times. If this had the effect of forcing cyclists onto the footpath, conflicts could develop between cycling and pedestrian use which would not be desirable for safety reasons.*

- [326] Mrs Foster goes on to talk about a "Strategic Walkway Proposal" which envisages a walkway between Plimmerton and Pukerua Bay. The plans indicated in the strategy show the walkway extending across the Paremata Bridge to the southern end of Mana Esplanade and how cyclists may be able to use these walkways for cycling.

*Porirua City Council (PCC) has not yet resolved the details of a walkway through the urban section but work on this is ongoing. Transit has undertaken to make available its land at either end of the urban section to facilitate the development of a combined walkway/cycle route to the extent that is practicable which is constructive.*

*There is no provision for a dedicated cycle lane on either the eastern side of the existing bridge or the western side of the proposed duplicate bridge but PCC has accepted the proposed 2 metre footpath width as being sufficient for a combined footpath and cycle facility given the expected number of pedestrian and cycle users across the bridge.*

- [327] Mr Barclay for the Residents in his evidence-in-chief said:

*Since the Council hearings, Transit has amended the proposed cross section for Mana Esplanade, increasing the width of curbside lanes from 3.3 to 3.5 metres. This is a marginal improvement which still does not meet Austroads standards for a shared cycle and traffic lane. I refer to the Austroads Guide to Traffic Engineering Practice Part 14, Bicycles (3) where the desirable minimum width is 4.0 metres, with an absolute minimum of 3.7.*

*... If the median is occupied by turning vehicle, then some of the cars in the right hand lane will have to stop, or slow to the cyclists speed.*

*... Even a small number of cyclists will have a disruptive effect, and I believe it important that appropriate and adequate provision is made.*

*If on-street provision cannot be made, the alternative is to encourage cyclists to use the footpath. For a shared cycle and pedestrian path, Austroads recommends an absolute minimum width of 2.0 metres with additional lateral clearances, defences or moving traffic ... I regard 2.5 metres as a minimum design width for the path.*

*Along Mana Esplanade, 2.5 metre footpaths have been proposed although there are some continuity issues at intersections. My main concerns relate to the two bridges where traffic lanes occupy the full width at times of the*

5.2.2



day. There will be no shoulders and footpaths will be no more than 2.0 metres wide.

[328] Mr McCombs stated in his rebuttal evidence:

*Broadly, where the available road space is limited and bicycle numbers are small as is the case, the guidelines point to judgement being needed to achieve the best overall result.*

*... In respect of Mana Esplanade, these factors point to the desirability of providing as well as possible for cyclists during the vast majority of the week while curbside parking is permitted, and in this regard the 3.5 dimension chosen for the curbside lane matches the guideline recommendations shown at the top of its Figure 4.7 as attached labelled Figure 6, except that the speed environment of 'about 40 kilometres an hour' has here been used up to 50 kilometres an hour. In other respects the 3.5 dimensional provision is the same and accords with good practice. It is not 'below the absolute minimum for cycle use ...' as Mr Barclay claims in para 13.5 of his evidence.*

*... He may have overlooked the fact that for most of every day there will be parking in the curbside lane. The principal need accordingly is to consider the provisions under the heading "As a shared 'bicycle/carparking' lane" as I have illustrated.*

[329] Mr McCombs goes on to talk about the plans currently being considered by the PCC contemplating provision of a cycle lane alongside the Domain linking with SH58 to the south and with SH1 at Plimmerton in the north, and he concluded by saying "I consider the arrangements for cyclists are safe and appropriate".

### Evaluation

[330] The continuation of vehicle numbers and the speed of those vehicles which we saw on our site visits and on which we have detailed evidence, leave us with some concern for the safety of commuter cyclists (some of whom will be children), particularly during peak hours.

[331] At the present time the arrangements on Mana Esplanade is a 2.1 metre parking lane against a traffic lane carrying up to 1600 vph. Under the *Reduced Upgrade* in peak hours cyclists would be in a 3.5 metre kerbside lane shared with the HOV traffic flows. **Mr G L Dickson, Traffic Engineer and Town Planning Consultant** called by Transit, anticipated the flows in the HOV lane to be about 600 vph. He considered that whilst 3.5 metres width is at the minimum end of what is an acceptable range, given the traffic flows, this operation would prove satisfactory. In off peak hours the cyclists would be able to use the 3.5 metre kerbside lane – again with parking which would be considerably better than the present situation of a 2.1 parking lane.

[332] Cycle surveys undertaken for this project indicated low cycle usage on weekdays and slightly higher usage in the weekends: more importantly most cycling occurs at the peak travel times and between 10.00 am and noon on Saturdays. We concluded that under this proposal the opportunity for cyclists varies, depending on:

- (a) whether they are recreational or commuter cyclists; and
- (b) whether they are cycling at the time of and in the direction of the operating Clearway.

J.C.K

- [333] Transit established that Mr Barclay had referred to an out-dated version of the Austroads Guideline. The wider 3.5 metre dimension chosen for the kerbside lane matches the Austroads Guideline, except the speed environment "of about 40 km/h" is being used at 50 km/h.
- [334] For most of the day there will be parking in the kerbside lane. Consequently it is a shared bicycle/carparking lane much the same as it is now. So in that respect nothing much will change. From the evidence of Dr Ramsay and Mrs Foster we accept therefore that at peak times the opportunities for commuter cyclists may be reduced but only for that limited period.
- [335] While the PCC plans for cycleways in the future will certainly be an improvement for some cyclists and for recreational ones in particular, we are unsure if they will do much to improve the lot and safety of commuter cyclists, particularly on Mana Esplanade at peak times.
- [336] We note that survey results indicate that the volume of commuter cyclists is not high and despite the answers given in cross-examination by Mr McCombs (he put it down to local geographical constraints), we are unsure to what degree this is influenced by the current traffic environment and in particular the paucity of provision for commuter cyclists.
- [337] One issue which considerably concerned us was that proper provision be made for cyclists to safely cross the Paremata Bridge. The evidence indicated that the amenity of pedestrians was dubious now on the existing bridge. If that is so, what must it be like for cyclists? Whilst Dr Ramsay stated there would be no difficulty in providing for a 2.5 metre footpath on a new bridge, he only "*expected it to be possible*" for the existing bridge.
- [338] In respect of the new bridge we understand resource consent has already been granted and a 2.0 m footpath is proposed. Our preference would be for a shared facility, complete with railing and of sufficient width to comply with Ausroads Standards.
- [339] We also urge Transit to look carefully at either the extension of the footpath to 2.5 metres on the existing bridge to accommodate both cyclists and pedestrians, or if necessary at some "*clip-on*" arrangement which might accommodate both.

#### Findings

- The combined 3.5 metre kerbside lane which is to accommodate cyclists accords with the relevant safety standards and appears at present to be sufficient for the current low number of cyclists.
- For the future however, following on from Policy C7.1.7 in the PDP, we consider that the PCC and Transit are obliged to give greater consideration as to how they best accommodate cyclist users.
- Provision for cyclists on the existing Paremata Bridge should be made available now if at all possible.

#### *Costs and Benefits of the Reduced Upgrade as a Measure of Efficiency*

- [340] At the time of the hearing it was Mr McCombs' evidence that even if the construction period for TGM was 6 years away and not 15 as first envisaged, there are substantial cost benefits (CB) in removing the congestion from Mana and surrounding areas. On current funding criteria the benefits would outweigh the costs by 6:1.

[341] Emeritus Professor L F Jackson from Victoria University who has studied transport economics, transport planning and transport systems design at the Massachusetts Institute of Technology (MIT) gave evidence for TGMAC. The thrust of Professor Jackson's evidence in respect of costs and benefits was that:

- (a) the *Reduced Upgrade* could be justified in financial terms;
- (b) benefits would flow from the time the *Reduced Upgrade* was completed until the opening of TGM;
- (c) the *Reduced Upgrade* will delay the start of TGM.

[342] Professor Jackson suggested that if the after *Reduced Upgrade* delays/costs are 15% of those before the *Reduced Upgrade*, there would be savings in excess of \$320 million, provided the *Reduced Upgrade* is completed in 2003 and TGM is opened before 2008. However, the additional savings (on top of the \$320 million) would be only \$20 million if opening of TGM did not occur until 2014.

[343] In addition to the monetary costs of the delays identified by Mr McCombs (which we discuss elsewhere) Professor Jackson also attempts to quantify the "non monetized" cost of the *Reduced Upgrade*. His evidence is that a completion of *Reduced Upgrade* would prevent *early achievement of the optimal long run solution to the problem*, or put more simply would delay the start of TGM. Professor Jackson lists the benefits (as he sees them) of TGM as:

- security of route;
- enhancement of capacity;
- design for seismic robustness;
- separation of long haul and local traffic;
- many aspects of amenity for both users and residents;
- improvements in safety;
- reductions in accident costs;
- major reductions in transit time for intra-regional movements;

[344] Professor Jackson argues that because *Reduced Upgrade* will delay TGM and the community will be denied these benefits, then they become a "non monetized" cost of the upgrade. He argues that the Transit/Transfund method of calculating the benefits of roading projects, explicitly avoids considering the projects role in the development of economic, social and cultural activities in the whole Wellington Region. He suggests this leads to substantial under investment in infrastructure and a preference for "marginal" high return projects at the expense of "large lumpy" projects like TGM. He says *TGM is a large lumpy project which has a lower total cost than a whole sequence of marginal improvements along the present route.*

[345] He goes on to say *if the reduced upgrade proceeds without any commitment to TG, and the 'marginal approach' is followed, it is inevitable that the best long term solution and its large number of additional benefits will be pushed further down the priority list.*

[346] Mr Brennand, subpoenaed by the Residents, also recognised the wider social and economic benefits that would accrue from an early opening of TGM. He said:

*"TGM is a different scale of project that will have a significant impact on the social and economic environment of Wellington and therefore will generate benefits that are not quantified under Transfund New Zealand's benefit cost procedures".*

7.2.11

### The dollar costs of delays

[347] Mr McCombs gave detailed evidence on the length of delays experienced by drivers on this section of SH1 from 1994 to the present day. He said:

*delays and queues occurring for progressively longer periods each year have now reached a stage where the worsening effects are extending over continually widening areas, and are affecting increasing numbers of people across other parts of the network and across adjoining neighbourhoods.*

[348] Mr McCombs produced in evidence Figure 4 in which he estimated the dollar cost (in wasted expenditure of the community) in terms of:

- additional vehicle cost;
- fuel consumption;
- excessive emissions;
- wear and tear;
- personal time waiting in queues; or
- extra otherwise unnecessary travel across an adjoining neighbourhood.

[349] He estimated that in net present value terms the additional costs borne by highway users as a charge on the community amounts to \$230 million between 1994 and out to 2019 – if a *Do Nothing* approach is adopted. When discussing Figure 4 he interpolated a figure which was not disputed by any other witness – namely the costs of delays in next 5 years are \$30 million for a project which is only \$18 million.

[350] In terms of Transfund benefit to cost formula<sup>1</sup>, the *Full Upgrade* would have a BC of approximately 18 and in terms of the *Reduced Upgrade* he says:

*a BC ratio in excess of the funding cut-off, even with early completion of the alternative inland route, is equally capable of being achieved by the reduced upgrade and HOV schemes described later in my evidence.*

[351] Professor Jackson argues in his rebuttal evidence that it is misleading and that the benefits should only be assessed as accruing until the opening of TGM.

[352] However, Mr McCombs further on in his evidence-in-chief, says:

*even if the construction period for Transmission Gully is 6 years, and not 15 as first envisaged, there are substantial benefits in removing the congestion from Mana and surrounding areas. On current funding criteria, the benefits would outweigh the costs by 6 to 1;*

[353] Although both these B/C ratios relate to the *Full Upgrade*, we have no reason (or evidence) to question Mr McCombs' assertion<sup>2</sup> in respect of the likely B/C ratio of the *Reduced Upgrade*.

[354] We note that Professor Jackson disputes Mr McCombs' methodology and in particular his use of 2000 as the reference year to establish the net present value. He argues and shows on his Table 1 that different (reduced) total costs are arrived at if 1994 is

#### **Transit New Zealand's Benefit/Cost Analysis**

Benefit cost (B/C) ratios are used by Transfund to rank all roading projects according to their national priority. It also ensures that funds are allocated on a basis that is economically rational. The B/C analysis has three principal functions:

- It determines that all projects funded by Transfund are economic.
- It ensures that the best option is chosen to resolve any particular roading issue.
- It ranks projects in terms of their benefits so that priority can be given to those which offer the greatest benefit to the nation as a whole.

(NOR para 2.4, page 12).

That a B/C ratio in excess of the funding cut-off is achievable by the *Reduced Upgrade* – see discussion above.

used as the year of reference. The main reason for this is that the annual costs have risen (significantly) between 1994 and 2000.

[355] Transit identify that although some features of the *Reduced Upgrade* will have a limited life – until TGM is commissioned, Mr McCombs reminds us that it will also confer permanent benefits on the Plimmerton and Mana communities. He listed these as:

- traffic lights to enhance the equity of side road and pedestrian movements;
- renewed road pavement and footpaths;
- acoustic treatment of dwellings;
- a new overbridge at Plimmerton;
- new carparking areas;
- a new roundabout for the entry to Plimmerton, assisting its separation from the higher speed rural highway and enabling a landscaped gateway to this community;
- safer arrangements for school buses with new James Street link.

[356] Transit conclude that with the Clearway and bridge remaining in place between 14,000 to 23,000 vehicle movements per day with or without tolls, will still need to use this section of road even if TGM is constructed early. *"The reduced upgrade will deliver an improved asset to the community."*

[357] Mr Barclay, for the Residents, does not challenge the cost/benefit analysis provided by Transit. He does however conclude that depending on the timing of TGM, the Residents will be subjected to 18 months construction period for a project which may only be in operation for a short time. Mr Rendall for Transit during cross-examination stated that the costs of any additional congestion etc during construction of the project were recognised in the B/C calculation. He went on to say that those costs of disruption or delay during construction have been assessed as being minor.

[358] Mr Morrison, in his opening submissions for TGMAC acknowledged that *"there are some adverse effects on the community which could be alleviated by Transit's proposal"*. However, he went on to submit that *"the community is prepared to endure the adverse effects in the short term because they believe it will lead to a more sustainable future"*. Mr Morrison was referring to the commission of TGM.

### Evaluation

[359] We note Mr Brennand considered that if the TGM project is delayed, that it is more advantageous in BC terms to put in the improvements to SH1 now. TGM is in fact delayed, and we believe the benefits of the *Reduced Upgrade* are sustainable.

[360] The issue at Paremata and Mana is having an adverse and confining effect on the economy and welfare of the Wellington region at large. Costs at the present time of losses due to congestion are estimated at \$20 million per annum. Transit forecasts that this will double to \$40 million per annum in another four years and reach \$60 million in six to seven years from now (McCombs Figure 4<sup>3</sup>). We were told that works which are relatively low scale such as the traffic management procedures which are what the *Reduced Upgrade* is concerned with here, achieve high B/C ratios compared with projects involving large scale earthworks, bridges, culverts etc. In this case the B/C ratio of 18 includes a new bridge across the inlet. Without it the B/C would be higher. A B/C range of 10-20 is not unusual for projects involving this level of expenditure.

<sup>3</sup> Travel Time Costs at Queues – At Present Growth Trends.

[361] Although there may have been some disagreement on the dollar value of the costs of the delays on the state highway it became clear to us that:

- The delays being experienced currently on this section of SH1 are unacceptable;
- That on a dollar basis the benefits of the *Reduced Upgrade* outweigh the costs;
- On Transfund's B/C procedure the *Reduced Upgrade* would comfortably meet the required threshold;
- The *Reduced Upgrade* will deliver some permanent benefit to the community.

[362] The difficulty for the Residents is that they, while not seriously challenging the present costs of the delays, are concerned that the *Reduced Upgrade* will seriously threaten the start of TGM. We have already stated that the commissioning of TGM is something about which there is no certainty.

[363] Mr Brennand identified that without tolling, TGM is unlikely to qualify for funding for many years. He also identified that the risks surrounding the commissioning of TGM relate to enabling legislation, funding, tolling issues and resource consents.

[364] The questions we must ask ourselves is:

Would the possible benefits (earlier commissioning of TGM) outweigh the certain costs (continuing and increasing delays) of the 'do nothing' option, or put another way, would the certain benefits of the *Reduced Upgrade* outweigh the possible costs (delay of TGM).

[365] Because we have no way of knowing how *Reduced Upgrade* will affect the timing of TGM we find in favour of the known/certain benefits that will accrue as a result of the upgrade, particularly as the increased capacity on the upgrade route is being kept at a level which is "*sufficient*", and therefore less likely to impact on the opening of TGM. In any event we note that much of the increased capacity of *Reduced Upgrade* (HOV lanes etc.) are reversible on the opening of TGM.

#### Finding

- We conclude that a study of the costs and benefits as known favours the *Reduced Upgrade*.

#### Overall Finding on Sustainable Management and Efficiency

- We find that Transit's proposals meet the tests for sustainable management and efficiency pursuant to Part II (s.5(2)) RMA.

---

*J.E.K.*

## Chapter 9: Health and Safety

### **RMA**

[366] The focus of the Court under this heading is the question of the health and safety and amenity of users of the *Reduced Upgrade* including the surrounding residents. As a consideration under s.5(2) RMA, such issues are necessary aspects to consider when assessing the designation.

### **Planning Instruments**

[367] The relevant planning instruments in relation to public health and safety issues are contained in the PDP C3 Suburban Zone Objectives and Policies and C7 Transport Policy. We particularly draw attention to the relevant provisions relating to quality of the residential environment in the Suburban Zone in which the *Reduced Upgrade* is situated:

#### **C3 Suburban Zone Objectives and Policies**

**Objective C3.2**      *To encourage an environment which continues to sustain Porirua City's suburban zone as an attractive, healthy and safe place in which to live.*

**Policy C3.2.1**      *To protect and enhance the amenity and character of the residential resource by defining standards for the bulk and location of buildings, and the nature and scale of activities.*

Anticipated environmental outcomes include:

**C3.4.1**      *A high standard of residential amenity which benefits the health and wellbeing of the community.*

**C3.4.7**      *Safe suburban streets and adequate pedestrian access and movement*

#### **C7 Transport**

##### **C7.1.3 Policy**

**To avoid, remedy or mitigate the adverse environmental effects of the transportation network on the environment.**

[368] We also draw attention to the Urban Section of the provisions of SH1 (Paremata Roundabout to Plimmerton) which identifies the upgrade route as a major urban arterial road.

[369] The existing SH1 is provided for in the PDP by designations numbered KO401 (Limited Access Road) being the rural portion and KO402 (Road (State Highway)) being the urban portion. These are shown on sheet 13 of the maps and in section K of the plan.

[370] SH1 is classified in section N4 as a primary road with the rural portion between Plimmerton and Pukerua Bay as Major Rural Arterial and the urban portion between Paremata and Roundabout to Plimmerton as Major Urban Arterial.

[371] Table 3, H5 of the PDP, characterises the region's Major Urban Arterial roads as having:

- 10,000 – 25,000 vpd
- 70 kph design speed
- minimum 30m width
- two 3m parking lanes
- four 3.5m traffic lanes

#### PDP Transport Policy

[372] The following objectives and policies relating to transport are particularly relevant to consideration of Transit's *Reduced Upgrade*:

**Objective C7.1** *To achieve a safe and efficient transportation network that enables the people of the City and the wider community to provide for their social and economic well-being without creating significant adverse environmental effects.*

**Policy C7.1.2** *To ensure that the adverse effects of land use and development on the efficiency and safety of the transportation network are taken into account, and any intersection or frontage conflicts are avoided or minimised or remedied as appropriate.*

**Policy C7.1.3** *To avoid, remedy or mitigate the adverse environmental effects of the transportation network on the environment.*

[373] The explanation to Policy C7.1.3 states:

*"The use and location of roads can significantly impact on the natural and physical environment and on communities. This policy is to ensure that due regard is given to ensuring a high standard of amenity through good design, landscaping and that the siting and classification of roads (in accordance with the Roding Hierarchy) takes into account the surrounding land uses, including the ecological values of environmentally sensitive areas."*

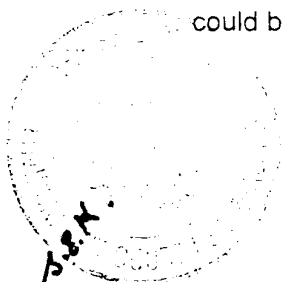
#### **Road User Safety: The Present Traffic Climate and Accident Patterns**

[374] Transit's review of the *Full Upgrade* considered the following factors (relevant to traffic safety only) as important:

- replacement of earthquake prone Paremata Bridge
- adequate operational safety

[375] It is intended that the existing two lane bridge will be duplicated with a second two lane bridge, south of which the road will be four lanes through to the redesigned Paremata Roundabout. Resource consents are in place for the bridge.

[376] In terms of operational safety, Transit maintain that in its existing form and with present traffic flows this length of SH1 experiences a number of safety-related problems which could be improved through the *Reduced Upgrade*. It is to these we now turn.





- [377] A summary of the reported accidents for the length of SH1, 1 kilometre south of the Paremata Roundabout, to 0.8 kilometres north of Plimmerton Drive for the most recent 5 year period 1995 - 99, indicates a total of 29 injury and 173 non-injury accidents including 7 serious events and 1 fatal accident.
- [378] A significant number of the reported accidents in this existing length of road are nose-to-tail/rear-end collisions arising from misjudged vehicle speeds and unexpected stops occurring amongst queues in congested conditions. These patterns are particularly evident on the external approaches both southbound prior to Grays Road, and northbound prior to the Paremata Roundabout arising (particularly) from the present inadequacies of the Paremata to Plimmerton length of the route. A further concentration of these nose-to-tail accidents is also shown either side of the zebra pedestrian crossing, just north of the Station Road and Mana View Road intersections.
- [379] Mr McCombs noted that comments have been made consistently by residents to the effect that it is difficult to cross the road as a pedestrian, especially during off-peak periods, when the traffic is travelling at higher speeds. Some pedestrians consider the zebra crossing near Station Road to be unsafe in this regard. Mr McCombs also notes that the particular concentrations of rear-end accidents and two pedestrian fatalities (one in 1992 and another in 1996) in this vicinity supports the view.
- [380] The other predominant pattern on the existing route involves injury accidents and collisions involving right-turn manoeuvres to and from the various side roads. Some 63% of all the accidents that have occurred at the Plimmerton Drive, James Street, Grays Road, Steyne Avenue, Acheron Road, Mana View Road, Station Road and Pascoe Avenue involve right-turn manoeuvres either to or from the side road, and a similar pattern is evident at the various Mana Shopping Centre driveways.
- [381] Traffic accidents along Mana Esplanade occur significantly because of nose-to-tail in congested conditions (unexpected stops/misjudged distances). Also accidents involve right turn manoeuvres through avoiding queues.
- [382] The *Reduced Upgrade* option is seen as lessening nose-to-tail occurrence whilst the increased number of signals will also improve right-turn accident occurrences. Overall Transit expects that there will be a significant reduction of accidents outside the peak travel times (20 – 30% expected) of the present situation. Mr McCombs concluded:

*Such occurrences in my view reflect an unsatisfactory performance for the existing road in terms of its delivery of safety for through-traffic, and equally unsatisfactory in terms of its amenity and safety for local access and pedestrians. Such patterns will continue and worsen in the future, and arise principally from the combination of traffic volume and road layout, and more particularly from the present lack of adequate or proper traffic management which is especially evident in the patterns of pedestrian, rear end and turning manoeuvre accidents.*

- [383] Mr Barclay, for the Residents, said this:

*With or without the clearways, the Mana Esplanade section will be substandard, with frontage conflicts, a relatively high accident rate, and an environment hostile to pedestrians, cyclists and residential activity.*

S.E.H.

[384] Mr Barclay was critical that the HOV scheme does not appear to offer safety benefits over a conventional Clearway. He considered that along Mana Esplanade it will complicate turning manoeuvres and intersection operations. If the non-HOV traffic is stopped or slow moving, the ability for vehicles to move sideways to accommodate cyclists will be affected. On the approaches to the lanes, the need for lane changing will, he considers, create *additional turbulence with a high speed environment*.

### Evaluation

[385] Mr Barclay's statements were the only reference by the Residents' expert to the accident rates on the *Reduced Upgrade* route.

[386] Mrs van Son, who lives on the esplanade, gave an eye witness accounts of numerous nose-to-tail accidents along that stretch of the upgrade route, many of which have caused cars to mount the footpath. Mrs Doornbos, who also lives on the esplanade, gave evidence that several trucks have crashed on that road causing near misses to others with one killing a motorist. Mrs Doornbos considered that the implementation of the HOV lane will further add to the accident tally as will the nose-to-tail accidents.

[387] Mrs Dinou, who owns the shops on the esplanade referred to earlier, also spoke of peak hour traffic nose-to-tail accidents. She observed that the present congestion gave rise to recurring difficulties for the passage of emergency vehicles (having to use the central median), associated hazards with other vehicles, such as motorbikes also making such manoeuvres. Mrs Dinou referred also to the dangers of pedestrians crossing the highway under the present conditions.

[388] We find the Transit evidence of the current situation is supported by that of the Residents and is of major concern. A copy of a map showing Accident Patterns on the route of the *Reduced Upgrade* taken from the evidence of Mr McCombs is attached to this decision marked **Appendix B**. We note there are 41 accidents listed for the Paremata Roundabout and 17 for the Grays Road intersection with St Andrews Road during the last five years.

[389] The Residents' expert evidence suggesting that a "*relatively high accident rate will remain*" as a result of the *Reduced Upgrade* needs close examination. Mr McCombs would expect the upgrade overall to promote a small reduction in the total number of adverse incidents. As to the operation of the HOV lane the additional manoeuvres are expected by Mr McCombs to produce a marginal increase in damage-only incidents. The total number of crashes likely during periods when the HOV lanes are operating will be influenced by driver attitudes to selective allocation of travel lane. A positive response should result in a lower accident rate than would occur if the present situation was allowed to continue.

[390] The avoidance of queues on the external approaches both southbound prior to Grays Road and northbound prior to the Paremata Roundabout could also significantly lessen the predominant occurrence of nose-to-tail collisions in these sections, and the co-ordinated "*green-wave*" management of through-traffic flows within the length of Mana Esplanade and St Andrews Road will enable similarly significant safety gains.

[391] Right-turn accidents to and from each of the principal side-road intersections could be overcome as a further notable gain from providing traffic signals. The gaps between platoons created when the main road signals turn red will also benefit manoeuvres to and from individual driveways.

1.2.2.

[392] Further, specifically marked traffic lanes for through and turning traffic along the length of the route, provides for a consistent flow of traffic in an organised and smooth fashion. As Mr McCombs indicated this operation greatly reduces the opportunity for intrusive or erratic driving behaviour by individuals and instead leads to an overall better and more uniform standard of controlled and smooth behaviour for the majority of drivers.

[393] Overall, we concluded the traffic safety issues will improve.

[394] And as identified earlier in this decision, a critical part of the upgrade route will not be a *high speed environment*. It was Mr McCombs' evidence that within the present road layout, an existing 100 km/h speed limit applies to all of the length of road from the southern end of Pukerua Bay through to around 300 metres south of Plimmerton Drive. From this point, a speed limit of 50 km/h applies through all of the length of St Andrews Road and Mana Esplanade. From just south of the Paremata Roundabout, the posted limit only increases again to 100 km/h along the motorway towards Porirua and Wellington.

[395] The general application of the 50 km/h speed limit applying within a built up area is determined by s.52 of the Transport Act 1962. On enquiry from the Court, Mr McCombs identified that Mana Esplanade would not be approved for the imposition (say) of a 40 km/h formal speed limit. For limits of less than 50 km/h the rules restrict their use essentially to circumstances of *roads defined as local roads within the District Plan and not intended for use by large volumes of through traffic*, which this is not.

[396] On further reflection and close evaluation of Mr McCombs' evidence, we are satisfied that the traffic management scheme for the area, will have beneficial effects on the current situation.

[397] Mrs Middleton considered traffic lights as of only marginal benefit to her family situation – she would still have to supervise her children crossing Mana Esplanade. But we consider traffic signals are in fact a key safety feature of the *Reduced Upgrade*. In our view they are necessary for the local residents in that they:

- provide safety for crossing pedestrians including children going to and from school;
- provide windows of opportunity for residents to safely exit their properties onto Mana Esplanade;
- provide opportunities for those exiting Marina View crossing northbound traffic to turn south;
- provide regular gaps in the southbound flows so that residents arriving from the south wishing to turn into their properties may wait on the painted median and turn into their entranceways.
- provide the opportunities for those who do not wish to wait on the painted median strip to U-turn at the appropriate traffic signals and come back to their driveways.

[398] In spite of these advantages, some of the Residents questioned the safety of such facilities; if there is a train to catch and a pedestrian is running late, might not an individual continue to cross against the lights?

[399] At this point in time, there is only one pedestrian crossing on Mana Esplanade and that is near the Mana shops. Pedestrians currently crossing the esplanade at random are supported in their movements by slow moving traffic at peak periods. But it is this traffic which in fact causes in part the very dubious safety record along the esplanade. Mr McCombs' evidence was that *the series of traffic signalled intersections could significantly improve the opportunity and safety levels for pedestrians crossing the*

7.2.11

principal traffic flows. And in this regard we prefer Mr McCombs' evidence to that of Mr Barclay. Mrs Foster as an experienced planner was also of the opinion that the proposal will enhance the adequacy of pedestrian access to the extent that 5 sets of traffic lights will enable safer crossing.

[400] We concluded that aiding the jay-walking activities of late commuters is not what this case is concerned with. It is to provide a safe, efficient traffic management system which takes account of all users of SH1 through several townships like Plimmerton and Paremata. We are concerned at the lack of safety features which currently exist along Mana Esplanade and indeed along the full route of the *Reduced Upgrade*. As observed by Mr McCombs, a particular benefit of the upgrade is that it provides a better standard of management at all times of the day rather than just at peak hours.

[401] We turned next to the safety issues surrounding the HOV/Clearway lane. As noted the *Reduced Upgrade* has done away with sight-line restrictions over private property which were first introduced to address perceived safety issues in relation to access. Mr McCombs concluded that these restrictions are an unnecessary feature of the amended proposal neither adding to nor detracting from traffic safety, although they may add a measure of convenience. Speaking in particular of Mana Esplanade, the reasons for his view are:

- for 99% of all cars, the measured distance between a driver's eye and the rear bumper when reversing is slightly less than the 2.5 metre width of the mid-block footpaths. Traffic using the kerbside lane during the Clearway hours is typically further out from the kerbline allowing an appropriate and realistic margin of safety. There are also occasional other larger vehicles that are manoeuvred or reversed from driveways and out on to SH1, but these are the exception for which the driver is properly responsible, and does not of itself warrant the adoption of greater standards or the general adoption of sight plane restrictions on properties along all of the route;
- the Clearways will only operate for several hours each day, and then driveway access will revert to the situation as it occurs at present;
- the safety records of other Clearways give no indication of difficulty or reported pattern of accidents involving driveways or a related lack of inter-visibility between vehicles;
- The HOV restrictions have the effects of reducing the traffic flows using the peak-period kerbside lane. Because the length of highway is short and because a series of traffic signals control vehicles throughout the route, motorists cannot gain much by illegally using the kerbside travel in both lanes which will occur pretty much at the same speed.

[402] As noted earlier, Mr McCombs had reviewed Clearways examples in Auckland where similar footpath widths and Clearways operate were significantly larger volumes than here. There were no safety issues identified. Dr Ramsay for Transit affirmed this view. Thus there was no evidence from which to draw an adverse inference as to the safety of clearways.

[403] What then of the operation of the HOV lane? Transit was persuasive that good signage and a properly located publicity campaign will be employed to reinforce this. It recognised clear explanatory signage has to be identified so that those who are not regular travellers along that stretch of the highway know what they are doing. It was established with Mr Barclay that the average driver during the morning and afternoon peak flows is a commuter. It follows therefore that it will be the regular commuter who will most benefit

from the HOV scheme and these drivers will become accustomed to the signage and occupancy components of the requirement.

### Finding

- The *Reduced Upgrade* will provide for greater traffic safety along the upgrade route.

### *Access Safety and Amenity*

[404] In Transit's view, the proposed painted flush median (at both Mana Esplanade and St Andrews Road) allows right-turning traffic the opportunity to sit safely out of traffic until it can complete manoeuvres, and it allows for separate traffic flows. The painted median is intended to provide waiting space for pedestrians and provides separation between opposing traffic streams. Lengths of solid or raised median however are also incorporated in the design in several areas in order to contribute to traffic flows as well as safety. Traffic signals at the various key intersections will further assist right turning manoeuvres and exits from driveways at peak periods along the upgrade route.

[405] We turned to traffic safety issues concerning schools. It was Ms Meade Rose's evidence that the majority of children at Paremata and St Theresa's Schools arrive by car. At Paremata the redesign of the Paremata Roundabout associated with closure of Station Road will provide access to SH58 from Paremata Crescent, thus avoiding the need to go round the main roundabout on SH1. It may be expected that this will increase the volume of traffic going through Paremata Crescent – but there will be no conflict traffic for people delivering and picking-up their children from the school because there will be no traffic coming into Station Road as there is currently.

[406] Currently access to St Theresa's is by way of SH1 into James Street. Ms Meade Rose indicated that some drivers experience difficulty turning right in and out of James Street with congestion there at peak times. With the *Reduced Upgrade* school buses to and from the school from the north and south will be able to use the left turn lane on SH1 out of James Street, the link road and the Plimmerton Roundabout. For private vehicles there will be greater ease of access reaching the school but the route would be longer for those needing to use the Plimmerton Roundabout. Ms Meade Rose advised nevertheless that access will be safer and result in less conflicting traffic.

### St Andrews Road

[407] It was Mr McCombs' evidence that the area along the west side of St Andrews Road to the north of Steyne Avenue poses particular design issues arising from the location of buildings and driveways. The latter are complex arrangements whilst some portions of the houses are currently located within the designation. The provision along this stretch of road with a raised median is seen by Transit as necessary to ensure good levels of operating safety of the curving length of the highway between two closely spaced intersections.

[408] The Plimmerton Residents are very critical about being prevented from right turning to access a total of 8 residential properties, to 2 businesses to the east, and from being prevented from parking in an area adjacent to the Plimmerton Railway Station because of 4 laning along the St Andrews stretch of the upgrade. They are also concerned about the disruption they perceive in terms of lifestyle and amenity values from the modification of driveways and ground levels proposed. The Residents, who provided helpful evidence on

St Andrews Road, included Mr B Cook, Mr M and Mrs G Rotherham, Mr N Harding, Mrs W Munro, Mrs M A Bradey and others.

[409] With respect to Plimmerton Motors, the present workshop entrance and lubrication bay of Plimmerton Motors lies within the existing road designation. The provision of the raised median strip along the adjoining length of St Andrews Road between Steyne Avenue and Grays Road is seen to raise access and operational difficulties for the company. **Mr I Capewell, Manager of Plimmerton Motors**, estimated that at least 50% of customers will be adversely affected by the upgrade. Many customers are elderly and he considers that the layout of the southbound laning in front of the company's entry/exit points will make it not only dangerous but impossible for vehicles to exit south to access Plimmerton as they will need to cross two lanes of traffic to access the right lane to enter.

[410] Mr McCombs specifically listed all the traffic features for each affected address along St Andrews Road and made both general and specific comment that the proposed design provides property owners with a better standard and facility for access to their properties, including the provision of medians and distinct localised gaps in traffic flows which will be created by the traffic signals to allow them better egress and ingress.

[411] Transit proposes alternative access to numbers 75 – 91 St Andrews Road (western). These properties now enjoy rights of access to St Andrews Road and, if Transit proposes to alter or restrict that access, by eliminating vehicles, as will be necessary to safely effect the *Reduced Upgrade*, alternative access will have to be negotiated under other legislation such as:-

- A new rear access driveway across the Railways land behind numbers 85 – 91 but with bridged vehicle access only to the rear of number 85;
- Rear access from Steyne Avenue to numbers 75 – 81 and a new front driveway access to numbers 75 – 81 parallel to St Andrews Road;
- A new front access driveway to numbers 83 – 89 parallel to St Andrews Road, and separated from the adjoining SH1 carriageway;
- Access to 204 shifted from the St Andrews Road frontage to James Street.

[412] As to St Andrews Road (east) the proposed median barrier along the centre of St Andrews Road between Grays Road and Steyne Road will prevent right turns into and out of numbers 188 – 196 St Andrews Road. Travel north from these properties will have to be by turning left into SH1 and then making a U-turn at Steyne Avenue or Pope Street. To travel south from St Andrews Road to these properties, vehicles would have to travel to Grays Road for a U-turn or to the northern roundabout. There will be a dedicated right turn phase at the Grays Road intersection (clear of any competing turns from Grays Road) to effect such a turn.

[413] The PCC (through Mrs Foster) observe that although the additional travel time would be an inconvenience to residents, the enhanced safety resulting from the raised median is important. Ms Meade Rose gave similar evidence. Mr McCombs identified that in his opinion safety outweighs any severance issues.

### Evaluation

[414] We gave special consideration to the St Andrews Road situation because it seemed to us that the residences and businesses along that section of the upgrade were particularly vulnerable to the changes proposed, particularly those on the western side of St Andrews Road north of Steyne Avenue. In response to our concerns and those of the Residents,

55K

Transit met again with the affected parties during the hearing to further clarify the situation. We were appreciative of the further attention Transit and the Residents gave the matter.

[415] As Mr Bradbourne identified however, the conflict which these residents experience at the interface of the highway and the urban environment is part of the existing environment. It is the basis against which effects assessment should be made. In this regard:

- It is relevant to consider the extent to which the upgrade would intensify those problems. If so, it is appropriate to consider the extent to which those effects should be avoided, remedied or mitigated in accordance with s.5(2);
- It is also relevant to consider the extent to which existing conflict at the highway/urban interface will be alleviated by the upgrade. As Transit submit in opening, any alleviation of existing conflicts should appropriately be measured in terms of an improvement to the existing environment.

[416] Mrs Bradey, who lives at 150 St Andrews Road and is a long term resident of the area, had this to say of the current situation:

*... The speed of the traffic makes it very dangerous to enter and leave my premises. The road is very narrow where I live. Probably the most narrow part in fact of St Andrews Road. I usually have to turn into the property next door, as there is a small amount of space available between the lanes to wait for a gap.*

*If the four lanes go ahead, I do not feel it would be safe at all to cross two lanes. The painted median opposite my house will be only one metre approximately wide and it will be quite unsafe to stop prior to making any right turn. It will be much more exposed and dangerous.*

#### *Entrance to Property*

*Not being able to do a right hand turn into my property will be a major problem. It is dangerous to do a U turn of any description locally. Pope Street is very busy with the new subdivisions constantly expanding. Steyne Avenue is no better, in fact, it is even worse. You are subjected to the railway station traffic and pedestrians. I work in Wellington and need to enter my property several times a day.*

#### *Crossing the Road*

*This is difficult now and when if the four lanes are implemented, we will have to walk back to the lights to cross. Nobody likes to walk in a different direction to where they wish to go.*

[417] Assessing the evidence of access issues in its entirety along St Andrews Road, Mr McCombs described them as "difficult". One of the hallmarks of this case is that even though the Residents realise how bad their existing situation is, they make no concessions to what may be improvements! We are entirely clear however that what Transit propose will improve access issues for the Residents.

4.8.8.

[418] We feel entirely comfortable with Transit's explanation that drivers wishing to enter Plimmerton Motors from either the south or to park to the north will be able to make the desired U-turns, within the fully protected exclusive right turn green arrow periods provided by the traffic signals at both the Grays Road and Steyne Avenue intersections. On departure from the site, drivers will have the advantage of driver courtesy where there are heavy streams of traffic. Mr McCombs produced Plan E which he described as providing "*a more workable, better managed and safer outcome for that section of the route*" and we agree.

[419] With respect to private addresses, we note the highway in front of many of the western properties is currently marked with only a painted double yellow line. But with the *Reduced Upgrade* because of the particular roading alignments at 172 St Andrews Road, the central painted median is wider than elsewhere. An onsite turning area is also provided for that resident and the operation of the nearby traffic signals at Steyne Avenue will provide localised entry gaps in the southbound traffic. In any event, the planned layout in this vicinity allows a 3.2 metre width between the property boundary and the new kerbline which provides for better egress from the property. A relatively similar situation exists for 154, 160 and 162 St Andrews Road. There will be a 2 metre width between the property boundaries and the repositioned kerbline for these addresses. It was Mr McCombs' uncontroverted evidence this width is sufficient for a reversing driver to stop within the kerbline, clear of passing traffic. The Bradey household will have a 4.5 metre clear width.

[420] Otherwise, for the residents prevented on St Andrews Road from accessing their properties through right turns, they will be advantaged by the green arrows provided by the traffic signals and breaks provided in the traffic flows. Other arrangements involving new gates and driveways and relocation of garages on the various sites to make access and egress better are also available through arrangements with Transit.

[421] Finally, we note that where alternative rear access is appropriate, that the resource consents sought to create the new arrangements in this area have been granted and have not been appealed. Access for residents at 75-83 St Andrews Road will now be via Steyne Avenue.

[422] We do not underestimate the potential adverse amenity effects on the residents of St Andrews Road where on-site modifications are to be made. Nevertheless we concluded that the safety features of the *Reduced Upgrade* should control what happens with such values now. Loss of parking on the grass verge outside certain properties does not, in our view, compensate for the unsafe access practices which currently exist.

#### Mana Esplanade

[423] Mrs Doornbos for the Residents described entering and exiting properties by car along Mana Esplanade as currently *difficult and hazardous ... residents have had to develop their own tricks to survive*. She told the Court that currently parked cars block the view of oncoming traffic while big trucks use Mana Esplanade as a rest area. Meanwhile vehicle owners use the footpath to drive on as an alternative roadway to gain access to their properties.

7.2.2



- [424] Mrs Doornbos was critical too of Transit's evidence that the traffic lights will create large enough gaps for residents to go in and out, considering that the gaps will be filled with cars entering from the side streets. She concluded residents living downstream from traffic lights will be worse off than those living mid-block. They will be unable to enter or leave during Clearway hours, because there will be either a platoon of moving cars or a line of stationary ones.
- [425] Evidence was also given on access for the Residents of Mana Esplanade by Mrs Dinou who (as noted) owns the Bridge Shoppe and Omega 3 Seafood. Mrs Dinou gave examples of customers on SH1 currently crossing 2 lines of traffic (with difficulty) to access both shops. She did not describe a comforting or safe situation. It was her conclusion that with 3 traffic lanes in operation under the *Reduced Upgrade* scheme there will be even greater difficulties and danger. In her opinion the Clearways should be extended further south on both sides of the road to nearer the northern end of the bridges. This would be in order to shift extreme dangers associated with lane changing away from such a busy stretch of highway.
- [426] Mrs Dinou also considers an extra set of traffic lights and a pedestrian crossing should be installed at the intersection with Marina View, to safely access SH1. She considered every driver will take life in his/her hands with the new proposal, noting the constant stream of traffic, the left hand lane obscuring visibility, with traffic comprising boats with trailers and commercial vans accessing the new businesses in the vicinity. She considered for pedestrians road crossing will become even more daunting. Mrs Doornbos too was concerned to ensure that there should be lights on the Marina View access onto SH1 describing the current situation with no traffic controls as very unsatisfactory. Mrs Doornbos specifically raised the issue of access and egress at 48 Mana Esplanade as did Mrs Middleton at number 70.
- [427] Mr McCombs specifically addressed the entry and exit from Marina View. Currently those exiting and entering and manoeuvring to and from the site have to cross an existing narrow painted median across the single northbound lane. With the upgrade, the traffic lights at Pascoe Avenue will provide some exit opportunities. And with a new bridge and associated realignment, Mr McCombs explained the width of the central median is able to be increased so as to provide a central 3 metre right turning and queuing lane, with a similar width of painted central median for southbound drivers. In this situation there is good visibility in both directions.
- [428] The evidence of Dr Ramsay describes turning arrangements on site for identified properties with which Transit is happy to assist. There will be a 2 metre wide painted median providing space for an arriving car on SH1 to wait clear of other traffic. The Pascoe Avenue intersection lights will provide distinct gaps to occur so that residents can complete right hand turns on to their properties.
- [429] Meanwhile the upgrade provides a 2.5 metre clear width between the properties and the kerb for safe ingress and egress. With respect to traffic banking up outside the Mana Esplanade properties, the traffic lights will stop the southbound flows and clear roads will occur regularly.

1.2K.

### Evaluation

- [430] For most of the day, access issues along Mana Esplanade will be as they are now. Otherwise the restrictions on the types and therefore numbers of vehicles able to travel in the kerbside HOV lane will reduce the volumes of vehicles in the kerbside lane making turning onto and off Mana Esplanade easier for the residents.
- [431] On Mana Esplanade, Mrs Doornbos considered that traffic from the side roads will fill up any pause options and intervening spaces when the traffic signals are red. But Mr McCombs stated that the turning volumes from the side roads throughout the esplanade are, (by comparison with the through traffic volumes), very small. And Mr Barclay stated in his evidence-in-chief that while high flow rates have the effect of making it more difficult for side road traffic to find access gaps, this could be addressed by the signal control of intersections which will be in place.
- [432] Meanwhile, it is our view that in addition to better visibility and lack of parked vehicles due to the Clearway, the proposed situation will assist safer and more efficient access at peak times. We noted too that Mr Heine who undertook the peer review of Transit's traffic issues conclusions affirmed that the *Reduced Upgrade* will enhance the ease of access on to private property right through the upgrade route.
- [433] The one exception to our conclusions on increased safety of access is the access provided by Marina View onto SH1. We are not at all convinced that the Residents' concerns have been taken seriously enough. Mrs Dinou's evidence on the current situation was concerning. We consider this issue requires re-visiting, particularly as the PCC has recently allowed further townhouse and business development in the area. We note however in its final amended conditions Transit appropriately allows for the issue to be revisited.

### Finding

- Overall the *Reduced Upgrade* for St Andrews Road provides a more workable better managed environment and safety outcome for access to properties along that section of the road. We concluded that for Mana Esplanade a similar situation will exist except in relation to ingress and egress from Marina View.

### *Pedestrian Safety and Amenity*

- [434] The earlier review of *Full Upgrade* proposal considered the following factors to be relevant to pedestrian safety:
- adequate operating safety.
  - adequate provision for local access and pedestrians.
- [435] Transit's experts conclude that the current situation is unsafe for pedestrians and there is particular concern at safety of a zebra crossing near Station Road. The *Reduced Upgrade* on the other hand signals significant improvements as well as opportunity and safety levels for pedestrians crossing the principal traffic flows.
- [436] It is proposed that the painted flush median on Mana Esplanade and St Andrews Road will provide adequate waiting space for pedestrians. Further, increasing the footpath's widths and lengths across Paremata Bridge will better connect the local Paremata community

with the bridge and increase safety for pedestrians. Local upgrading objectives include both maintaining and extending the ability and safety of crossing the arterial flows.

[437] On St Andrews Road Transit considered the current distance between the footpath and the lanes provides a good separation distance between traffic and pedestrians.

[438] Transit also maintains that arrangements under the *Reduced Upgrade* for children walking to and from school will be both safe and appropriate. For example, footpaths are to be provided where there are none currently, and as noted there will be controlled pedestrian crossings at each of the intersections. Particular areas of concern for pedestrian safety such as Mana View, Station Road, the Mana Esplanade intersection and Grays Road were addressed specifically by Mr McCombs.

[439] Mrs Middleton for the Residents described how one of the assets of a home on Mana Esplanade is her family's easy walking access to every facility in the area. She is concerned at the safety factors involved with an HOV lane operating immediately adjacent to the footpath on which her children currently walk without problems. She indicated too that the proposed 2 metre wide footpath at intersections is just wide enough to accommodate with the dog and pushchair on either side with the other children either in front or behind. To have a child alongside requires a 2.5 metre footpath. Mrs Middleton was critical too that Transit had not mentioned that the footpath would be used by cyclists, particularly children riding to and from schools. She was concerned also that when Mana Esplanade is eventually reinstated to a two lane road, that footpaths will not be returned to their original width.

[440] The Paremata Bridge footpath was also in contention. The evidence indicated that there have been 15 accidents in recent years on or near the bridge.

[441] The eastern footpath on the existing bridge currently varies in width between 1.15 metres and 1.4 metres. Mr Heine identified that a feasibility study carried out by BCHF found that widening of the eastern footpath to 2 metres is feasible and will provide a significant improvement for pedestrians. If the footpath cannot be widened further as we indicated earlier, we concluded that the addition of a handrail should be considered to provide an additional safety measure.

[442] Meanwhile the Residents who live on St Andrews Road, are critical that there will only be a 2 metre wide footpath between their section boundaries and the kerb, and they would not as a consequence, be able to stop to open or close the gate without the car protruding into the kerbside traffic lane. And in terms of pedestrian safety, Mrs Foster for PCC identified that the Transit proposal brings the traffic lane closer to the footpaths.

[443] Mr Barlow acknowledged with approval that the footpath width on the western side of the northern pedestrian crossing at the Mana View intersection will be increased from 2 – 2.5 metres. But he was critical that pedestrians will need to wait longer at the traffic lights to cross Mana Esplanade (Ms Meade Rose's evidence is that wait time will be 70 – 89 seconds). Mr Barlow's point is that if commuters are running short of time to catch a train they may take risks crossing the road outside the pedestrian phase time. Further, at the (only) existing pedestrian crossing, currently not only is there a centre-of-road pedestrian refuge, but he estimated the average wait time would be less than 15 seconds -- an issue we alluded to earlier.

[444] Mr Barclay for the Residents considered that 2.5 metres is a minimum design width for footpaths which may serve cyclists as well. Similar standards should apply in places like

5.8.14

Goat Point where a footpath of 2 metres only is proposed. He acknowledged the 2.5 metre footpath along Mana Esplanade, but then identified that his chief concerns relate to the two bridges where traffic lanes occupy the full width at all times of the day. There will be no shoulders and footpaths will be no more than 2 metres. The witness' experience with river bridges in the Hutt Valley indicates this width to be insufficient.

[445] Mrs Doornbos considered that the "juggernauts" which travel SH1 close to the pavements create suction that could topple a child or frail adult onto the road.

### Evaluation

[446] Our view of the current Urban Section of SH1 is that in pedestrian terms it is a hostile and unsafe environment throughout the upgrade section. With the *Reduced Upgrade* we conclude matters will be substantially improved. Mrs van Son acknowledged pedestrian amenity would be improved.

[447] All the expert traffic advice in this case is that the traffic situation on Mana Esplanade is likely to become worse not better in an already difficult traffic climate. This means the conflicts between pedestrians and vehicles will also increase. Given that situation, we fail to see that not providing for better safety measures is commensurate with the principles of sustainable management.

[448] We were advised that consultation between BCHF and the **PCC's Director of Works, Mr T M Davin**, established the desired benchmark of providing a minimum width footpath of 2.5 metres in mid block locations with 2 metres at intersections along the Mana Esplanade. This is to be achieved as far as practical, including widening of the eastern footpath on the existing Paremata Bridge.

[449] There are three sections where footpaths will not meet the benchmark of 2.5 metres. But in each of these, however, footpath widths will be no less than those existing, and not less than 1.5 metres. The alternatives would be to either reconstruct the adjoining length of existing roadway to a narrower width, to show the localised widths of the adjoining traffic lanes, or to seek additional land on the opposite of the road. On balance, Mr McCombs identified it is preferred that these options be retained in their present form.

[450] New lengths of footpath are also included in the plans. The verge south of Paremata Bridge roadway between SH1 southbound, and SH58 northbound will be constructed to better connect the local Paremata community with the bridge.

[451] The proposed footpath widths were set out in Appendix 9 to Dr Ramsey's evidence. They show extensive lengths of footpaths along Mana Esplanade at 2.5 metres or greater, the area around the two intersections at 2 metres with new links elsewhere at 2 metres – 2.5 metres with two very small sections only at less than 2 metres near Acheron Road and one at Grays Road. We note that 2.5 metre widths provided mid block and 2 metres at intersections are standard elsewhere providing for convenience and safety. And we consider with the footpaths more formalised, the linking patterns provide greater amenity for pedestrians.

[452] Mrs Foster, with reference to the section of St Andrews Road north of Acheron Road observed that the road would operate with traffic in both directions "*hard against the footpath*". As noted by Mr Julyan, however this statement is misleading. The *Reduced Upgrade* would provide a 3.5 metre wide kerbside lane. And it is Mr Julyan's evidence that this width provides a reasonable degree of clearance between vehicles, travelling normally

52.2.

in the lane, and the kerb. This situation is not uncommon in urban arterial road environments as demonstrated in the examples referred to by Mr McCombs.

[453] As to the concerns of Mrs Doornbos and other Residents about 'suction' from high, fast moving vehicles, the evidence all pointed in the direction of measured, steady flows throughout the upgrade route. Mr McCombs' evidence was that while moving vehicles create pressure charges as they pass, the extent and nature of such effects are essentially minor, particularly with the urban travel speeds at Mana.

#### Plimmerton Pedestrian Overbridge

[454] The Plimmerton Pedestrian Overbridge was constructed by the PCC in 1989 following strong representations from the local community and schools and their concerns about pedestrian safety on SH1. With the proposed upgrade St Theresa's Church and School have expressed concern that the overbridge be retained. The evidence established it is a well used facility (a recent survey indicated that 120 people passed over the bridge in the two hours between 7.00 – 9.00 am).

[455] On our site visit we visited the overbridge mid-morning on a weekday. We witnessed the steady heavy traffic flows along St Andrews Road. We were in no doubt at all that the overbridge with an access ramp must be retained to provide pedestrian safety and this should be a condition on the designation – as indeed is intended.

[456] There was some discussion from Transit's witnesses that the painted median strip in the centre of St Andrews Road would provide a safe haven for those wishing to cross that part of SH1 to their houses. But as Mr and Mrs Rotherham of 160 St Andrews Road queried: *Would a mother come to stand on the painted median strip with two traffic flows north and south?*

[457] After observing the heavy traffic flows beneath the Plimmerton overbridge at the time of our site visit, we concluded that a painted median strip would probably offer little comfort or safety to any pedestrian in that area. For this reason alone the overbridge is a necessity – either that or the residents have to walk back to the proposed lights at Steyne Avenue intersection – an additional distance of 800 metres.

[458] In addition and in support of retaining the overbridge, Mrs Foster for PCC identified that crossing at the traffic lights is not perceived to be as safe as the overbridge, because it requires children to queue up at the edge of the traffic lane. This apparently creates the potential for jostling and the risk of the children spilling out into the lane. It is also difficult to prevent young children making last minute dashes across the road to join their friends, even though the pedestrian signal is on "stop".

#### Finding

- We find that the arrangements for pedestrian safety to be provided by Transit along the **Reduced Upgrade** route contribute to the health and safety of the residential community and considerably mitigate the adverse effects which currently exist.
- The arrangements support the relevant provisions of the PDP.

*Handwritten:* J.E.H.

## Air Emissions

### Planning Instruments

#### *Wellington Regional Policy Statement*

[459] Chapter 8 **Air** in the Wellington Regional Policy Statement (**RPS**) (inter alia) states as follows:

#### 8.3 Objectives

**Objective 1** *High quality air in the Region is maintained and protected, and there is no significant deterioration in air quality in any part of the Region.*

#### 8.4 Policies

**Policy 1** *To identify and describe the existing air quality of the Wellington region.*

**Policy 2** *To identify pollution sources that currently degrade, or have the potential to degrade, air quality in the Region.*

**Policy 3** *To identify and improve understanding of the links between atmospheric processes, air quality and the range of human activities that occur in the Region.*

...  
**Policy 8** *To avoid, remedy or mitigate the adverse effects of local and global air pollution on human health.*

...  
**Policy 11** *To avoid, remedy or mitigate the adverse effects of air pollution on public amenity values.*

...

#### *Regional Air Quality Management Plan for the Wellington Region*

[460] The Regional Air Quality Management Plan for the Wellington Region (WRAQMP) contains a number of relevant provisions. They include:

**Issue 2.3.3** *Discharges to air from mobile sources, particularly mobile transport sources, cause, or have the potential to cause, significant adverse effects on air quality.*

[461] The explanation to this issue recognises that motor vehicles are a significant source of air pollution from mobile sources, and that the WRC has little substantive information on the contribution of mobile sources to local air pollution or to the ambient air quality of the region as a whole.

[462] Relevant objectives and policies from the WRAQMP include:

**Objective 4.1.1** *High quality air in the Region is maintained and protected, degraded air is enhanced, and there is no significant deterioration in ambient air quality in any part of the Region.*

**Policy 4.2.22** *To avoid, remedy, or mitigate the adverse effects of discharges to air from mobile transport sources and to promote:*

2.2.22

- (1) *the use of transport fuels which are low or non-polluting;*
- (2) *the use of fuel-efficient and well maintained vehicles; and*
- (3) *driving habits which minimise the production of harmful emissions.*

**Policy 4.2.23** *To promote improved air quality in the Region through regional and district transport planning practices which:*

- (1) *encourage the development of an efficient and effective public transport system;*
- (2) *promote the use of non-motorised forms of transport such as walking and cycling; and*
- (3) *aim to reduce the growth in motor vehicle numbers and motor vehicle congestion in urban centres.*

[463] It was Mrs Foster's evidence that because the proposed changes to SH1 are expected to improve (lessen) air emissions by reducing traffic congestion at certain times of the day, the proposal is, on this basis, consistent with the RPS objectives and policies.

[464] It was Mrs Foster's evidence based on Dr Kuschel's evidence below that the proposal is competent with the objectives and policies of the proposed regional plan.

[465] **Dr G T Kuschel, a Research Engineer and Auckland Regional Manager of NIWA**, who gave atmospheric scientific evidence for Transit identified that contaminants on this part of SH1 will go up in time, irrespective of the different options, because of increased traffic flows. But if the *Reduced Upgrade* takes place then her conclusions are as follows:

- In the short term, the overall air quality of the area will actually be enhanced by the proposed upgrade as a direct result of the immediate relief of traffic congestion and the associated emissions.
- Further into the future, emissions of most contaminants with the proposed upgrade will decrease by 11% on average in 2009 and increase by 20% on average in 2019 versus the 1999 emissions resulting from the current layout. The corresponding impact on air quality from the proposed upgrade will be negligible.
- By comparison, a significantly larger increase in emissions (up to 93% on average) will result in 20 years time if the current layout is left as it is (that level will still be nowhere near the WHO health level recommended).
- The impact of the HOV lane is unlikely to result in any adverse effect on air quality. Depending on the number of commuters who choose to take advantage of the HOV lane, the likely effect on air quality ranges from slightly lower to slightly higher emissions predictions versus the emissions resulting from the clearways alone. Regardless, emissions resulting from incorporating HOV lanes will still be fewer than those predicted for the current layout if left as it is.
- Overall the combination of site geometry of the upgrade area and local meteorology is highly favourable to dispersion.

[466] In questioning Dr Kuschel stated that an improved emission situation will emerge from the upgrade because traffic flow behaviour will be controlled at peak times through the green wave when vehicles will be able to move efficiently rather than with the stop/start behaviour which currently exists. Vehicles in effect will flow more efficiently in a controlled manner rather than through slowing down or even stopping due to congestion. Because of improved traffic behaviour there will be fewer contaminants.

J.E.H.

[467] Mrs M D van Son, a resident of 72 Mana Esplanade, Paremata, was not satisfied with the pollution reading taken by Dr Kuschel at Paremata School which is 40 metres from the road. Her front door is 12 metres from the present carriageway and with the HOV lane will be 2 metres nearer the carriageway. She and her family can smell diesel and petrol fumes outside the house. She told us the dust which falls daily from the traffic is black, greasy and gritty. Mrs van Son considers that the pollution she currently experiences will only get worse as the traffic increases and when it queues outside her house waiting for the green light.

[468] Other residents complained about the existing air quality and complained that it would deteriorate under the *Reduced Upgrade*.

### Evaluation

[469] Despite the Residents concerns about the existing air quality, Dr Kuschel's evidence was effectively unchallenged.

[470] Dr Kuschel stated:

- (a) With increases in emissions as estimated above, exceedences of guideline levels of any contaminant are highly unlikely to result from the proposed upgrade.
- (b) Carbon Monoxide (CO) is a really adverse contaminant, and is generally the problem in terms of exceedences in locations affected by transport emissions. Therefore the decrease (13%) in CO emissions forecast for the proposed upgrade in 20 years time, versus the current ambient measurements, is favourable. Although measurements of the other contaminants have not been made, inferences can be drawn between them and CO from previous experience at other monitoring locations. Even heavily-congested and constrained sites (such as Riccarton Road in Christchurch with 24,400 vpd where CO exceedences have already occurred), generally do not have exceedences of the other transport-related contaminants.
- [a] The *dispersion* of contaminants has a much greater impact on the ambient air concentrations than the actual level of emissions and is influenced by site geometry and local meteorology. For the Plimmerton-Paremata section the open layout and meteorological conditions are favourable to dispersion. Dr Kuschel stated the current air quality is very good and site conditions are very favourable to dispersion.

[471] With the new traffic systems in place there may be idling for short periods of time but normally traffic will be operating under a green wave and this will achieve benefits in emission terms. Dr Kuschel identified too that emissions from a vehicle travelling at 30 kpm are greater than one at 50 kpm with the engine running more efficiently.

### Finding

- The proposed upgrade will not result in any adverse effects on the ambient air quality in the Plimmerton-Paremata area.
- If the proposed upgrade does not take place daily emissions could increase up to 93% in 20 years - still well within WHO standards.
- The air emission aspects of the *Reduced Upgrade* are not contrary to the relevant planning instruments.

S.E.K.



## Noise

### Planning Instruments

#### PDP

#### C11 Noise Objectives and Policies

**Objective C11.1** *To minimise the adverse effect of noise on the environment.*

**Policy C11.1.1** *To protect the natural and physical environment from unreasonable noise in order to maintain and enhance the amenity values of the environment.*

**Policy C11.1.2** *To promote health by ensuring environmental noise does not exceed a reasonable level.*

[472] The Method of Implementation for Policy C11.1.2 notes that noise standards have been established based on the expected traffic noise in any part of the City.

[473] The environmental outcomes anticipated include the recognition that:

**C11.2.2** *Residents in the Suburban and Rural Zones receive a high level of protection from intrusive noise, and from the gradual degradation of the environment from increased background noise levels.*

[474] Mrs Foster for the PCC identified that for the Suburban Zone (affecting the Mana Esplanade and St Andrews Road environment) noise levels surrounding SH1 are set at levels recognising the predominant residential character of the environment.

### Noise Effects

[475] It is Transit's case that noise levels will be largely reduced and the Heads of Agreement formulated between the PCC, WCC and Transit provides for a commitment by Transit to undertake a review of the environmental effects of the *Reduced Upgrade*, in the event that construction of the TGM has not commenced by 2005. Otherwise the agreed conditions governing operational and construction noise are based on guidelines and standards generally accepted by practitioners in the field as appropriate for that purpose. The relevant document with respect to operational noise from SH1 is *Transit New Zealand's Guidelines for the Management of Road Traffic Noise – State Highway Improvements, (the Guidelines)* and with respect to construction noise is *NZS 6803P: 1999 Acoustics – Construction Noise (Construction Noise Standard)*.

[476] **Mr N I Hegley, Acoustic Consultant** gave evidence for Transit, supporting the *Reduced Upgrade*. He concluded that

*Residents along Mana Esplanade currently experience high levels of traffic noise. If this alignment were upgraded there would be an insignificant change to the existing noise level for the majority ... and a small reduction for some as a result of noise control measures being put in place.*

5.2.4.

[477] With respect to acoustic design Mr Hegley considered that the Guidelines provide a good level of traffic noise protection. He considered:

*The guidelines provide a design level based on the existing noise environment. ... Where the traffic noise is already significant the guidelines ensure that any further increase in the noise is minimised to the point where no additional noise is considered acceptable. ... The aim ... is to keep the  $L_{max}$  to within a level that will not disturb sleep for the typical person. ... I am of the opinion that, when taking into account the community response to traffic noise and industrial noise, the value adopted in the Transit guidelines is reasonable. Significantly it is 5dBA below the level previously recommended by the Ministry of Health.*

[478] Mr Hegley identified that the Guidelines recommend that when the distance from the nearside edge of the traffic lane to the nearest assessment point for residential buildings is less than 12 metres, some noise reduction may be appropriate. He notes that there are in the upgrade area some dwellings that fall within that category and as a result the design levels in the guidelines are already being exceeded. The existing noise environment for the houses fronting SH1 is generally in the range that puts them in the 70dBA design limit under the guidelines. Mr Hegley considers however that the use of a friction course road surface (for example) could generally reduce the noise levels to bring them within the design goals. He then considered those houses closer to the road where the noise level exceeds 70dBA. He concluded that a modified road surface would enable the 24 hour  $L_{eq}$  design goal to be maintained.

*However, as these houses are very close to the road the  $L_{max}$  night time level ... would not be complied with. The best method to control the  $L_{max}$  value would be to construct a screen fence. ... The only houses that would require attention beyond that proposed above are the few houses on the western side of the highway between Steyne Avenue and Grays Road. The proposed upgrading would bring the edge of the carriageway within 2-3m .... As the current access to these houses is off State Highway 1 it would be impractical to screen them and retain their access. It has therefore been recommended that alternative access is provided from the rear of these properties and they are then protected with a solid noise barrier ... to ensure the design requirement is achieved.*

[479] The witness identified that Transit itself had determined the need for noise attenuation measures by application of the criteria in the Guidelines. He then gave evidence as to the acoustic design measures which would ensure compliance. In particular he concluded with respect to those houses within 12 metres of the carriageway any attenuation measures would include acoustic treatment subject to residential approval. For those 5 houses identified as impractical to screen and retain access, the suggested option of providing rear access and a solid barrier will reduce the noise exposure at these houses by a minimum of 8 dBA – which he considered was a significant improvement.

[480] Mr Hegley also gave evidence as to the relative merits of the various options with respect to noise effects. In his opinion, based on an effects-based comparative analysis, the *Reduced Upgrade* is the preferred noise option.

1/2/11

[481] The Residents' case is that it is inevitable that the already damaging levels of traffic noise will be worse if capacity is increased, traffic lights are installed and traffic is moved nearer to the footpaths and residences. They are however prepared to accept that the effects in some residences may be mitigated with acoustic treatment but were concerned that their implementation would, in fact, create further adverse effects. They accepted that the use of friction course sealing might assist in controlling noise levels but considered that it would be extremely difficult to maintain, because of the many services in the carriageway and would not mitigate the new noise increases caused by the effects of traffic lights on vehicle movements. The Residents considered that retaining the status quo and sealing the existing carriageway in friction course would provide greater noise mitigation.

[482] **Dr P J Dickinson, a Consultant Acoustic Scientist**, gave evidence on behalf of the Residents and it is his conclusion too that the proposal will increase noise effects. He also identified that the Residents of Mana Esplanade are already receiving noise levels from the road traffic on SH1 which are well in excess of those compatible with the requirements for protecting the environment. Dr Dickinson set out several areas in which he considered that the evidence of Mr Hegley either contains omissions or may be open to misinterpretation.

[483] First of all he considers that the Guidelines are not acceptable as a planning tool with respect to protecting the environment. He considered that no Government Department had accepted the Guidelines as acceptable, nor had the local government agencies.

[484] For example the unit of sound description in the guidelines, the 24 hour time average level (Leq 24hrs), is not the recommended metric for environmental noise world-wide, as it tends to hide the increased effects of high levels of noise during the night. He concluded that:

*Almost without exception the noise metric used for the description of sound when health and the environment is involved, is the day/night level Ldn. This takes account of noise at night having greater effect on a population trying to sleep than the same amount of noise on the same population awake during the day. The 24 hour Leq used by Transit New Zealand simply averages the sound received over the entire 24 hours ...*

[485] The Ldn treats all levels occurring between 10 PM and 7 AM as though they are 10 times (10dB) as high as they are. Use of the Ldn (as opposed to Leq), identified Dr Dickinson, is internationally accepted practice and is reflected in the following New Zealand Standards on Environmental Noise:

NZS 6801:1999 Acoustics – Measurement of Environmental Sound  
 NZS 6802:1999 Acoustics – Assessment of Environmental Noise  
 NZS 6805:1992 Airport noise management and land use planning  
 NZS 6807:1994 Noise Management and land use planning for helicopter landing areas  
 NZS 6809:1998 Port Noise

[486] Dr Dickinson questioned why Transit had decided to use a unit other than Ldn, unless the object was to obscure the high levels of noise at night.

5.2.2.

[487] In NZS 6802:1999 the standard given as a guideline for the protection of health and amenity is 45-55dBA Leq for daytime and 35-45 dBA Leq for night-time. Dr Dickinson gave evidence of the noise measurements he had identified over three days at three properties in the subject area. The results were as follows:

At 48 Mana Esplanade the Leq 24hrs was 71 dBA and the Ldn was 75 dBA  
 At 96 Mana Esplanade the Leq 24 hrs was 69 dBA and the Ldn was 75 dBA  
 At 160 St Andrews Road the Leq 24hrs was 67 dBA and the Ldn was 71 dBA

[488] Dr Dickinson noted that at the Mana Esplanade properties the Leq was 4 and 2 dB higher respectively than those in the Hegley report, but emphasised particularly the difference between the Leq of 67 dBA and the Ldn of 75 dBA. He concluded that the Hegley report somewhat underestimates noise along Mana Esplanade. Further, he noted that in his own study there were very high single event noise levels at night, with many over 80 dBA.

[489] It was also Dr Dickinson's evidence that while many consultants like to describe an increase of 10 dBA as being twice as loud, that this conclusion is illogical. He stated that:

*From basic acoustics, an increase of 10 dB is ten times ( $10^{10/10}$ ). If the noise exposure is increased by one decibel, it is an increase of 26%. A two decibel increase is an increase of 58%, and a three decibel increase, an increase of 100%. An increase of 12 dB would mean almost 16 times the amount of noise ( $10^{12/10}$ ).*

[490] However in his rebuttal evidence Mr Hegley responds thus:

*I accept that to say an increase of 10dBA sounds twice as loud is not scientifically accurate for all sounds and frequencies. However, as far as a general appreciation of sound is concerned, this is a fact.*

*Loudness is measured with a unit called phon. A change of 10 phon is usually associated with a doubling or halving of loudness. The dBA scale is, in fact, the smoothed 40 phon curve. Rather than adding further to the confusion, I will simply say that the majority of my colleagues in acoustics remain of the view that a 10dBA increase in the noise level is an apparent doubling of the sound level. This is supported by technical facts.*

[491] In Dr Dickinson's opinion, the increase in noise as a result of the Clearway through Mana will not be just 1 dB, but is likely to be significantly more. He identified that maximum noise levels at night are often 100 times as great as those recommended as the maximum allowable in New Zealand NZS 6802:1999.

[492] Much of Dr Dickinson's evidence concerns what is an appropriate level for noise in a residential environment. He refers to environmental noise standards from reputable organisations such as the WHO and EPA and compares these with the current noise situation in the subject area. Having done this he concludes the current noise levels are inappropriately high.

[493] Dr Dickinson acknowledged however that because noise from road traffic is measured at 1 metre from the dwelling that it does suffer some enhancement by reflection, as compared with the free field levels referred to in the above standard. He concluded, nevertheless, that even if the effect of that is adjusted the Residents' evidence is that there are still free field levels in the range of 70-75 Ldn levels in which residential use is proscribed.

AKK.

[494] Mrs Middleton who lives at 70 Mana Esplanade and is an **Environmental Health Officer and Lecturer** with ten years experience gave evidence. She confirmed that the Residents already suffer excessive noise daily. She queries why Transit's noise levels on the *Reduced Upgrade* route should exceed the International Noise Standard identified by Dr Dickinson. She was critical too that Transit have used the Leq noise measurement to assess potential effects. In her opinion, this "balances" high and low noise energies but not the fluctuating ones currently experienced by the Residents. Free flowing traffic provides a constant noise environment and the more traffic travelling at speed mid afternoon the noisier the environment becomes. Peak times when the traffic is travelling slowly is relatively quiet by comparison. Mrs Middleton was of the opinion the traffic light controls will change noise characteristics from a steady noise to stop/start with trucks braking and traffic accelerating away.

[495] Mr Hegley responded to two aspects of Dr Dickinson's evidence. Firstly, that as a member of the committee that developed the Guidelines that he had seen no evidence that any of the committee members had objected strongly to the Guidelines finally adopted. Nor was Mr Hegley aware of any concerns being expressed by Government Departments or local government agencies. Thirdly, Mr Hegley identified that the controls finally adopted by the committee were generally stricter than those previously adopted, which were a copy of the levels used in the United Kingdom.

[496] As to Dr Dickinson's suggested use of a Ldn descriptor for traffic noise, Mr Hegley considered that it is not significant that some countries have chosen to use the Ldn value because there are different descriptors. For each descriptor there will be a corresponding trigger level to reflect the different type of measurement value. What matters is that the noise level that is adopted, relates to the reaction of the community to traffic noise.

[497] And as to Dr Dickinson's application of the NZS6802 Standard to traffic noise, Mr Hegley referred to Paragraph 1.2 of each of the 1991 and the 1999 Standards which specifically exclude the use of the standard for assessment of sound in relation to transportation noise.

[498] With regard to noise estimates along Mana Esplanade, Mr Hegley observed that there will necessarily be some variation in any measurements and noted that the equipment used to monitor noise is only accurate to  $\pm 2\text{dBA}$ . In this instance, the difference in the measurements recorded by Dr Dickinson and himself could, he concluded, be largely attributed to wet weather conditions at the time of Dr Dickinson's recordings. A wet road will raise the noise level significantly ... *on average I am of the opinion that the measurement sites that I selected are representative of the typical noise levels experienced by the resident in fine calm weather conditions.*

[499] Further, as to criticism of the noise level that has been designed for, Mr Hegley himself was critical of the noise levels suggested by Dr Dickinson as acceptable. Mr Hegley identified that those levels are not necessarily sought by the community and that such levels on a state highway such as the Mana Esplanade are realistically unachievable. As an example, based on distance alone, to achieve those levels at Mana the closest a house should be to the Highway would be around 250 metres. This distance would be reduced if screening were included. However, no amount of screening could achieve the night time criteria for the existing houses.

A.B.K.

[500] Finally, in respect of the effects of noise on sleep, Mr Hegley considered that Dr Dickinson's evidence with respect to the effects of noise on sleep was incomplete and thus gave an incomplete discussion of the issues. Mr Hegley referred to some additional factors that modified the picture gained from that evidence. First, that the noise level generated at the ear of a person turning over in bed exceeds the Lmax recommended by Dr Dickinson for sound inside a bedroom. Secondly, the type of acoustic surroundings (near an airport, near a heavy traffic street, etc) also affects the threshold of awakening as does the stage of sleep at which the noise occurs.

[501] **Mr K O Ballagh, an Acoustic Consultant** also gave evidence for Transit on the basis that he conducted a peer review of the noise investigations into the *Reduced Upgrade*.

[502] Mr Ballagh addressed several principal concerns. Firstly, the range of bypass options between Goat Point and the Paremata Roundabout. Secondly, with respect to existing noise effects, the estimated noise from each option, possible methods of mitigation, and the effects of traffic lights on noise emission, particularly in heavy traffic. The effects of noise were then compared for the Mana Bypass and the Clearway options. Mr Ballagh identified and also reviewed a number of key documents<sup>1</sup> and concluded that any concerns that he had after reviewing those documents were satisfactorily addressed by Mr Hegley.

[503] With respect to the existing noise environment Mr Ballagh noted that Hegley Acoustics had conducted investigations at nine sites in the area. Prior to that there was data from only one property recorded some 5 years prior. A summary of those results is as follows:

- |       |  |           |
|-------|--|-----------|
| (i)   | Properties fronting onto Mana Esplanade            | 67-71 dBA |
| (ii)  | Near sections                                      | 62 dBA    |
| (iii) | Properties fronting onto the proposed bypass route | 56-62 dBA |

[504] Because doubts had been raised by the Commissioners at the NOR hearing, Mr Hegley had made new calculations of the predicted noise emissions for each option. But for one result, the predicted levels generally agreed within  $\pm 1$  dB of the actual measured levels at the same location. This conclusion, Mr Ballagh considered, is satisfactory, giving confidence that the predicted levels for future situations are a reliable indicator of noise exposure. At one location only, being 13 Mana Esplanade, the measured levels were 4dB higher than the predicted levels. Mr Ballagh concluded that anomalous conditions on the day might have caused this difference.

<sup>1</sup> (i) SH 1 Paremata to Pukerua Bay Capacity Improvement Study-Option Evaluation: Assessment of Effects on the Environment August 1995 (Transit)  
 (ii) State Highway One Paremata To Pukerua Bay Capacity Improvement Study Noise (Acousafe Consulting & Engineering Limited 22 June 1995)  
 (iii) State Highway One Pukerua Bay to Paremata Upgrade Noise Study December 1996 (Hegley Acoustic Consultants)  
 (iv) State Highway One Upgrade – Plimmerton to Paremata Section Upgrade – Notice of Requirement, Resource Consent Applications, Assessment of Effects on the Environment  
 (v) Brief of evidence in the matter of a notice of requirement for State Highway 1 (Plimmerton to Paremata section) Upgrade  
 (vi) Proposed State Highway 1 Urban Section Upgrade Recommendation of Commissioners (PCC reference number RC 1119/A)

7.2.12

[505] The second outcome of the study was a comparison of the noise emissions for each of the options. These results are as follows:

- (i) Clearways option - increases the existing ambient noise by ~ 1dBA
- (ii) Full Bypass options - reduces existing noise to properties on Mana Esplanade by ~ 5-6 dBA, while increasing the noise levels for those properties fronting onto the bypass route by about 10dBA (assuming no mitigation)
- (iii) Two Lane One Way Bypass option – reduces existing ambient noise for properties on Mana Esplanade by 3 dBA, while increasing the noise levels for properties fronting onto the bypass by ~ 6dBA (assuming no mitigation)

[506] Mr Ballagh was satisfied that the methods identified by Mr Hegley are standard ones which are well understood and widely used. It is Mr Ballagh's opinion that the suggested mitigation should be adequate to achieve compliance with the Transit Noise Guidelines.

[507] Mrs Middleton for the Residents inquired whether Mr Ballagh could clarify his conclusion that with the *Reduced Upgrade* there would be insignificant change to existing noise levels for the majority; and a small reduction for some, given that noise from traffic flow is louder than noise from stationary vehicles. Mr Ballagh's response was that because traffic must go past at some stage, traffic jams do not reduce noise overall, they just shift it in time. Further, measurements show that traffic will produce the same amount of noise at any speed between 20 – 50 kilometres per hour. Mrs Middleton next inquired whether traffic lights would create more noise because of the traffic starting and stopping at the lights. Mr Ballagh responded that a study of such effects, conducted by Mr Hegley at a comparable site (in Auckland) found that there was no significant difference in noise effects by virtue of the operation of traffic lights.

[508] **Mr M Hunt, an Environmental Consultant** specialising in environmental noise gave evidence for the PCC. He was also concerned that the proposed works will introduce an increase in noise levels in an already high noise environment. He concluded that the operation of outside lane traffic will result in a small increase in Lmax noise levels at nearby house locations as a result of the traffic lane moving closer to dwellings. The installation of traffic lights also has the potential to increase noise in discrete areas near intersections.

[509] Mr Hunt believes that the evidence of existing noise levels and survey results support the contention that the current noise situation represents an undesirable noise environment for the Residents. He considered that even if the mitigation recommendations are implemented, the noise environment along Mana Esplanade and the entire "urban section" would still be far from ideal. Like Messrs Hegley and Ballagh Mr Hunt believes that the *Reduced Upgrade* constructed and operated in accordance with the noise conditions as agreed, will result in reduced adverse noise effects in the residential environment improving existing residential amenity and better sustaining the residential use of already affected sites.

[510] Mr Hunt referred to the potential use of a friction course, a low noise road surface, to ameliorate potential adverse effects. He considered that such a course will appreciably reduce overall traffic noise in the local area (eg as experienced by pedestrians).



[511] Mr Hunt also referred to the differences in the impact of night and day noise effects with which Dr Dickinson was concerned. Mr Hunt considered that the time of day when noise is received is of critical importance. He stated:

*Leq(24hr) is the most commonly- used metric measure to quantify traffic noise in New Zealand. It is used both in New Zealand and overseas for this purpose and in my view is adequate to quantify whole- day exposure to traffic noise. The recommendations of the Transit noise guidelines are based mainly on this unit. As described above, the Guidelines also refer to a design guide for mitigation of noise for houses very close to highways which is based on the Lmax unit (a method of quantifying single event type sounds that are particularly important in terms of night time sleep disturbance).*

[512] Mr Rendall replied on behalf of Transit to Mr Hunt's evidence. Mr Rendall was concerned that while Transit is prepared to use friction course there are practical limitations. He identified that Transit will use friction course wherever practicable, pointing out that for such a mitigating measure the Agreed Conditions allow some degree of flexibility to determine where it is to be used for practical reasons related to maintenance.

### Evaluation

[513] The evident outcome of the expert evidence as Transit identifies is of an environment with high existing noise levels generally as a consequence of proximity to SH1, often exceeding the levels in the Guidelines.

[514] Mr Hegley provided criteria to identify properties where the Guidelines would indicate that acoustic treatment be offered to owners for the purposes of noise mitigation. As a result some owners have been offered acoustic glazing of specified windows. As well, an acoustic barrier will be constructed to provide noise mitigation for 9 frontages belonging to odd-numbered properties 75 – 91 on the western side of St Andrews Road. In his supplementary evidence Dr Ramsey further discussed the provision of an acoustic fence at this location. He indicated it is similar to one at 2 metres high already constructed at No. 93. Examination of an accurate scaled cross-section suggests a fence slightly lower than 2 metres might be acceptable for the fence to function as a noise barrier for traffic in the northbound lanes.


[515] Throughout the hearing Mr Lambie considered that under the upgrade the traffic lanes will be closer to several houses with resulting adverse effects. But Mr Hegley told the Court that there may be possibly a 1 dBA increase which he concluded would be unnoticeable.

[516] Nevertheless as observed by Dr Ramsey, it is appropriate for Transit and the Residents of St Andrews Road to meet and agree what might be suitable both in terms of noise mitigation as a result of this decision.

[517] For his part Mr Hunt now considers that his points of difference with the other experts have been satisfactorily addressed in the proposed conditions on noise latterly agreed to between the PCC and Transit. They provide for specified reductions for those dwellings close to the road (namely numbers 75 and 77 Steyn Avenue), and the potential increase in overall 24 hour noise levels that exceed the Guideline criteria. Further, Mr Hegley refers to proposed conditions that refer to the collection of further ambient noise levels in the affected area and suggests that that provides a reasonable basis for future assessment of compliance with the Guidelines.

5.2.11





- [524] Turning now to Dr Dickinson's views on the relationship between decibel level (dBA) and loudness, referred to at para 488 – we make no finding on this point.
- [525] We believe the more relevant matter with respect to noise here is the perceived effect on the residents and again we note the agreement between Messrs Hunt and Hegley on the application of the guidelines and the condition of consent based on them.
- [526] With respect to the question of the suitability of friction course two matters were raised by Transit. Messrs Hegley and Hunt had given their opinion that the noise level on Mana Esplanade could be reduced, in Mr Hegley's opinion by approximately 5dBA, if a friction course is used on the road. The Residents did not question Mr Hegley further on this issue.
- [527] With respect to maintenance of friction course in response to concerns raised by Mr Barlow, Transit acknowledged that there are practical limitations on the use of friction course on areas such as intersections, which are subject to high levels of stress. But we note this is reflected in the conditions now proposed by Transit after further discussions with the Residents groups such that the use and maintenance of low noise road surface is required "where practicable".
- [528] Meanwhile along with the PCC, we consider it is reasonable to expect a different noise environment for properties on an arterial route than for those in the area located away from the route. Mr Julyan considers that if no upgrade is undertaken, noise would continue to increase with increased traffic flows without the benefit of conditions mitigating existing noise. It is clear to the Court that will occur.

### Findings

- The residents along Mana Esplanade currently experience high traffic noise and the noise will worsen if nothing is done. If this alignment is upgraded with the noise measures proposed there would be an insignificant change to the noise level for the majority and even a small reduction for some as a result.
- If the *Reduced Upgrade* is constructed and operated in accordance with the proposed noise conditions it is likely that there will be reduced adverse noise effects within the residential environment.
- The methods by which Transit achieves noise reduction in the relevant residences along the *Reduced Upgrade* route is for Transit in consultation with the Residents.
- The methods by which Transit achieves noise reduction on road surfaces is for Transit.
- The noise conditions imposed are not contrary to the provisions of the relevant planning instruments.

S.E.K.

## Chapter 10: Landscape Amenity Values

### Introduction

[529] Very detailed landscaping evidence was given by **Mr J R Hudson, Landscape Consultant to Transit**, who considered the existing streetscape character and had initially considered the effects of the *Full Upgrade* on 80 properties along the Urban Section of SH1 which either had land loss or sight plane restrictions resulting from that proposal.

[530] When the *Reduced Upgrade* was developed, which takes no land from any residential properties south of Steyne Avenue, Mr Hudson assessed this option also. In landscaping terms Mr Hudson identified that for all the landscaping factors assessed, except ambience, the *Reduced Upgrade* is clearly preferable to the bypass. For ambience, the *Reduced Upgrade* is slightly preferable to the two lane bypass option and preferable to other proposals.

[531] Mr Hudson's plans for the upgrade were peer reviewed by **Ms M C Buckland, Consultant Landscape Architect**. Ms Buckland agreed with the conclusions he drew of the proposal and its landscape effects as well as the roading options identified. She concluded that in visual terms the *Full Upgrade* is preferable, and in landscape terms the two lane bypass options were better. Ms Buckland considered the *Reduced Upgrade* however had the least visual and landscape effects of all. The Resident groups chose not to cross-examine either of these two experts.

[532] We do not intend to traverse the details of Mr Hudson's evidence because it was largely unchallenged, but evaluate only those issues which arose out of questions put to him by the Residents and the Court. The Residents had in fact been invited by Transit to submit questions in writing to which Mr Hudson replied in his rebuttal evidence. These questions ranged over issues such as:

- the effects of the proposed weigh station and the industrial site on the character of the northern entry to Pimmerton
- peoples' preference for diversity over aesthetic coherence particularly when coherence involves a noise screening wall along most of the western side of the road beyond Goat Point, two sets of lights in close proximity, the removal of large trees, no grass berms etc
- loss of views as a result of the construction of a concrete barrier south of Pope Street
- parties affected by frontage alterations and the alterations themselves particularly in respect of the Steyne Avenue to Paremata Bridge properties, including the aesthetics of noise mitigation fences
- issues surrounding the Pimmerton Domain/Pimmerton Roundabout.

We address these in a somewhat different format.

### The Steyne Avenue / Goat Point Area

[533] The intersection of Steyne Avenue and St Andrews Road is marked by a steep clay bank carrying a number of Pohutukawa on the eastern side of SH1 and the Steyne Avenue railway level-crossing to the west with views seaward. At Goat Point, the road skirts the headland wedged between the foot of this steeply rising bank and the railway line. For a

1.2.2

short section of SH1 at this junction, there is a complete absence of buildings, allowing unimpeded views across the railway to the seascape beyond.

- [534] It was Mr Hudson's evidence that when looking north, the views from the highway at Goat Point are spectacular, with an open seaward vista which takes in Plimmerton Beach, Mana Island and Whitireia Park. At that junction the headland road has the character of a coastal highway. When heading towards Wellington this section of the highway is the first point south of Pukerua Bay from which motorists gain views of the sea. The seaward aspect of Whitireia Park is in full view and views of Mana Island may also be obtained. Mr Hudson considered this area has a seaside ambience characterised by the views of the sea in this coast, the style and scale of dwellings, the old sea cliff escarpment and prominent headland of Goat Point, the Pohutukawa trees, the informality of the wide berms and the informal edges to the highway.
- [535] The effect of the necessary road widening around Goat Point will be to remove the grass berm and formalise this section of the highway and footpath. This, Mr Hudson concluded, is going to have the greatest landscape or visual effect along this section of the upgrade. A batter wall on the proposed cut, traffic signals, extra lanes, and a concrete barrier south of Pope Street on the seaward side will all contribute to this formalisation. This area and its future development troubled us.
- [536] The clay bank on the eastern side of SH1 at the Steyne Avenue intersection is to be cut back to better accommodate the physical proportions of the upgrade. Dr Ramsay's evidence is that the toe of the bank will be set back 1 metre, with the wall footprint 3 metres, and with a height of 12 metres. This may require removal of some of the trees on the bank and a stepped face in that prominent location. The residents sought some control over the materials used to face the bank and more extensive landscaping. The Court endorses that approach. The area requires as natural a treatment as possible.
- [537] The parties recognise however that engineering feasibility of the suggestions made must be a prime consideration. Concept Plan 2 in Appendix 3 introduced in evidence by Mr Hudson demonstrated a rather formal tiered bank of timber half rounds to be planted with native shrubs to complement the surrounding vegetation. Proposed condition 8.7 records the fact. Notably, proposed condition 8.17 records that Transit in landscaping the bank will take into account the reasonable preferences of the adjoining residents, and landscaping will be to the satisfaction of the PCC.
- [538] Meanwhile, draft condition 8.8 requires Transit to design and construct a vertical safety barrier on the western side of the highway as a pedestrian protection measure between the footpath and the road at Goat Point, incorporating surface treatment measures to soften its appearance.
- [539] Mr Hudson established that the 6 houses south of Pope Street will have their sea views reduced to some extent by this proposed concrete safety barrier. Of these, one low-lying property, 15 St Andrews Road, will lose most of its sea view and the rest, including 160 St Andrews Road, will lose sight of the near seashore.
- [540] Otherwise it was his opinion that there would be minimal effects on any private property from the *Reduced Upgrade* in the area except for a small wall or bank at 158 St Andrews Road, grade changes at 180 St Andrews Road and the wall construction from 186-182 St Andrews Road. Although these changes would occur on private land, the actual houses are set well back on the ridge above the road and in his opinion would not be greatly affected (beyond the entry access changes).

T&K

1999

1

1

- 

ГД

This has t

### Diversity Over Aesthetic Coherence For Noise Screening Walls

[546] Several of the residents were critical of the aesthetics of the proposed noise mitigation fences and offended by the potential for what they termed "*pedestrian*" designs.

[547] We are satisfied that the range of fences proposed by Mr Hudson in his Appendix 4, *Frontage Reinstatement Options*, provides for varying heights, designs and materials (as examples) which are available on request and in many cases are an improvement on what currently exists.

[548] The Residents ultimately have the say in what design they require. Mr Hudson made the point that it is beyond Transit's control to ensure ongoing diversity and aesthetics on the issue. But we note his designs included in Appendix 4 cater for those criteria and we conclude, if implemented, it will contribute to enhanced visual amenity in the area.

### Plimmerton Domain and Taupo Stream Diversion

[549] Transit have indicated (in response to a question from the Court) a willingness to modify the linear nature of the stream realignment to produce a more natural alignment.

[550] We note that Transit hold a resource consent allowing final modification of the design for compliance with resource consent conditions and that Connell Wagner have prepared a plan incorporating pond areas in association with the stream relocation.

[551] We realise that PCC do not wish to increase the area of land designated for the stream diversion but understand that the modification proposed will fit within the boundaries of the existing designation.

[552] Once again we commend Transit and PCC for their willingness to mitigate as far as possible any adverse effects on the landscape arising from the *Reduced Upgrade*.

### Plimmerton Pedestrian Overbridge

[553] Currently the Plimmerton Overbridge is a very dominant unaesthetic structure which dissects and clutters the air space over SH1 on St Andrews Road. Its timber denseness creates an adverse visual impact.

[554] As part of the mitigation of adverse effects, when the overbridge is replaced, Transit have undertaken to redesign it to be in keeping with the surrounding environment and in consultation with the Plimmerton Residents and to the satisfaction of the PCC. Mr Hudson stated that if it had a wide span and was a structure with supports of light appearance located towards the edge of the reserve, then that would be mitigation of an obvious, but necessary, facility.

[555] Dr Ramsay in his supplementary statement of evidence stated he knew of no reason why the bridge could not be constructed of steel sections with balusters that comply with the Building Act. The approach ramps could also be framed from steel sections but because of the switch-back arrangements of the ramps dictated by the site constraints, there would be substantially lesser reduction in the visual impact as the ramps themselves form a visual barrier.

15 SEP 05  
S.E.K.

[556] Transit has included a new condition to take account of the new design (proposed condition 29A). We have amended the condition to reflect more closely emphasis on a more slender bridge recognising there may well be structural limitations on what may be achieved.

#### The New Paremata Bridge

[557] The introduction of a new bridge into the existing environment will introduce further structures into the Pauatahanui arm of the Porirua Harbour inlet. The inlet itself is classified as a significant landscape in the RPS. The bridge is to be constructed immediately adjacent to and west of the existing bridge. Its decking would be at a similar level to the existing bridge and the two bridges are to be linked by a flat grill structure. Mr Hudson said this:

*Its general appearance when viewed from road level and above in relation to the significant Pauatahanui Inlet, the new bridge would read as one with the existing bridge. This visual integration would be assisted by the bridge being seen in association with the other large structures in the immediate area. If the piers could be aligned, the same could be said for views from the beach or water.*

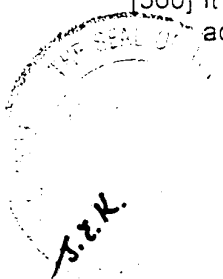
[558] We explored with Transit the alignment of the piers (noting that the resource consent for the new bridge had already been granted). Dr Ramsay had this to say after Transit had revisited the issue:

*Factors considered in the determination of the pier arrangements for the proposed duplicate bridge included the following:*

- (i) *maintenance of navigation passage (which required the central pier of the duplicate bridge to align with the central pier of the existing bridge and that the central two spans have a width of not less than those on the existing bridge);*
- (ii) *all piers for the duplicate bridge needed to avoid the location of the piers of the former railway bridge;*
- (iii) *minimisation of total pier cross-section (to minimise scour effects);*
- (iv) *minimisation of disturbance to the seabed during construction;*
- (v) *cost effective and efficient bridge forms, with the ability to achieve a flat deck level at a similar elevation to the existing bridge and the underside of beams to provide sufficient clear headroom in the navigation spans at high water.*

[559] Dr Ramsay included in his evidence Attachment 3 which shows the proposed 7 span arrangements (of generally equal span) which avoids the piers on the former bridge, and involves a 22.9 metre span. He believed the 7 span arrangement is most appropriate as it will produce a structure which will have the necessary headroom and will also be visually balanced. The alternative of a 45.8 metre span arrangement would require expensive on-site construction and there could be difficulties in achieving navigational headroom. In addition an examination of Attachment 3 shows that a 9 span bridge with 15.2 metre spans (to match the existing bridge) would have two piers too close to piers on an earlier railway bridge, which remain embedded in the seabed to allow practical construction.

[560] It is therefore not practical to achieve what would be more aesthetically acceptable. We accept Dr Ramsay's evidence on the issue.



### Weigh Station Landscaping

[561] It was Mr Hudson's evidence that a plan entitled "Plimmerton Weigh Station – James Street Concept Plan" recognises the effects the extended weigh station and industrial estate will have on the character of the northern entry to Plimmerton and outlines landscaping to mitigate these effects.

[562] In response to enquiries from the Court on the rather barren nature of the weigh station in what we consider to be a visually significant location, Dr Ramsay indicated it may be possible to dispense with the concrete barrier currently provided and substitute a vegetated strip. Some taller trees may also be able to be introduced to soften the area. Dr Ramsay made the point however that such modifications have to be made with the agreement of the Commercial Vehicle Investigation Unit of the NZ Police (CVIU). The CVIU requires high visibility of the area from the weigh station as well as high visibility from the highway.

[563] In the event Transit now proposes to add a further condition to reflect our interest (proposed condition 8.2A) which we consider achieves a possible better outcome in the circumstances.

### Other Landscape Issues

[564] Otherwise we affirm and endorse Mr Hudson's evidence as produced.

### Findings

- The re-examination of some of the issues raised and amendment to a number of the conditions have satisfied us that Transit is concerned to mitigate any adverse visual amenity effects which would otherwise reflect against sustainable management of the area's natural and physical resources.
- Transit has used its best endeavours to address all the Court's and Residents' concerns.
- The landscape through which the *Reduced Upgrade* route travels is extremely diverse and changing rapidly. We conclude that Transit is committed to work with the PCC and the Residents jointly to mitigate adverse effects through the implementation of various landscape measures around key features of the upgrade.

---

3.2.1



### Chapter 11: Further Conditions

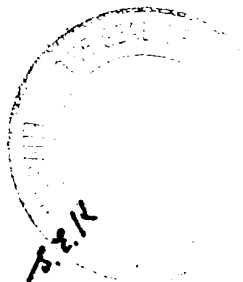
[565] We have referred throughout this decision to a number of proposed conditions agreed to by all parties. A few exceptions sought by the Residents are found in Annexure B to the Agreed Memorandum of All Parties in Respect of Proposed Conditions.

[566] We have reviewed all conditions in both Annexures A and B and amended some in Annexure A as follows:

1. Extended the date for the review of the designation to 31 December 2006 in Conditions 58 and 58.1
2. Re-emphasised our concern for a more slender design of the Plimmerton Overbridge in Condition 29A.

We have reviewed the conditions in Annexure B but have concluded in the light of the evidence they should not be included. All issues are satisfactorily accounted for, thanks to the parties.

---



## Chapter 12: Summary

- The proposal is designed to meet Transit New Zealand's Principal Objective under the Transit NZ Amendment Act 1989 "to operate a safe and efficient highway system" (55).
- For road traffic and pedestrian safety reasons and for relief of traffic congestion, the *Reduced Upgrade* should proceed as soon as possible. What is proposed by Transit is a safe and efficient upgrade to a critical portion of SH1.
- In legal terms the proposal meets the tests set out in s.171 RMA. The *Reduced Upgrade* is reasonably necessary for achieving the objectives of the public work for which it is sought, namely:
  - to relieve existing congestion problems associated with this section of the SH1 coastal route; and
  - to assist in ensuring that, during the interim period pending construction of the Inland Highway route, there is a sufficient level of service afforded in relation to the existing coastal highway route by enhancing traffic capacity between Plimmerton and Paremata.
 Transit has given adequate consideration to alternative routes and methods. It is not required to select the best option but under the particular circumstances of the case, we consider the *Reduced Upgrade* is the best alternative. It is unreasonable to expect Transit to use another alternative.
- The *Reduced Upgrade* meets all the requirements for sustainable management under Part II RMA.
- The *Reduced Upgrade* is consistent with the relevant planning instruments, namely the Porirua District Plan and the Regional Policy Statement.
- The *Reduced Upgrade* is not an alternative to TGM. It is both a short term strategy and one that may be made to last effectively until the TGM is commissioned whenever that may be.
- What is proposed is essentially a traffic management solution and not a road building one.
- The designation for the *Reduced Upgrade* provides sufficient roading capacity for the short/medium term and also meets the reasonably foreseeable needs of future generations by leaving open all other roading options.
- Some attributes of the *Reduced Upgrade* will become permanent assets to the Paremata/Manā/ Plimmerton region. Others are reversible after TGM is commissioned. The position is to be reviewed with the local community in 5 years time.
- The *Reduced Upgrade* achieves a well-reasoned and well-structured balance between the interests of the local and greater regional communities of Wellington.
- Conditions are imposed on the *Reduced Upgrade* to avoid, remedy and mitigate identified major adverse effects and include ongoing provision for consultation.
- The *Reduced Upgrade* is consistent with the Wellington Regional Land Transport Strategy.
- Within their objectives for the *Reduced Upgrade* Transit have made their best endeavours to mitigate the adverse effects of the proposal and to meet the concerns of local authorities and residents.

S.E.K.

**Chapter 13: Determination and Confirmation of Designation**

[567] The designation for a *Reduced Upgrade* on the Urban Section of SH1 is confirmed subject to the modifications to the conditions set out in Schedule 2.

[568] This decision records the appeal (RMA 1000/98) Porirua City Council v Transit New Zealand is allowed on the terms and conditions set out in Schedule 2.

[569] This decision records that the concerns of associated parties to the PCC appeal, Shell New Zealand Ltd and McDonald's System of NZ Ltd is settled by consent. A consent order is attached to this decision marked **Schedule 1**.

[570] Appeals RMA 1006/98, RMA 1013/98, RMA 1015/98 and RMA 1016/98 by A and F Middleton and Others, Transmission Gully Action Council, Paremata Residents Association and Plimmerton Residents Association are disallowed whilst recognising that many of the concerns of the Residents have been met in the final conditions.

**Costs**

[571] We wish to record that we do not consider that there should be an award for costs. If any parties wish to seek an order for payment of costs however against the appellants however, they may do so in writing within three weeks of this decision. A party in reply may respond in writing within two weeks of receipt.

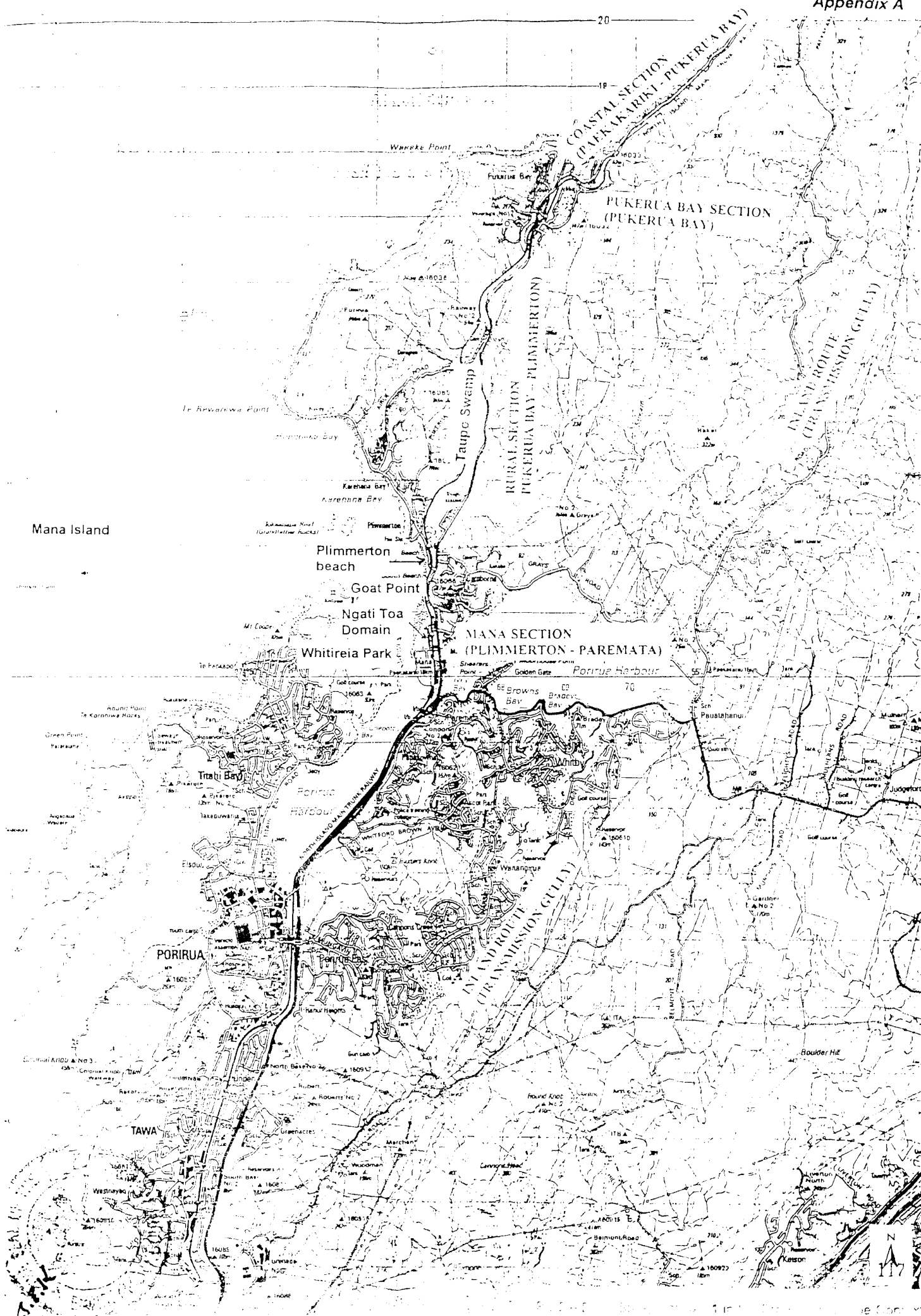
**DATED** at WELLINGTON this 16<sup>th</sup> day of July 2001

  
S E Kenderdine  
**Environment Judge**

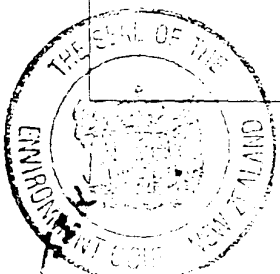
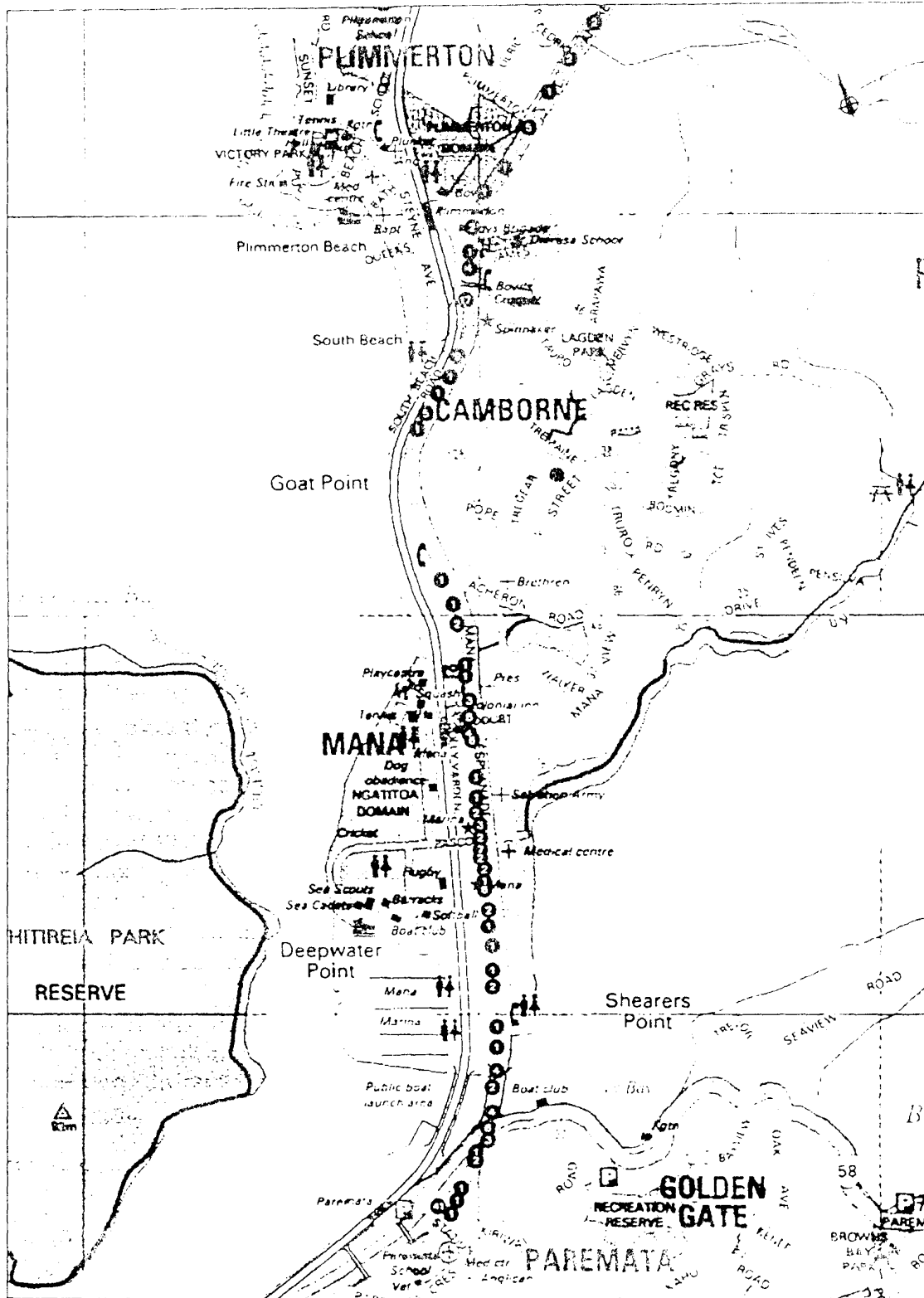
For the Court







ACAD:3783W5



# ACCIDENT PATTERNS

# 5

**SCHEDULE 1**

IN THE MATTER of the Resource Management Act 1991  
AND  
IN THE MATTER of an appeal under section 174 of the Act  
BETWEEN PORIRUA CITY COUNCIL  
(RMA 1000/98)  
Appellant  
AND TRANSIT NEW ZEALAND  
Respondent  
AND SHELL NEW ZEALAND LIMITED and  
McDONALD'S SYSTEM OF NZ  
LIMITED  
Section 271A parties

**BEFORE THE ENVIRONMENT COURT**

Environment Judge S E Kenderdine sitting alone pursuant to section 279 of the Act

**IN CHAMBERS** at WELLINGTON

**CONSENT ORDER**

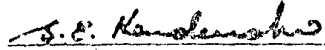
**HAVING CONSIDERED** the notices of Shell New Zealand Ltd and McDonald's System of NZ Ltd, and the memorandum submitted on behalf of those parties and Transit New Zealand, **THIS COURT HEREBY ORDERS BY CONSENT** that:

1. The Court confirms the respondent's decision, subject to the following:
  - (a) The requirement will include **Plan G** in Appendix 1 to the "Porirua District Plan – Transit New Zealand "Urban Section" Designation: Restrictions, Terms and Conditions" (the "Agreed Conditions") in Annexure A to the "Agreed Memorandum as between Certain Parties Concerning Determination of the Appeals" dated 17 August 2000; and
  - (b) The requirement will include **Condition 34** of the Agreed Conditions.\*
2. The notices of Shell New Zealand Ltd and McDonald's System of NZ Ltd to be a party to the proceedings and/or represented at the hearing are withdrawn.

*Handwritten notes and stamps:*  
A circular stamp with text around the perimeter.  
Handwritten initials "SKH" and other illegible marks.

3. There is no order for costs.

DATED at WELLINGTON this 16<sup>th</sup> day of July 2001



S. E. Kenderdine  
Environment Judge

\* The Court notes that Plan G and Condition 34 as agreed between Shell New Zealand Ltd, McDonald's System NZ Ltd and Transit New Zealand have since been incorporated into the "Agreed Memorandum of all Parties in respect of Proposed Conditions" dated 10 November 2000. As a result the s.271A parties' concerns have still been met.



## SCHEDULE 2

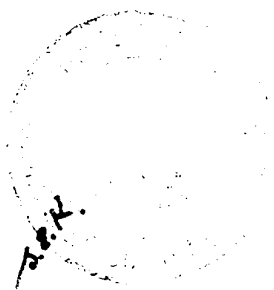
### TABLE OF CONTENTS

#### TRANSIT NEW ZEALAND "URBAN SECTION" DESIGNATION: RESTRICTIONS, TERMS AND CONDITIONS

Table of Contents .....	1
Requiring authority .....	3
Objectives of the Work .....	3
Boundaries of the designation .....	3
Properties subject to the designation .....	4
Building Line Restrictions .....	4
Scope and extent of work .....	4
Certificate of final design .....	4
Maintenance of built structures .....	5
Landscaping .....	5
Maintenance of landscaping .....	5
Landscape design principles .....	5
Plimmerton Weighstation – James Street .....	6
Plimmerton roundabout to Steyne Avenue .....	6
St Andrews Road property frontages .....	7
Cut Face at Steyne Avenue Intersection .....	7
Goat Point .....	7
Mana commercial area frontage .....	8
Modifications to property frontages .....	9
Steyne Avenue to Paremata Bridge .....	11
Paremata Bridge to south of Paremata Roundabout .....	11
Landscape plans .....	12
Earthworks .....	13
Lighting .....	13
Construction effects mitigation .....	13
Traffic Management Plan .....	14
Disruptions to property access .....	15
Construction noise mitigation .....	15
Construction Noise Management Plan .....	15
Operational noise mitigation .....	16
Compliance Monitoring .....	18
Acoustic treatment of residential dwellings .....	18
Pedestrian overbridge at Plimmerton .....	20
Provision for emergency service vehicles .....	21
Access to Shell/McDonald's site .....	22
Signage .....	22
Sewer and water main protection and fire hydrants .....	22
Consultation .....	23
Community Information Programme .....	23
Community Liaison Group .....	23
Consultation in relation to detailed road design .....	24
Mitigation of dust including management plan .....	24
Protocol for discovery of koiwi, taonga or other artefact material .....	25
Footpath widths and handrails .....	25
Community feedback register .....	25
Traffic calming .....	26
Replacement of parking spaces .....	26
James Street carparking .....	26

S.A.K.

Paremata Station carpark .....	26
New parking area in Redoubt Lane.....	26
Plimmerton Domain Playing Field.....	27
Plimmerton Pony Club.....	27
Restrictions on the operation of kerbside lanes .....	27
Monitoring parking.....	28
Notices .....	28
References to PCC .....	28
Review of designation .....	28



## ANNEXURE A

**Requiring authority**

- I *Transit New Zealand ("Transit") is the requiring authority responsible for the designation.*

**Objectives of the Work**

- II *The objectives of the Work are as follows:*

- *To relieve existing congestion problems associated with this section of the State Highway 1 coastal route; and*
- *To assist in ensuring that, during the interim period pending construction of the Inland Highway route, there is a sufficient level of service afforded in relation to the existing coastal highway route by enhancing traffic capacity between Plimmerton and Paremata.*

**Boundaries of the designation**

- 1 The land (in this designation called "the Land") which is subject to the designation and to which this designation applies is within the Porirua City Council (in this designation referred to as "PCC") district boundaries, and is as follows:

- 1.1 The road reserve for the existing SH1 including the land shown in the Porirua City District Plan ("PDP") as designated for "Limited Access Road" (Reference KO401) and for "Road (State Highway)" (Reference KO402);
- 1.2 Specified additional land adjacent to the existing SH1, including land contained within the boundaries of various properties with frontages to SH1; and
- 1.3 Specified additional land in the vicinity of the approaches to a new bridge proposed to be constructed in the vicinity of Pauatahanui Inlet near Paremata to the west of the existing SH1 bridge; and
- 1.4 Specified additional land of Taupo Stream and in the vicinity of Taupo Stream, in Plimmerton and various specified roads and streets including Plimmerton Drive, James Street in Plimmerton and portions of various other streets in the vicinity of their intersections with the existing SH1, including Steyne Avenue, Pope Street, Pascoe Avenue and other land -

each as shown on the Plans in Appendix 1 attached hereto as being within the PCC district boundaries.



### Properties subject to the designation

- 2 Those properties which are the subject of this designation are all of those properties listed in **Appendix 2**.

### Building Line Restrictions

- 3 The parts of the Land at 182, 184, 186 and 188 St Andrews Road, Plimmerton to which the proposed Building Line Restrictions apply are shown on Plans E and RLR E in **Appendix 1**. On those parts of the Land within the areas shown on those Plans, the nature of the proposed restrictions is that in respect of each of the relevant properties no person may, without the prior written consent of Transit New Zealand:

- 3.1 Erect, reconstruct, place, alter or extend any structure in, on, under or over the Land where this would involve any excavation or disturbance of the Land;
- 3.2 Introduce or plant any tree, bush or other plant or vegetation (excluding any grass or other shallow rooting vegetation) where this would involve any excavation or disturbance of the Land or the intrusion of any root system into that Land, and which may affect any retaining wall or anchor support; or
- 3.3 Excavate, drill, tunnel, or disturb the Land (except where this is necessary for and in relation to the planting, or removal of any grass or other shallow rooting vegetation).

### Scope and extent of work

- 4 Subject to and in accordance with its terms and conditions, this designation authorises Transit to undertake a work (in this designation called the "Work") being the construction, operation and maintenance of that section of SH1 as shown on preliminary design plans A to M inclusive in **Appendix 1** (the "Plans") and associated works and activities. The scope and extent of the Work shall be generally in accordance with the Plans, subject to final design and any minor modifications required to comply with any condition of this designation.

### Certificate of final design

- 5 The following shall apply to all aspects of the Work other than landscaping (to which **conditions 6 to 8.17** apply) and operational and construction noise mitigation (to which **conditions 18 to 27** apply):

- 5.1 Prior to commencing the Work, Transit shall submit to the PCC detailed drawings, specifications and other such information as the PCC may reasonably require to enable the PCC to certify that the Work is in accordance with the designation.



- 5.2 Transit can seek such certificates in respect of any particular section or aspect of or for the whole Work.
- 5.3 Transit shall not commence the Work (or any section or aspect of it) until the PCC has certified that the Work (or that section or aspect of it) is in accordance with the designation.
- 5.4 Any certificates under **condition 5.3** may be given subject to a condition that details of specified aspects of the Work be provided at a later date if the PCC is satisfied that it is impractical or unreasonable for Transit to be required to provide those details at the time certification is sought.

#### **Maintenance of built structures**

- 5A Transit shall, following completion of the Work, maintain all structures located within the designation boundaries that are built in accordance with these conditions [8.7] (cut face at Steyne Avenue, [8.8] (Goat Point accessway and fence or wall), [11&12] (lighting), [23] (acoustic fence), [29] (Plimmerton Pedestrian overbridge), [35] (signage), and [46] (handrails).

#### **Landscaping**

- 6 In carrying out the detailed design for the Work, Transit shall engage a practising landscape architect to advise on the carrying out of landscaping in accordance with the conditions of this designation.
- 7 Landscaping work (other than maintenance and other ongoing work) shall be:
- 7.1 Commenced and substantially progressed within one planting season after the completion of construction of the Work authorised by this designation; and
- 7.2 Completed before the end of the next planting season.

#### **Maintenance of landscaping**

- 7A Transit shall, following completion of the Work, maintain all landscaping work undertaken in accordance with these conditions. Maintenance shall include replacement of any plants that perish or are damaged by the Work (eg because of changes to ground water or damage to root systems or canopies).
- 8 Landscaping shall be undertaken by Transit in accordance with the following:

#### **Landscape design principles**

- 8.1 (a) Transit shall retain as far as practicable the essential elements that contribute to the character of the area;

- (b) To retain some of the diversity of character which currently exists, new fences shall vary in height, materials, vegetation, line and setback, subject to agreement with individual property owners;
- (c) The various treatment methods used shall include varying materials, design and planting to create a non-uniform streetscape.

#### **Plimmerton Weighstations – James Street**

8.2 Transit shall landscape the area of the Plimmerton Weighstations south through to the vicinity of the intersection of James Street with St Andrews Road (including the Plimmerton Roundabout and environs) shown in the Plimmerton Weighstations – James Street Concept Plan (being Concept Plans 1A, 1B, 1C, 1D, 1E, 1F and 1G in **Appendix 3**) in general accordance with that Concept Plan and the Landscape Plan required to be submitted under **condition 8.17** and to the reasonable satisfaction of the PCC.

8.2A In addition to the landscaping required by **condition 8.2**, Transit shall enter into consultation with Commercial Vehicle Investigation Unit of NZ Police (CVIU) to seek agreement to:

- (a) Carry out additional excavation to reduce the slope of the batter east of the proposed Weigh Station, and plant the batter with native vegetation;
- (b) Determine the requirement for the paved area north and south of the Weigh Station buildings, and determine whether it is possible to include additional planting in areas within the vicinity of the Weigh Station; and
- (c) Substitute the concrete barrier with a vegetated strip of approximately 2 to 2.5 m wide with a centrally located steel W-Section [ARMCO] guard rail.

Such modifications shall be in accordance with **condition 8.2** and to the reasonable satisfaction of PCC.

#### **Plimmerton roundabout to Steyne Avenue**

8.3 Transit shall offer to the owner to replace, at Transit's cost, the existing hedge outside the SH1 frontage of the Spinnaker Motel (located at the south eastern corner of Grays Road and St Andrews Road), with a hedge or fence within the motel site and in consultation with the property owner and, if the owner so desires, shall undertake that replacement.

8.4 Transit shall, as far as practicable, ensure undisturbed retention of the group of Pohutakawa trees on the northern side of Grays Road along the Grays Road frontage of number 1 Grays Road and adjacent to SH1.



8.5 Transit shall retain, where practicable, the trees on the northern side of Steyne Avenue at the intersection with SH1, within the designation boundary adjacent to 75 St Andrews Road.

8.5A If it is not practicable to retain undisturbed the trees specified in **conditions 8.4 and 8.5**, Transit shall where practicable and under the supervision of Transit's landscape architect transplant the subject tree(s) to a nearby suitable position within the designation boundary.

#### **St Andrews Road property frontages**

8.6 Transit shall construct and finish the fence referred to in **condition 23** in general accordance with a fencing plan which shall incorporate the following principles:

- (a) Varied faces, styles and heights, incorporating features shown in the examples in Appendix 4 Figures 2, 3, 6 of the Agreed Memorandum; and
- (b) An alternating of the position of the fence within the 500mm available space.

The fencing plan shall be developed as follows:

- (i) Transit shall consult as to the street-facing treatment and finish of the fence with the PCC;
- (ii) Transit shall consult as to the property-facing treatment and finish of the fence (including with regard to the selection of materials and design) with the owners of the properties at 75-91 St Andrews Road;
- (iii) After incorporating such reasonable changes as may be requested during such consultation, Transit shall finalise the fencing plan (the street-facing treatment and finish thereof being to the reasonable satisfaction of the PCC) and provide copies of it to those property owners and the PCC prior to commencing construction of the fence.

#### **Cut Face at Steyne Avenue Intersection**

8.7 Transit shall landscape the cut face opposite the intersection of Steyne Avenue and St Andrews Road shown in the Steyne Avenue Cut Face Landscape Concept Plan (being Concept Plan 2 in **Appendix 3**) in general accordance with that Concept Plan and the Landscape Plan required to be submitted under **condition 8.17** and to the reasonable satisfaction of the PCC.

#### **Goat Point**

8.8 Transit shall provide a pedestrian accessway west of State Highway 1 in the vicinity of Goat Point. Transit shall, in designing such pedestrian

accessway consult with the Plimmerton and Paremata Residents' Associations and the PCC about alternative design options, for structures for the provision of the pedestrian accessway including options relating to fences, location and height of the accessway relative to the carriageway, and surface treatment of any vertical structures. In the design of the pedestrian accessway regard shall be given to the following design principles:

- (a) The protection of pedestrians from vehicle traffic;
- (b) Vertical and horizontal separation of pedestrians from vehicle traffic where practicable;
- (c) The safety and security of pedestrians including night security;
- (d) The importance of westward views of the sea from numbers 150 to 166 St Andrews Road and from passing vehicles;
- (e) The finished appearance of any fences or structures.

**Mana commercial area frontage**

8.9 Transit shall seek agreement from the owner of that privately-owned land shown in the Mana Retail Area Frontage Concept Plan (being Concept Plan 3 in **Appendix 3**) and, for this purpose, not less than 3 months prior to the commencement of construction of that section of the Work shown on plan G in **Appendix 1** as south of Acheron Road, Transit shall:

- (a) Give written notice to the owner of that privately-owned land shown in that Concept Plan, specifying the following:
  - (i) A copy of the Concept Plan; and
  - (ii) A description of the landscaping which Transit seeks to undertake on that land (at Transit's cost) in accordance with that Concept Plan, if the owner so agrees; and
  - (iii) An offer to the owner to agree to allow Transit to undertake the landscaping of that land; and
- (b) Pursue all reasonable endeavours in consultation with the owner during that period of not less than 3 months in order to secure such agreement.

8.10 Except as provided in **condition 8.11**, Transit shall landscape those parts of the privately-owned land shown in Concept Plan 3 in **Appendix 3** in general accordance with that Concept Plan and any Landscape Plan

A.S.K.



required to be submitted under **condition 8.17** and to the reasonable satisfaction of the PCC.

8.11 Where, on the expiry of 3 months after Transit has given notice to the owner of the privately-owned land shown in Concept Plan 3 in **Appendix 3**, the owner has not agreed to the landscaping of that land:

- (a) Transit shall inform PCC accordingly; and
- (b) Transit shall not be required to comply with **condition 8.10**.

8.12 Transit shall keep available for inspection on request by the PCC, records of the following:

- (a) The written notice given in accordance with **condition 8.9(a)**;
- (b) Any response to that written notice.

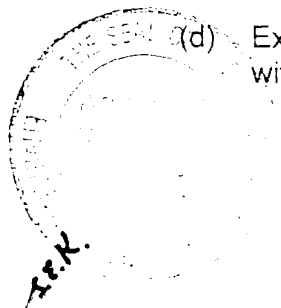
#### **Modifications to property frontages**

8.13 In respect of all properties adjacent to the Work except those covered by Conditions 8.3 to 8.6 (dealing with hedges and trees from Plimmerton roundabout to Steyne Avenue and St Andrews Rd property frontages) and 8.9 to 8.12 (dealing with the Mana commercial area frontage) the following shall apply:

- (a) Prior to the commencement of construction, Transit shall:
  - (i) Provide to the PCC, a list of all such properties (in this **condition** called "Affected Property" or "Affected Properties") in respect of which SH1 road reserve immediately contiguous with that land (in this condition referred to as "road reserve frontage") will be modified by the carrying out of the Work;
  - (ii) Consult with the PCC as to:
    - (A) The nature of the road reserve frontage modifications proposed to be undertaken contiguous with the Affected Properties;
    - (B) The options proposed to be offered to owners for reinstatement including reinstatement of boundary fences and retaining walls (including, but not limited to, the options illustrated in Figures 2 to 8 in **Appendix 4**), replacement of boundary plantings of hedges and vegetation and reinstatement of vehicle crossing places; and

ASR.

- (C) The process which Transit will follow in its dealings with the owners on these matters;
- (b) Not less than 3 months prior to the carrying out of any modification of the road reserve frontage contiguous with any Affected Property, Transit shall give written notice to the owner of the Affected Property specifying the following:
- (i) A description of the nature of the modification proposed to be undertaken of the road reserve frontage contiguous with the Affected Property (including in relation to boundary fences and retaining walls, hedges, trees or other vegetation, and driveway entrances);
  - (ii) A description of options proposed to be undertaken to reinstate that road reserve frontage including options for the replacement, design and construction of any boundary fences and retaining walls, and for replacement of any boundary plantings of hedges and vegetation and the design and treatment of vehicle crossing places (including, but not limited to, the options illustrated in Figures 2 to 8 in **Appendix 4**);
  - (iii) An invitation to the owner to notify Transit within a specified period of not less than one month of whether or not the owner agrees to enter into discussions with Transit as to the selection of suitable road reserve frontage reinstatement options or otherwise to inform Transit of the owner's preference in regard to the proposed options;
  - (iv) A statement informing the owner of any ability for owners of Affected Properties to have access to any expert adviser (nominated by Transit to the reasonable satisfaction of the PCC);
- (c) Transit shall keep records available for inspection on request by the PCC of the following:
- (i) All written notices given in accordance with clause (b) of this condition;
  - (ii) All responses received to those written notices;
  - (iii) Those Affected Properties in respect of which responses have not been received;
- (d) Except as provided in **condition 8.13(e)** Transit shall, in consultation with each Affected Property owner (and, if so requested by the



owner, with any expert adviser so nominated), design and implement the road reserve frontage reinstatement works and shall notify the PCC once those reinstatement works have been implemented in respect of each Affected Property;

- (e) Where, on the expiry of 3 months after Transit has given notice to an owner of an Affected Property under **condition 8.13(b)**, the owner has not agreed with Transit as to road reserve frontage reinstatement works or could not after reasonable enquiry be found:
  - (i) Transit shall inform the PCC accordingly;
  - (ii) Transit shall not be required to comply with **condition 8.13(d)** in respect of that Affected Property;
  - (iii) Transit shall, in its construction of that section of the Work immediately adjacent to that Affected Property, take practicable measures to mitigate to the reasonable satisfaction of the PCC any adverse effects of the construction of the Work on the road reserve frontage of that Affected Property (including in relation to boundary fences and retaining walls, trees and other vegetation and driveway crossing places).

#### **Steyne Avenue to Paremata Bridge**

- 8.14 Where any existing established tree on any Affected Property is required to be removed in order to construct the Work, Transit shall offer to the Affected Property owner, at Transit's cost, to replant or replace the tree, where practicable.

#### **Paremata Bridge to south of Paremata Roundabout**

- 8.15 Transit shall landscape the area of the Paremata Bridge through to south of the Paremata Roundabout shown in the Paremata Bridges-Paremata Roundabout Concept Plan (being Concept Plans 4A, 4B and 4C in **Appendix 3**) in general accordance with that Concept Plan and the Landscape Plan required to be submitted under **condition 8.17** and to the reasonable satisfaction of the PCC.
- 8.16 In general accordance with the Paremata Bridges-Paremata Roundabout Concept Plan (Concept Plans 4A, 4B and 4C in **Appendix 3**) and any Landscape Plan required to be submitted under **condition 8.17** and to the reasonable satisfaction of the PCC, Transit shall:

- (a) Construct a walkway on the northern side of Pauatahanui Inlet under the existing and proposed bridges to link the beaches to their east and west; and

SEN

- (b) Re-establish screen planting between SH1 and Paremata School which will be removed in the construction of the SH58 southbound on-ramp onto SH1.

#### Landscape plans

8.17 Where Transit is obliged under any of **conditions 8.2, 8.7, 8.10, or 8.15** to undertake landscaping, Transit shall arrange for the following landscape plans to be prepared by a qualified landscape architect to the reasonable satisfaction of the PCC:

- (a) Landscape plans demonstrating how Transit will implement the Plimmerton Domain, Plimmerton – Weighstations to James Street, and Mana Retail Area Frontage Landscape Concept Plans set out in **Appendix 3**, such landscape plans:
  - (i) To detail those matters outlined in the Landscape Concept Plans (including in relation to ground levels and contours, the locations and species of major trees to be planted, and the areas, shapes and heights of areas of plantings) and maintenance and upkeep; and
  - (ii) To be submitted to the PCC not less than one month prior to commencement of construction of the section of the Work between the Plimmerton Weighstations and Steyne Avenue;
- (b) A landscape plan demonstrating how Transit will implement the Steyne Avenue Cut Face Concept Plan set out in **Appendix 3**, such landscape plan:
  - (i) To detail those matters outlined in the Steyne Avenue Cut Face Landscape Concept Plan (including details of the locations and species of major trees to be planted, the areas, shapes and heights of areas of plantings, facing treatment for excavated surfaces), taking into account the reasonable preferences of owners of 188, 186, 184 and 182 St Andrews Road ascertained through consultation with them; and
  - (ii) To be submitted to the PCC not less than one month prior to commencement of construction of the section of the Work between James Street and Pope Street.
- (c) A landscape plan demonstrating how Transit will implement the Paremata Bridges – Paremata Roundabout Landscape Concept Plan set out in **Appendix 3**, such landscape plan:
  - (i) To detail those matters outlined in the Landscape Concept Plan including ground levels and contours, the locations and species

AK.

of major trees to be planted, the areas, shapes and heights of areas of plantings, the walkway and re-establishment of screen planting between SH1 and Paremata School referred to in condition 8.16; and

- (ii) To be submitted to the PCC not less than one month prior to commencement of construction of the section of the Work between the northern approaches to the Paremata Bridges and the southern boundary of the designation.

#### **Earthworks**

- 9 All earth filling shall be carried out in accordance with Transit standard specification F1.
- 10 The disposal of cleanfill material at each of the Deposit Areas along and adjacent to SH1 shown on Plans C and D in **Appendix 1** shall be completed within three years of commencement of the earthworks for construction of the Work.
- 10A In undertaking the works to realign the Taupo Stream, to create a variety and more natural appearance, Transit shall modify the stream by widening its course, as far as practicable, within the boundaries of the designation, and in accordance with resource consents WGN 970226(01)-(03) and WGN 970226(7)-(15). Such modification shall be to the reasonable satisfaction of the PCC.

#### **Lighting**

- 11 Lighting provided along the route shall be in accordance with the appropriate classification for "main roads" in AS/NZS 1158:1997.
- 12 Transit shall ensure that the design and construction of the pedestrian footpath along the western side of SH1 at Goat Point between Steyne Avenue and the Mana Shell Service Station site and under the duplicate Paremata Bridge along the northern and southern shores of the inlet provides for lighting in accordance with standard AS/NZS 1158:1997.

#### **Construction effects mitigation**

##### ***Construction hours***

- 13 Subject to unforeseen emergency situations, hours of work during the construction phase of the Work shall be:

13.1 Weekdays: 7:30 am to 7:00 pm;

13.2 Saturdays: 8:30 am to 5:00 pm;

13.3 Special Short Term Operations (being operations which, by their nature, cannot reasonably be undertaken or completed in

5.2.12.

accordance with **conditions 13.1 or 13.2**): 8pm to 6.30am, weekdays, Saturdays, Sundays and Public Holidays, preceded by written notice being provided to the occupiers of those residences which are both contiguous with the designation and within 500 metres of the location of the intended operations not less than 5 working days prior to such operations commencing, such notice including reference to the location, the nature, and the proposed timing and duration of the operations;

13.4 Sundays and Public Holidays: Except as provided in **condition 13.3**, no work, except for emergency maintenance works for public safety and convenience.

#### **Traffic Management Plan**

14 Not less than one month prior to construction of the Work, Transit shall establish a Traffic Management Plan in consultation with the PCC. To demonstrate that traffic will be managed during the construction phase of the Work, so that the section of SH1 is safe at all times and there is minimal disruption to the public and to the normal flow of traffic this Traffic Management Plan shall address the following matters:

14.1 Programme of works;

14.2 Hours of work;

14.3 Proposed Traffic Control Methods:

- (a) Safety procedures for hazardous substances;
- (b) A Contingency Plan (including 24 hour call out for emergencies);
- (c) Public notification procedures (such as Advertisement, Radio Reports);
- (d) Monitoring and maintenance of Traffic Management Procedures; and
- (e) Contractors' Traffic Control Supervisors.

15 Without limiting **condition 14**, Transit shall ensure that the PCC is kept reasonably informed of traffic control arrangements made from time to time in relation to:

T.P.K

15.1 Measures such as signs, temporary marker posts, amber flashing lights (night work), temporary bypass traffic lanes, and other such measures;

15.2 Proposed speed restrictions and minimum lane widths; and

15.3 Circulation routes for site traffic.

- 16 Construction works within the carriageway shall take place, as far as practicable, at times and places that minimise interference with traffic flows, and particularly peak hour traffic flows.

**Disruptions to property access**

- 17 Provision shall be made to enable safe vehicular, pedestrian and cycle access to private properties at all times during the construction of the Work, as far as practicable, and to ensure that any interruption to public pedestrian, cycle and vehicle accessways is minimised to the extent practicable. Where existing pedestrian routes are affected by the construction of the Work, an alternative route will be provided wherever practicable.

**Construction noise mitigation**

- 18 During the construction activities all construction work shall comply with the requirements of NZS 6803:1999 *"New Zealand Standard, Acoustics – Construction Noise"*.

**Construction Noise Management Plan**

- 19 Not less than one month prior to construction, Transit shall establish a Construction Noise Management Plan to the reasonable satisfaction of the PCC. Transit shall not commence construction of the works until the Construction Noise Management Plan has been established and it shall take all reasonable steps to ensure that the Construction Noise Management Plan is complied with during construction works. The purpose of the plan is to describe the method by which noise associated with the construction of the Work will be managed to comply with **condition 18** of this designation. In particular, the Construction Noise Management Plan shall specify:

19.1 Estimated duration of works;

19.2 Methods of managing noise, including information in any relevant tender documentation and specifications in the contract documentation of contractors' obligations in assessing and controlling noise;

19.3 Noise monitoring methods, including details of methods, equipment, location and frequency;

12.12

19.4 Auditing;

19.5 Contingency measures in the event of any incident of non-compliance;

19.6 Procedures for handling any noise complaints; and

19.7 Arrangements to ensure that occupiers of all dwellings within 20 metres of any proposed construction works receive not less than 10 working days' notice of the intended works and are informed of the estimated duration of works and procedures for making any noise complaint.

20 In respect of dwellings adjacent to or within 20 metres of any construction works:

20.1 Transit shall keep the PCC informed of all noise complaints received;

20.2 Upon reasonable request by the PCC, Transit shall arrange for measurement of construction noise levels to be undertaken at any specified occupied dwelling in accordance with NZS 6303:1999 to the reasonable satisfaction of the PCC and shall provide the results of that measurement to the PCC;

20.3 If any such measurement demonstrates that the noise levels specified in NZS 6303:1999 are not met for any occupied dwelling, Transit shall take such measures as are required (including at the affected dwelling) to ensure that the noise levels at the dwelling comply with NZS 6303:1999, unless the occupier of that dwelling otherwise agrees (and Transit provides evidence of that agreement to the reasonable satisfaction of the PCC).

#### **Operational noise mitigation**

21 Transit shall engage an acoustic engineer to investigate, and where practicable, implement his/her recommendations with regard to the following **conditions 22 to 27**.

22 The Work shall be designed so that, in relation to existing dwellings, noise levels shall comply with the Transit document entitled "*Transit New Zealand Guidelines for the Management of Road Traffic Noise - State Highway Improvement*" contained in the *Transit New Zealand Policy Planning Manual*, dated December 1999 (the "Noise Guidelines") throughout the 10 year design period referred to in the Noise Guidelines. In particular, where the façade of any habitable room is within 13 metres of the nearside edge of any southbound or northbound traffic lane, the L<sub>max</sub>

22K



noise level within that habitable room shall be reduced by not less than 3dBA by implementing any practicable control measures<sup>1</sup>.

- 22A In order to achieve the necessary operational noise levels in Condition 22, Transit will, wherever practicable, use a low noise road surface to reduce noise at source and will maintain that surface in good order in accordance with normal maintenance practices.
- 23 As soon as practicable after commencement of construction of the Work, an acoustic fence shall be developed along SH1 frontage at the houses on the western side of SH1, north of Steyne Avenue (75 to 91 St Andrews Road) in accordance with **condition 8.6**.
- 24 Prior to construction of the Work, and for the purposes of establishing to the reasonable satisfaction of the PCC ambient noise levels as required by the Noise Guidelines, Transit shall provide to the PCC the results of 24 hour ambient noise measurements (the "ambient noise measurements") at not less than 12 sites within 20 metres of the proposed northbound and southbound traffic lanes, such ambient noise measurement results comprising:
- 24.1 The results of the measurement of existing ambient noise at the sites shown on the plan in **Appendix 6** as "Measurement Site 1", "Measurement Site 2", "Measurement Site 3", "Measurement Site 4", "Measurement Site 5" and "Measurement Site 6".
- 24.2 The results of measurements undertaken by or under the supervision of an appropriately qualified person of existing ambient noise at six (6) further sites to be selected by that person and undertaken at a position one metre from the outside of the most exposed façade of any habitable room in any existing residential dwelling within the following areas:
- (a) On the east side of St Andrews Road, between Goat Point and Pope Street;
  - (b) On the east side of St Andrews Road, within 70 metres of the intersection with Steyne Avenue;
  - (c) On the west side of St Andrews Road, within 50 metres of the intersection with Grays Road;

---

<sup>1</sup> It is acknowledged that this reduction cannot be achieved by road surfacing alone

7.8.4

- (d) 3 other sites including sites in the vicinity of signalised intersections along Mana Esplanade nominated by the PCC after consultation with the Paremata Residents' Association; and

24.3 Site maps detailing measurement locations and relevant information on measurement conditions.

#### **Compliance Monitoring**

- 25 Following completion of the Work, Transit shall arrange for an appropriately qualified person to undertake monitoring of the level of traffic noise at the twelve (12) sites referred to in **condition 24** for which ambient noise level data has been previously recorded:

25.1 Within the period of 6 to 12 months after completion of construction of the Work; and

25.2 Within six months of the fifth anniversary of the completion of construction of the Work -

and shall report the findings of that monitoring to the PCC. Where the Noise Guidelines referred to in **condition 22** are or have been exceeded, except where **condition 27.5** applies, Transit shall advise the PCC of the measures taken or intended to be taken to ensure that noise levels attributable to road traffic will comply with **condition 22**.

#### **Acoustic treatment of residential dwellings**

- 26 Prior to commencing construction of the Work, Transit shall:

26.1 Engage a suitably qualified person to undertake an assessment of all existing dwellings to which acoustic treatment shall be applied in order to ensure compliance with the Noise Guidelines' 10 year design period (in this condition and **condition 27** referred to as "Affected Dwelling" or "Affected Dwellings"); and

26.2 Provide to the PCC a report listing the Affected Dwellings and identifying the extent of noise reduction required (if any) for each dwelling in order to ensure compliance with **condition 22**.

- 27 In respect of the Affected Dwellings referred to in **condition 26**, the following shall apply:

27.1 Not less than 4 months prior to completion of construction of the Work, Transit shall consult with the PCC as to the options for on-site noise mitigation treatment of the Affected Dwellings and the processes which Transit will follow in its dealings with the owners of Affected Dwellings on these matters;

2.8.1

27.2 Not less than 3 months prior to completion of construction of the Work, Transit shall give written notice to the owner of each Affected Dwelling specifying the following:

- (a) The change in noise levels without on-site noise mitigation treatment at that dwelling predicted in accordance with the Noise Guidelines for that dwelling arising from the operation of the Work following construction of the Work and on the fifth anniversary of completion of construction of the Work;
- (b) The options which Transit offers to that person for on-site noise mitigation treatment to that person's dwelling and the predicted benefits and any other implications such as the need for alteration of house ventilation which implementation of those options would have in terms of noise levels (and demonstrating compliance with **condition 22**);
- (c) An invitation to the owner to enter into discussions with Transit as to the selection of suitable noise mitigation treatment options and other consequential measures such as altered house ventilation;
- (d) A statement to the effect that the owner (or any subsequent owner) has a period within which to decide whether or not to accept Transit's offer for on-site noise mitigation treatment, which period shall not terminate sooner than the sixth month following completion of the Work;
- (e) A statement informing the owner of the ability which owners have to get access to any expert adviser (nominated by Transit to the reasonable satisfaction of the PCC);

27.3 Transit shall keep records available for inspection on request by the PCC of the following:

- (a) All written notices served in accordance with **condition 27.2** of this condition;
- (b) All responses received to those written notices;
- (c) Those Affected Dwellings in respect of which responses have not been received;

27.4 Except as provided in condition 27.5 of this condition, Transit shall:

- (a) In consultation with each Affected Dwelling owner (and, if so requested by the owner, with any expert adviser so nominated

2.2.2

by the PCC), arrange for the implementation of the noise mitigation treatment works for each Affected Dwelling by a person whom the PCC is satisfied is competent (or such other person as may be agreed with the owner);

- (b) As soon as practicable after completion of the noise mitigation treatment works at an Affected Dwelling, arrange for a completion certificate to be issued in respect of that property certifying that the noise mitigation treatment works have been undertaken to appropriate standards, to attain the level of reduction required to comply with **condition 22**, such completion certificates to be submitted to the PCC within one month of completion of the noise mitigation treatment;

27.5 Where Transit has duly given notice to an owner of an Affected Dwelling in accordance with **condition 27.2** hereof, Transit shall be deemed to comply with **condition 22** hereof:

- (a) From the date notice was given until the date the completion certificate referred to in **condition 27.4(b)** of this condition has been issued, where the owner of the Affected Dwelling has agreed to Transit implementing noise mitigation treatment works;
- (b) From the date notice was given until indefinitely thereafter, where the owner of the Affected Dwelling refuses to agree to Transit implementing noise mitigation works (except where before the expiry of six months after completion of the Work the owner then agrees in which case **condition 27.5(a)** of this condition applies);
- (c) From the date notice was given until indefinitely thereafter, where the owner of the Affected Dwelling cannot after reasonable enquiry be found before the expiry of six months after completion of the Work.

#### **Pedestrian overbridge at Plimmerton**

28 Prior to dismantling the existing ramped pedestrian overbridge at Plimmerton, Transit shall:

- 28.1 Consult with members of St. Theresa's Primary School and with the owners of neighbouring residential properties and with the PCC;
- 28.2 Seek all necessary statutory consents and approvals to enable re-erection or replacement of the ramped pedestrian overbridge in the same general locality; and

*28.11.*

28.3 Report to the PCC on those matters advising the PCC on whether or not Transit has succeeded in securing those consents and approvals and, if so, Transit's timetable for re-erection or replacement of the overbridge to ensure its erection prior to completion of construction of the Work.

29 Unless Transit fails to secure necessary statutory consents and approvals under **condition 28.2**, Transit shall erect in the same general locality a ramped pedestrian overbridge at Plimmerton, prior to completion of construction of the Work. Prior to erecting a pedestrian overbridge, Transit shall comply with the requirements of section 176A of the Resource Management Act 1991 in relation to the erection (unless approval for the erection is by way of resource consent).

29A Subject to **condition 29**, if Transit erects a new pedestrian overbridge, the overbridge shall be designed to provide a less visually intrusive design in consultation with the Plimmerton Residents Association Inc. and shall be in keeping with the surrounding environment to the reasonable satisfaction of the PCC.

30 In the event that Transit re-erects the pedestrian overbridge at Plimmerton in accordance with **condition 29** or erects any new pedestrian overbridge in the general vicinity of the existing Plimmerton pedestrian overbridge, Transit shall be entitled to alter the layout of the signal-controlled intersection of SH1 and Grays Road such that it provides for only a single pedestrian crossing of SH1 provided that Transit shall ensure to the reasonable satisfaction of the PCC that any altered signalised intersection continues to provide for the safety of pedestrians crossing SH1 and/or Grays Road.

31 Except as provided by **condition 30**, Transit shall construct and maintain the signal-controlled intersection of SH1 and Grays Road in general accordance with the layout shown in plan E in **Appendix 1** and operate the intersection as a "Barnes Dance".

#### **Provision for emergency service vehicles**

32 In carrying out the detailed design for the alignment, Transit shall provide a 2.5 metre wide shoulder along both sides of the section of SH1 between the southern end of each of the weighstations (north of Plimmerton), south to taper into the proposed Plimmerton Roundabout to provide access for emergency service vehicles.

33 The shoulder on the western side shall be extended to the north of the weighstation to connect with the proposed emergency access lane running along the Rural Section of SH1 north of the weighstation.

5.2.K

### **Access to Shell/McDonald's site**

- 34 Access to and from the Shell/McDonald's site and site works within the designated land, including reinstatement of landscaping, and relocation of drive-through 'grille order' parking spaces, lighting poles and signs, shall be generally in accordance with plan G in **Appendix 1** or otherwise as may be agreed between Transit and the owners and occupiers of that site.

### **Signage**

- 35 Transit shall provide a sign in accordance with Land Transport Safety Authority ("LTSA") standards (standard blue service sign) north of the Acheron Road/service lane intersection with SH1, to ensure clear direction is provided to SH1 motorists wishing to use the services accessed to or from the service lane. The sign shall incorporate generic identification of the services offered.
- 36 Transit shall provide signage at the northern approach to Plimmerton and the southern approach to Mana to advise heavy goods drivers that they are entering a residential area and that the use of engine brakes should be avoided.
- 37 Transit shall provide directional signage at the Plimmerton Roundabout clearly identifying the Plimmerton Industrial Estate, and clarifying the route to be taken to the Estate. The signage shall be constructed and erected following consultation with the owners and occupiers of the Estate.

### **Sewer and water main protection and fire hydrants**

- 38 Transit shall:
- 38.1 Consult with the PCC to determine the location of the trunk sewer along the 4.1 kilometre section of SH1 and shall co-operate with the PCC in order to ensure the protection and/or relocation of the trunk sewer; and
- 38.2 Consult with the PCC and Wellington Regional Council to determine the location of the bulk water supply main along the 4.1 kilometre section of SH1 and shall co-operate with the Councils in order to ensure the protection and/or relocation of that water main.
- 39 Transit shall:
- 39.1 Retain or replace existing fire hydrants within the road corridor.
- 39.2 Provide a fire hydrant and water supply at the eastern Plimmerton weighstation.

22

### **Consultation**

- 40 Prior to the commencement of construction works, Transit shall use its best endeavours to notify affected owners and occupiers of all properties adjoining the new road of:

40.1 The details of the construction programme; and

40.2 A single point of contact for any concerns or enquiries relating to the project, including a telephone and facsimile number -

provided that Transit shall be treated as complying with this condition once any such notice sent by pre-paid post to the person at the usual or last known place of residence or business or Post Office box address would have been delivered in the ordinary course of post, or once any such notice has been sent by facsimile to the usual or last known facsimile number of that person, or delivered by hand to the property.

- 41 For the period of construction works, Transit shall prepare a bi-monthly newsletter for circulation to the owners of all properties adjoining the new road. This newsletter shall, without limitation, include the following:

41.1 A statement of progress against the construction programme; and

41.2 An assessment of the management of dust and noise relative to management plans.

### **Community Information Programme**

- 42 Prior to completion of construction of the Work, Transit shall establish and implement, to the reasonable satisfaction of the PCC, a Community Information Programme, to provide information to the communities of Plimmerton, Camborne, Mana and Paremata, regarding modifications to intersections, traffic lights and the operation and enforcement of the lanes shown marked "High Occupancy Vehicle Clearway (HOV2 Clearway)" on Plans G-J in Appendix 1. The Programme shall identify to whom information should be disseminated and specify the methods for the dissemination of information, including leaflet drops, and press releases to, and public notices and advertisements in, local newspapers and other media.

### **Community Liaison Group**

- 43 For the purposes of providing during construction and for the six month period immediately following completion of construction of the Work an interface between Transit and the communities of Plimmerton, Camborne, Mana and Paremata (the "communities"):

43.1 Transit shall, prior to commencement of construction of the Work, in consultation with the PCC, invite representatives of local residents'

2.2.2

groups and community groups and organisations, Ngati Toa Rangatira, schools, businesses, PCC and such other bodies and persons as the PCC considers appropriate to form a Community Liaison Group whose purpose is to provide a forum to enable the communities to be kept informed of progress with the Work and issues to be identified and resolved quickly and co-operatively;

43.2 Transit shall provide such administrative support as is necessary to ensure that the Community Liaison Group is formed and can effectively continue to perform its functions (including regular meetings) during the construction period and until the sixth month immediately following completion of construction of the Work.

**Consultation in relation to detailed road design**

43A During detailed design, and prior to completion of construction of the Work, having regard to the interests of residents, Transit shall consult with the Plimmerton Residents Association Inc. and the Paremata Residents' Association Inc. in respect of methods including advisory or variable message signs:

- (a) To discourage drivers from travelling in the kerbside lanes during off-peak hours and to encourage driver courtesy; and
- (b) To encourage heavy commercial vehicles to use the central lane at all times of the day.

43B During detailed design, and prior to completion of construction of the Work, having regard to the interests of residents, Transit shall investigate in consultation with the Paremata Residents' Association Inc. the extension southward of the HOV lanes at the southern end of Mana Esplanade in order to discourage drivers from travelling in the kerbside lanes.

43C Transit will, within one year of commissioning the Work, undertake surveys to assess side road and pedestrian delays at Marina View intersection and any relevant issues concerning vehicle access difficulties for properties south of Pascoe Avenue. In consultation with the Paremata Residents Association Incorporated, Transit shall investigate the necessity for modifications to the form and operation of the intersection and consider whether future surveys and investigation should be undertaken.

**Mitigation of dust including management plan**

44 In order to minimise dust nuisance, Transit shall ensure that each contractor engaged in activities that may generate dust shall prepare and comply with a Dust Management Plan which, as a minimum, shall require the Contractor to undertake the following measures:

S.M.H.



44.1 That all exposed earthworked areas, stockpiles of earth, and other dust sources which, in each case, are liable to give rise to dust nuisance beyond the construction site be kept moist so as to avoid any such nuisance; and

44.2 That all earthworks materials on trucks which are carted near urban areas or in any locality beyond the construction site liable to give rise to any dust nuisance beyond the construction site be covered and/or kept moist so as to avoid any such nuisance.

**Protocol for discovery of koiwi, taonga or other artefact material**

- 45 If koiwi, taonga or other artefact material is discovered in any area Transit shall ensure that Ngati Toa Rangatira is immediately contacted through Te Runanga O Toa Rangatira Incorporated, and construction work in that area shall stop to allow a site inspection by Ngati Toa Rangatira and their advisors. Transit shall then consult with Ngati Toa Rangatira on appropriate steps to recover the artefacts in order that work can resume.

**Footpath widths and handrails**

- 46 Pedestrian handrails shall be installed and located to the reasonable satisfaction of the PCC between the footpath and the carriageway where each of the following criteria apply:

46.1 The section of carriageway does not provide for kerbside parking at any time; and

46.2 The section of footpath is less than 1.8 metres wide; and

46.3 The handrail would not impede or interfere with the safe movement of vehicles across vehicle entrance ways and crossing places.

- 47 Transit shall offer to the owner to install at Transit's cost and in consultation with the owner, a pedestrian handrail between the footpath and the carriageway on the eastern side of Mana Esplanade extending for a distance of not less than 2 metres outside the frontage of the Omega 3 at 116 Mana Esplanade and, if the owner so desires, shall install that handrail (to the reasonable satisfaction of the PCC).

- 47A Transit shall install a handrail on the road side of the footpath in front of the properties at 75-91 St Andrews Road except where it is necessary to provide access to the pedestrian crossings. Such handrail shall be constructed of panels of "pool fence" mesh, set into a frame of timber uprights, lower rail and handrail.

**Community feedback register**

- 48 Transit shall maintain a permanent record of any complaints alleging adverse effects from its operations within the designation or any breach of

25.1

these conditions or other comments received. The record shall include the name and address (as far as practicable) of the person who made the complaint or comment, and where a complaint is made, identification of the nature of the matter complained about, date and time of the complaint and of the alleged event, weather conditions at the time of the alleged event (as far as practicable), and any remedial action taken. This record shall be made available to the PCC on request.

#### **Traffic calming**

- 49 Transit shall install traffic calming measures in Paremata Crescent north of the Kiriwai Road intersection, approximately opposite 44 to 46 Paremata Crescent, if required.

#### **Replacement of parking spaces**

##### ***James Street carparking***

- 50 Transit shall extend the formed carparking in James Street to replace the carparking spaces removed from James Street as a result of the upgrade.

##### ***Paremata Station carpark***

- 51 Within two (2) months of the removal of carparking spaces from the commuter carparks as a result of the Work, Transit shall reinstate or replace on the western side of SH1 the carparking spaces so removed. Transit shall ensure that access to the Paremata Station carpark from SH1 is designed to minimise the loss of carparking spaces.

##### ***New parking area in Redoubt Lane***

- 52 Transit shall:
- 52.1 Seek any necessary consents and approvals for the formation of a carparking area at 91 Mana Esplanade (Redoubt Lane) in general accordance with **Appendix 5**; and
- 52.2 Subject to securing such consents and approvals, shall form, seal and maintain the carparking area to the reasonable satisfaction of the PCC and shall make all reasonable endeavours to enable usage of the carpark prior to completion of that section of the Work between Dolly Varden Crescent and Mana View Road.
- 52A If so requested by the Plimmerton Residents Association Inc. during detailed design, Transit shall provide five additional car parking spaces located within 40m of the St Andrews Road/Steine Avenue intersection, and available for use at all times. The precise location of the carparking shall be determined following consultation with the Plimmerton Residents Association Inc. and PCC.

*2.2.2*

### **Plimmerton Domain Playing Field**

- 53 Transit shall, in consultation with and to the reasonable satisfaction of the PCC, arrange for repositioning of the rugby league playing field within or adjacent to the Plimmerton Domain to the same size and no lesser standard as the existing playing field, the boundaries of which will be modified as a result of the Work.

### **Plimmerton Pony Club**

- 54 Transit shall, in consultation with and to the reasonable satisfaction of the PCC, arrange for:

54.1 The relocation of the Plimmerton Pony Club buildings and ancillary facilities within or adjacent to the Plimmerton Domain; and

54.2 Provision of an area of the same or similar size to the area of the Domain as a result of the Work for the use of the Plimmerton Pony Club.

### **Restrictions on the operation of kerbside lanes**

- 55 In its operation of the Work as SH1, Transit shall ensure that practical provision is made to enable those portions of the northbound and southbound kerbside lanes shown marked "Parking Permitted Except When HOV2 Clearway Operates" on Plans G to J in **Appendix 1** to be available for kerbside vehicle parking except during the periods specified below (being the "Clearways hours"):

55.1 Southbound kerbside lane to be available for parking except:

- (a) Monday to Friday, for a maximum continuous period of up to three hours commencing not earlier than 6.30am and ending not later than 9.30am;
- (b) Sunday and Public Holidays, for a maximum continuous period of up to three hours commencing not earlier than 3.30pm and ending not later than 7.00pm;

55.2 Northbound kerbside lane to be available for parking except:

- (a) Monday to Friday, for a maximum continuous period of up to three hours commencing not earlier than 3.30pm and ending not later than 7.00pm;
- (b) Saturday, for a maximum continuous period of up to three hours commencing not earlier than 10.30am and ending not later than 2.30pm.

5.2.1

**Monitoring parking**

- 55A Transit will monitor the vehicle parking activity in the HOV lanes and particularly the impact of parked vehicles on sight distances from property entrances.

**Notices**

- 56 Where, in accordance with any condition of this designation, Transit is required to give written notice of anything to any person, then Transit shall be treated as having duly given such notice once:

56.1 Any notice sent by pre-paid post addressed to the person at the usual or last known place of residence or business of that person, Post Office box or private bag or document exchange would have been delivered in the ordinary course of post or delivery;

56.2 Any notice sent by facsimile to the usual or last known facsimile number is shown by the sender's facsimile records to have been transmitted.

**References to PCC**

- 57 References in any of the **conditions** to PCC shall include:

57.1 Any officer of the Porirua City Council acting for the time being in the office of the Chief Executive of that Council;

57.2 Any officer of the Porirua City Council nominated by the Chief Executive of that Council as having the relevant experience and expertise to deal with the matter on behalf of the Council.

**Review of designation**

58. In the event that the construction of the Transmission Gully Motorway has not commenced by 31 December 2006, Transit shall:

58.1 No later than 31 December 2006 complete a review of the operation, environmental effects, safety and efficiency of the Work for the purposes of determining whether or not to seek any alteration to the designation in relation to those matters; and

58.2 Consult with the PCC, the WRC, Paremata Residents Association Inc, Plimmerton Residents' Association Inc, Ngati Toa Rangatira, and such other body as the PCC reasonably considers ought to be consulted, regarding any proposed alterations, including (but not limited to) alterations in relation to capacity of the operation of the clearway or HOV lanes; and

7.2.2

- 58.3 Report the outcomes of that review and consultation to the PCC and the WRC prior to making any decision to seek any such alteration to the designation.
59. Prior to the completion of the construction of Transmission Gully Motorway Transit shall:
- 59.1 Consult with PCC, WRC, Paremata Residents Association Inc, Plimmerton Residents Association Inc, and Ngati Toa Rangatira in relation to its proposals for the Work following the construction of the Transmission Gully Motorway, including the following matters:
- (a) Ownership and control of the Work;
  - (b) Options relating to the future of the existing Paremata Bridge;
  - (c) The continuation of four laning of St Andrews Road between Acheron Road and James Street;
  - (d) Measures (to the extent that they are legally available) to restrict or discourage heavy vehicle movements through the Work;
  - (e) Other measures required to ensure an adequate level of service for the traffic volumes and traffic type expected to use the Work;
  - (f) Provision of arrangements for cyclists;
  - (g) Alteration of footpath widths;
  - (h) Removal of traffic lights;
  - (i) Changes to the operation of the clearway or HOV lanes;
  - (j) Alteration of arrangements in relation to capacity;
  - (k) Any changes to be sought to the designation in relation to those matters; and
- 59.2 Report on the outcomes of that consultation to PCC and WRC for the purposes of ensuring that the PCC and WRC are fully informed of the views of the public and those bodies, and of Transit's intended response to that consultation.

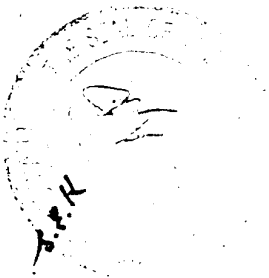
7.8.11

APPENDIX 1  
Plans

J.P.H.

## Contents

- Section 1      Preliminary Design Plans: Reduced Upgrade  
                    A-M (D001 – D013)
- Section 2      Land Required for Reduced Upgrade  
                    A-M (Z001 – Z013)
- Section 3      Detail Requirement Plan  
                    Reduced Upgrade  
                    N-Q (Z014-Z017)



7.2.2

SECTION 1  
Preliminary Design Plans  
Reduced Upgrade

1

\$





GENERAL NOTES

- 11 THESE DRAWINGS ARE AT PRELIMINARY DESIGN STAGE  
12 SHOWING THE PROPOSED ALIGNMENT AND GENERAL  
13 INTERSECTION LAYOUTS  
14 21 CENTRAL MEDIAN IS 35' WIDE WITH BARRIER  
15 31 THROUGH LANE WIDTHS 35'±

### LEGEND

CUT/FILL SLOPES

PROPOSED DESIGNATION

PROPERTY LIABILITY

NEW OR ALTERED

EXISTING ADVERT

10.1111/j.1365-3113.2011.04601.x

## CURVE DATA

SV = 5000  
R = 5000  
SE = 5000  
ST = 5000

FOR INFORMATION

REDUCED UPGRADE/PLAN	BOACING
PROPOSED ALIGNMENT	
DIST - 126 - 175 -	126-175-126

SP-1 UPGRADE  
00000000 TO 00000000  
00000000 - 00000000

**NEW ZEALAND**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Page	124	125
Year	1980	1981
Month	10	11
Day	10	11

Original Name (A)	Year	Revised Name (A)	Year
FARMER Ltd		Farmer (A)	1999

Cartier Holdings  
Cartier Engineers

STU	STU	STU
STU	STU	STU
STU	STU	STU

17	
18	
19	
20	

120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

810 844



2000-01-01  
2000-01-01

100.00m

0 ( )m

-100.00/m

(continued)

**CURVE DATA**

SV =	100XPH
R =	500m
SE =	7.2%
SL =	80m

GENERAL NOTES

10 THESE DRAWINGS ARE AT PRELIMINARY DESIGN STAGE  
SHOWING THE PROPOSED ALIGNMENT AND GENERAL  
INTERSECTION LAYOUTS  
20 CENTRAL MEDIAN 2.5' WIDE WITH BARRIER  
30 THROUGH LANE WIDTHS 3.50

0142537

536075 726/157

PROPOSED DESIGNATION

PROPERTY BOUNDARY

NEW OR ALTERED

EXISTING CULTVERT

1. The following information is for your information only:

PERFORMA / PERFORMA

**Abstract**

FOR INFORMATION

REQUIRED OFFICE/BLN  
 PROPOSED ALIGNMENT  
 DIST - 175' TO 175m  
 3700699/0002  
 ROAD NO

SH.1 UPGRADE  
09/03/1981 TO RP 169/0.29  
PLUMERTON - PARISHATA

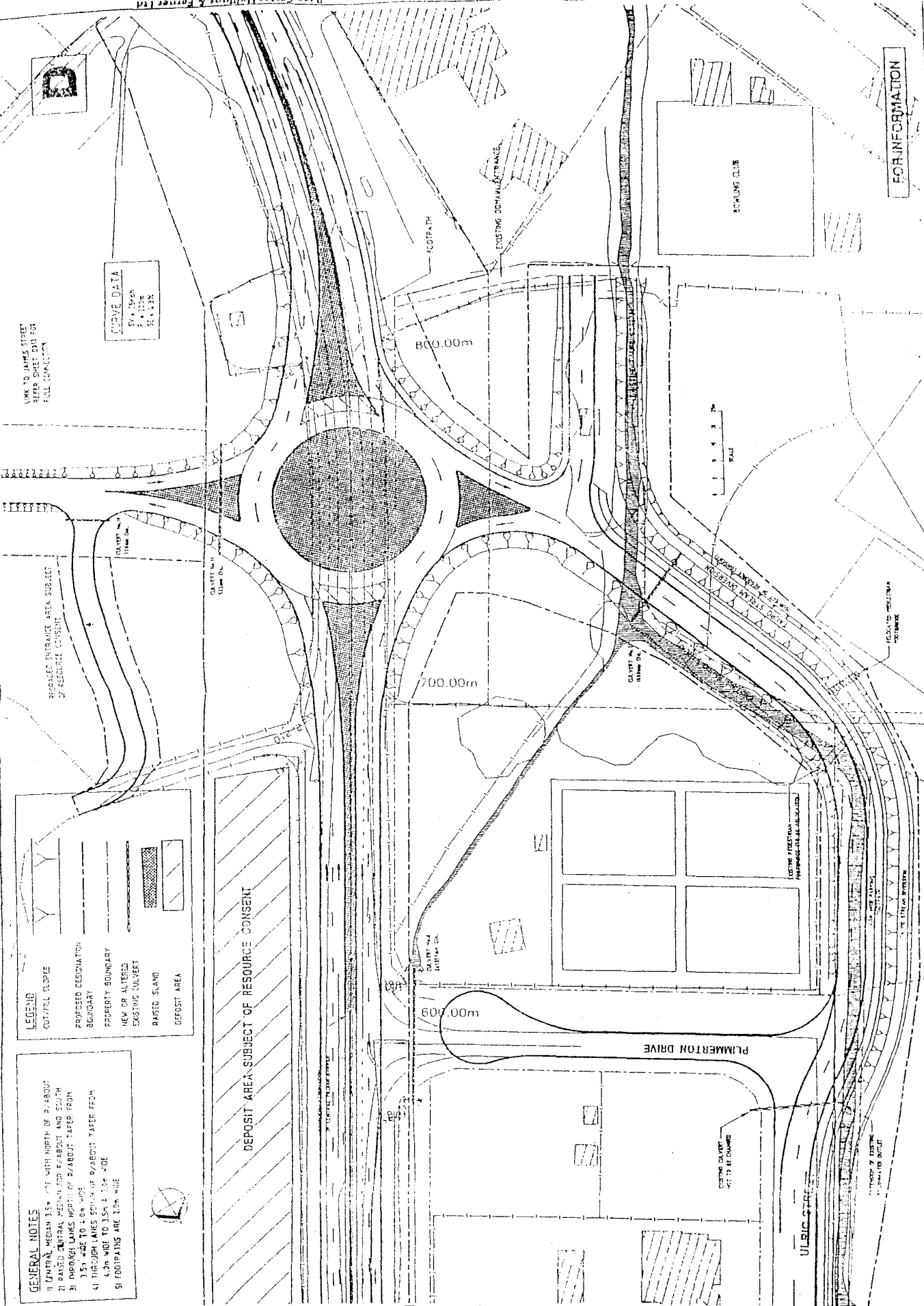
NEW ZEALAND  
NEW ZEALAND  
NEW ZEALAND

[illegible]

**Beca Carter Hollings & Ferner Ltd**  
Consulting Engineers  
Industrial Hygiene • Occupational Health • Air Pollution • Noise  
Vibration • Hazardous Waste Management • Environmental Impact  
Assessment • Water Treatment • Plant Reliability • Safety Engineering

№	Угол	Полное	Буква
1	0°	000	0
2	15°	001	1
3	30°	002	2
4	45°	003	3
5	60°	004	4
6	75°	005	5
7	90°	006	6
8	105°	007	7
9	120°	008	8
10	135°	009	9
11	150°	010	0
12	165°	011	1
13	180°	012	2
14	195°	013	3
15	210°	014	4
16	225°	015	5
17	240°	016	6
18	255°	017	7
19	270°	018	8
20	285°	019	9
21	300°	020	0
22	315°	021	1
23	330°	022	2
24	345°	023	3
25	360°	024	4





LINK TO JAMES STREET  
REFER SHEET END FOR  
FULL CONNECTION

CURVE DATA

SV	=	15.004
F	=	200π
ST	=	1.30X

DEGRADED ENTRANCE AREA SUBJECT  
TO RESOURCE CUES

The map shows a plan view of a river or waterway. A dashed line indicates the 'PROPOSED BOUNDARY'. A solid line indicates the 'NEW OR ALTERED EXISTING CULVERT'. A hatched area indicates the 'RAISED ISLAND'. A stippled area indicates the 'DEPOSIT AREA'. The 'CENTRAL SLOPE' area is labeled on the left side of the map.

**GENERAL NOTES**

- 1) CENTRAL MEAN IS 1.5' WIDE WITH NORTH OF B/ABOUT
- 2) PAISED CENTRAL MEAN FROM E/ABOUT AND SOUTH
- 3) THROUGH LAKES WIDTH OF B/ABOUT TAPER FROM 1.5' WIDE TO 4.0m WIDE
- 4) THROUGH LAKES SOUTH OF B/ABOUT TAPER FROM 1.5' WIDE TO 3.5' + 1.5' WIDE
- 5) FOOTPATHS ARE 2.0m WIDE

~~800.00m~~

700.00m

607.00m

PLIMMERTON DRIVE

ULRIC STAFF


FORMATION

REDUCED UPGRADE/PLAN	ROADING
PROPOSED ALIGNMENT	300698/0000
POST 525M TO 500M	

SH-1 UPGRADE  
COST/USE TO BE 3600.00  
SUBJECT - CEMENT

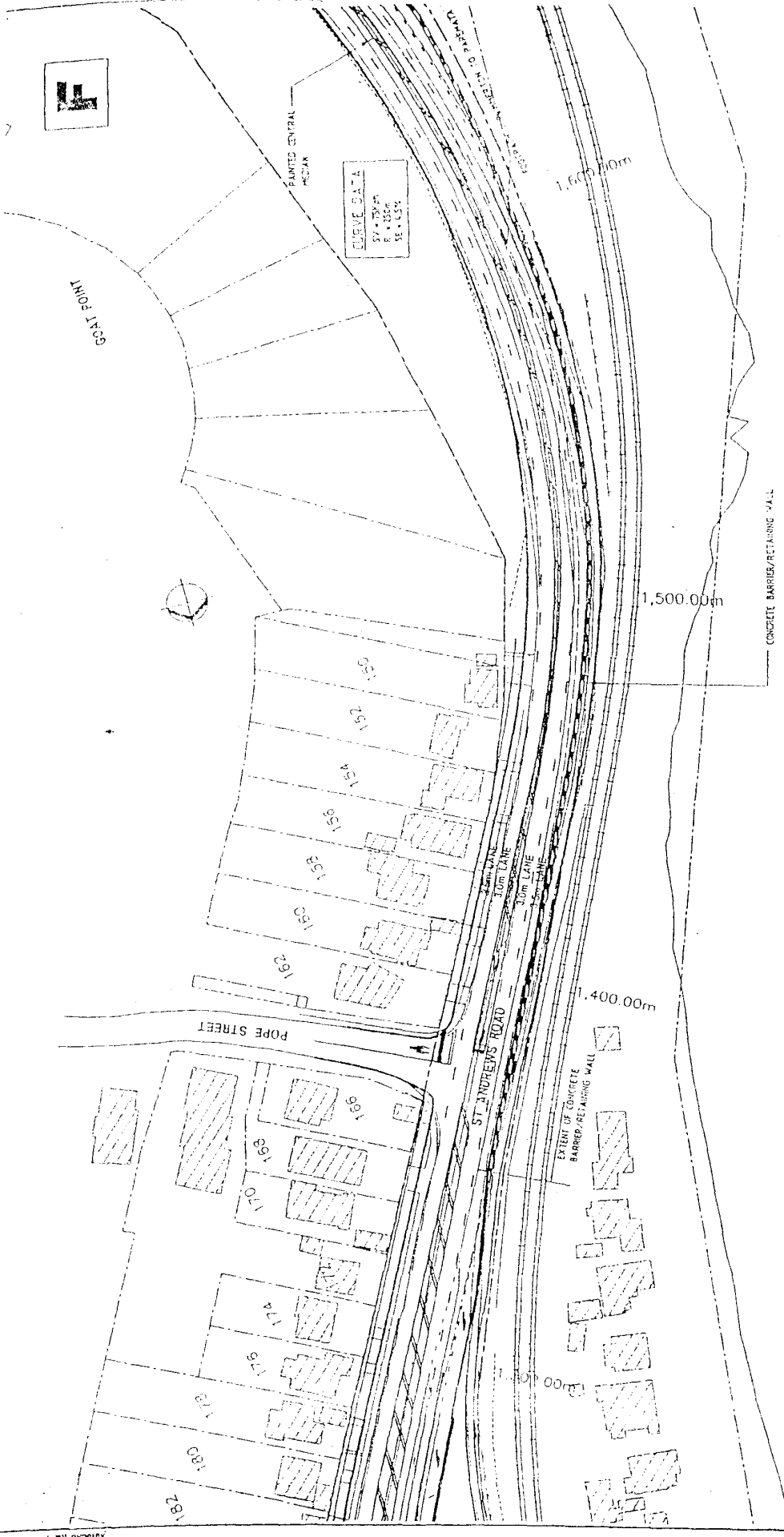
**JOHN J. JAMES**

Sample	2A	17.81%	Agreement for Construction
Owner	BE		
Base Owner			
Base Owner			
Base Owner			

	<b>Beck Carter Holdings &amp; Ferner Ltd</b> Consulting Engineers Architects, Engineers, Surveyors, Valuers, Quantity Surveyors, etc. 100, Victoria Road, London, W.1	100, Victoria Road, London, W.1 Architects, Engineers, Surveyors, Valuers, Quantity Surveyors, etc. 100, Victoria Road, London, W.1
---	--	---

[illegible]





**CURVE DATA**  
 SV = 25.4m  
 R = 150m  
 SE = 0.5%

**GENERAL NOTES**

- 1) THESE DRAWINGS ARE AT PRELIMINARY DESIGN STAGE
- 2) SHOWING THE PROPOSED ALIGNMENT AND GENERAL INTERSECTION LAYOUTS
- 3) PAVED CENTRAL MEDIAN VARIES 1.2m - 4.2m WIDE
- 4) THROUGH LANE WIDTHS - KERBSIDE LANES 3.5m
- 5) LEFT TURN LANE WIDTHS 3.5m
- 6) RIGHT TURN LANE WIDTHS 2.5m
- 7) FOOTPATHS VARY 2.0m - 2.5m WIDE
- 8) NO ON-STREET PARKING THROUGH SECTION (175m - 1650m)

**LEGEND**

- PROPOSED DESIGNATION
- BOUNDARY
- PROPERTY BOUNDARY
- RAISED ISLAND

**FOR INFORMATION**

<b>REDUCED UPGRADE PLAN</b> PROPOSED ALIGNMENT DIST 1650 TO 1650		<b>SHALL UPGRADE</b> 1650 TO 1650 TO 1650 PLUMMERSTON - PAPERDATA		<b>ROADING</b> DIST 1650 TO 1650	
<b>BECA Carter Holdings &amp; Fennell Ltd</b> BECA Carter Holdings & Fennell Ltd BECA Carter Holdings & Fennell Ltd BECA Carter Holdings & Fennell Ltd					

1.2.2









LEGEND

LEGEND

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

44703

PROPERTY BOUNDARY

RAISED: IS AND

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

100% A.M.

$$e^{-\beta H} = \int d\mu \, \delta(\mu - \frac{1}{N} \sum_{i,j} \sigma_i \sigma_j) \int d\sigma_i \exp(\beta \mu \sum_{i,j} \sigma_i \sigma_j)$$

© 2007 Blackwell Publishing Ltd, *Journal of Internal Medicine* 261: 105–114

\_\_\_\_\_

[illegible]

100% POLYESTER FIBER OIL 7

© 2014 John Wiley & Sons, Ltd. *J. Polym. Sci. Part A: Polym. Chem.* 52: 1077–1087, 2014  
DOI: 10.1002/pola.23607

GENERAL NOTES

11. THESE DATA WERE USED TO SET THE OPTIMAL DESIGN STATE  
 SHOWING THE PROPOSED ALIGNMENT AND GENERAL  
 INTERSECTION LAYOUTS  
 12. PAINTED CENTRAL MEDIAN VARIES 20m-25m WIDE  
 13. THROUGH LANE - BOTH KERFSIDE LANES 15m  
 CENTRAL LANES 10m  
 14. MINIMUM MAXIMUM WIDTHS WERE SET AT 15m-20m  
 15. FOOTPATHS VARY 10m-15m WIDE  
 16. DISTANCE BETWEEN KERFSIDE AND THROUGH TRAFFIC  
 BETWEEN DISTANCES 300m-250m  
 17. PEAK ONE-SECT PLANNING FOR THROUGH TRAFFIC  
 TIME OF PEAK ONE-SECT PLANNING FOR THROUGH TRAFFIC  
 18. PEAK ONE-SECT PLANNING FOR THROUGH TRAFFIC  
 19. PEAK ONE-SECT PLANNING FOR THROUGH TRAFFIC  
 20. PEAK ONE-SECT PLANNING FOR THROUGH TRAFFIC

FORMATION

REDUCE VAPORISE/PLAN	ROADING	320663/0000
PROPOSED ALIGNMENT		
COST 2851.10 PER KM		

SHAW, USRAE  
809527/138 TO NE 80970135  
GLIMMERTON - PAGE 2A

THE NEW YORK PUBLIC LIBRARY  
ASTOR LENOX TILDEN FOUNDATION  
500 5TH AVENUE  
NEW YORK 17, N.Y.

	Total	per year for Construction
Year	76	1980
On hand		
Change		Net
		per 100 employees per annum beginning

<b>Wings &amp; Partner Ltd</b> 100, Market Street, Manchester M1 1PL, England, U.K.	Telephone: (061) 236 1111 Telex: 9400 1000 Fax: (061) 236 1111
---	--

**BECA** Career  
Consulting Experts  
Business Development  
Marketing Sales Training

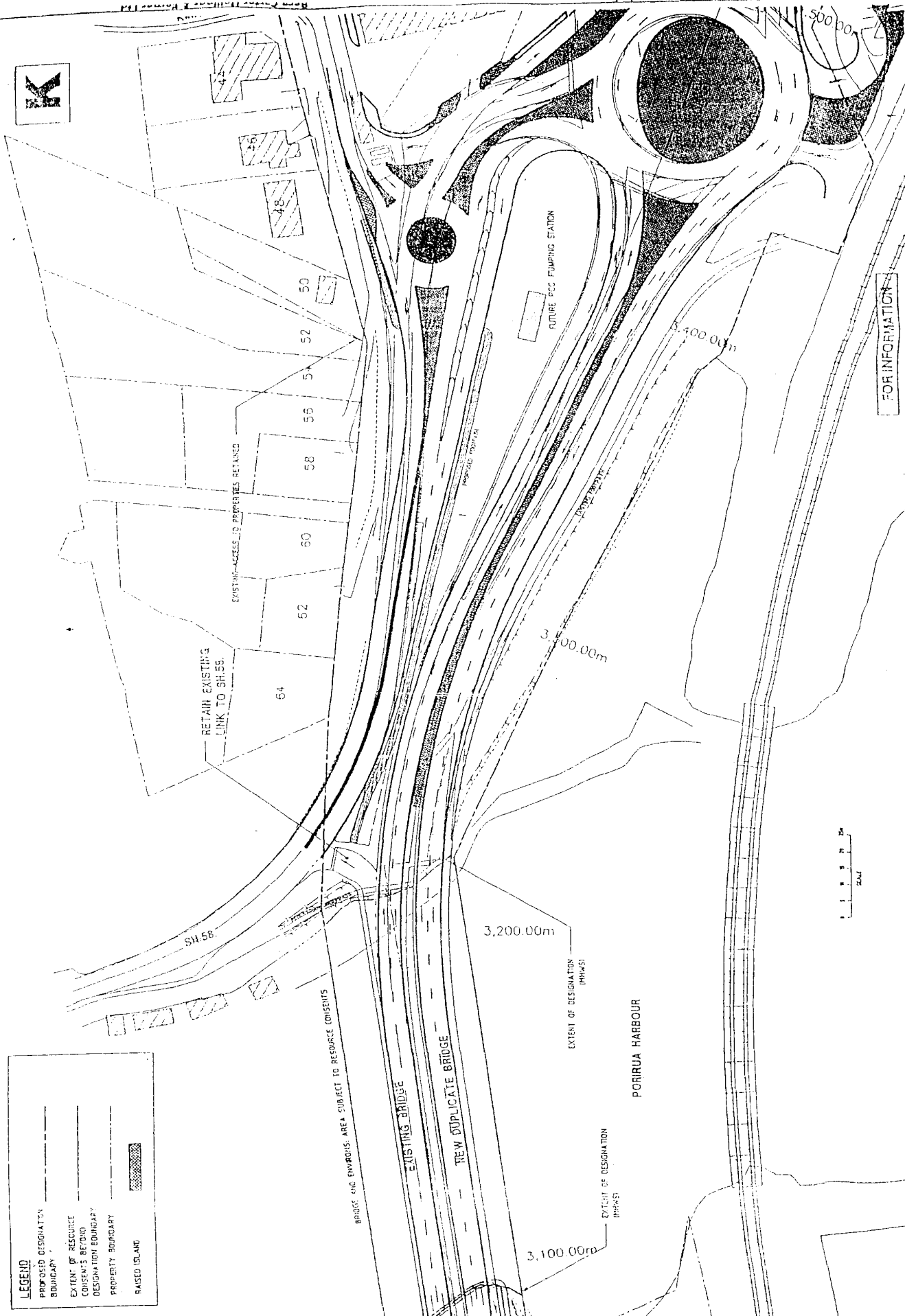
Case No.	Year	Age	Sex	Height	Weight	Color	Complexion	Build	Occupation	Education	Religion	Marital Status	Family Size	Income	Assets	Liabilities	Net Worth	Other
1	1910	25	M	5' 8"	150	White	Fair	Medium	Farmer	High School	Protestant	Married	4	\$1,200	\$500	\$700		
2	1910	27	M	5' 10"	160	White	Fair	Medium	Farmer	High School	Protestant	Married	4	\$1,500	\$600	\$900		
3	1910	25	M	5' 8"	150	White	Fair	Medium	Farmer	High School	Protestant	Married	4	\$1,200	\$500	\$700		

Page	Page	Page	Page
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

17-00000

1

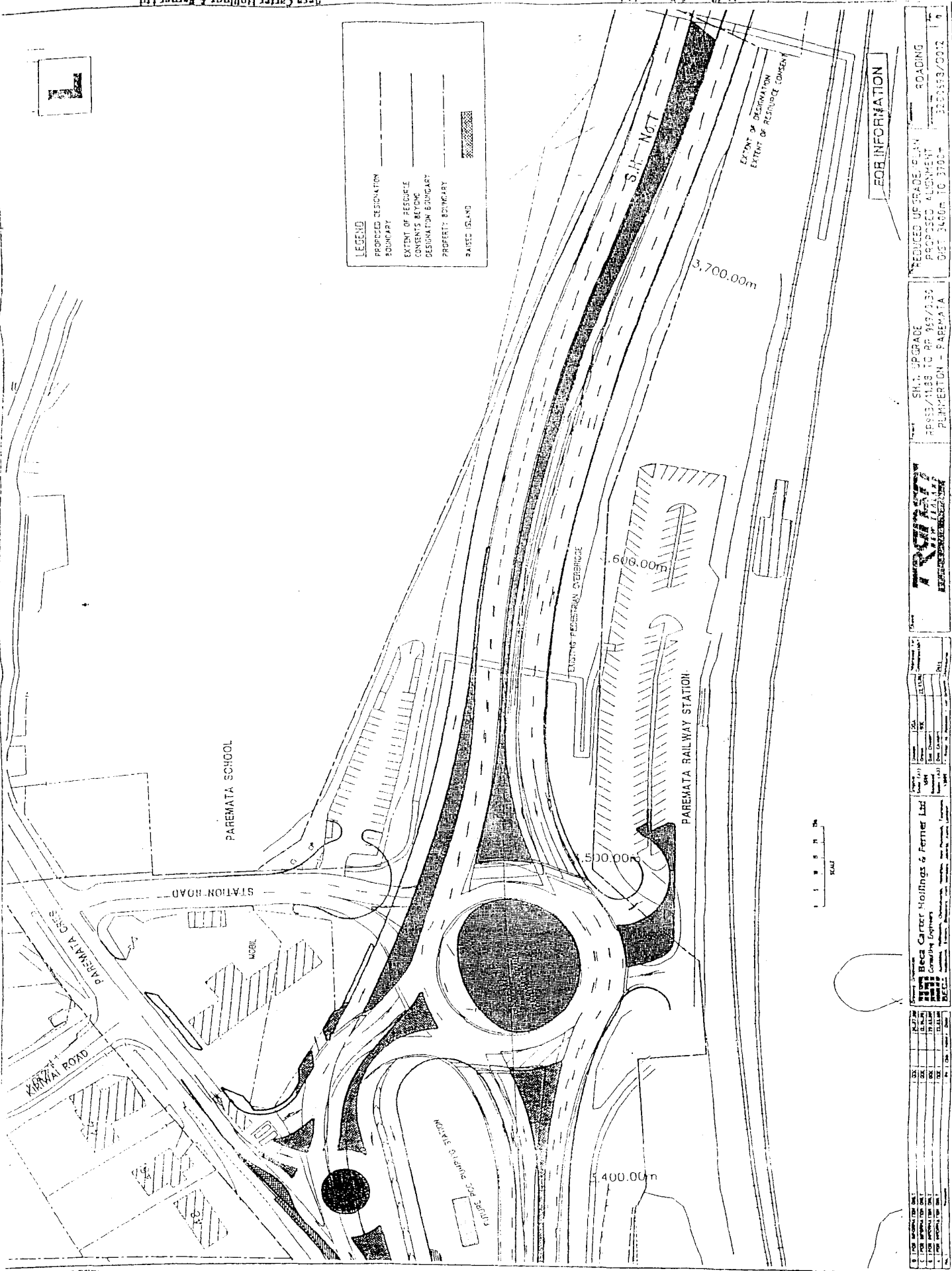




~~FOR INFORMATION~~

[illegible]

2.2K



FOR INFORMATION

<p>1. PROPOSED ROAD</p> <p>2. PROPOSED ROAD</p> <p>3. PROPOSED ROAD</p> <p>4. PROPOSED ROAD</p>	<p>5. PROPOSED ROAD</p> <p>6. PROPOSED ROAD</p> <p>7. PROPOSED ROAD</p> <p>8. PROPOSED ROAD</p>	<p>9. PROPOSED ROAD</p> <p>10. PROPOSED ROAD</p> <p>11. PROPOSED ROAD</p> <p>12. PROPOSED ROAD</p>	<p>13. PROPOSED ROAD</p> <p>14. PROPOSED ROAD</p> <p>15. PROPOSED ROAD</p> <p>16. PROPOSED ROAD</p>	<p>17. PROPOSED ROAD</p> <p>18. PROPOSED ROAD</p> <p>19. PROPOSED ROAD</p> <p>20. PROPOSED ROAD</p>	<p>21. PROPOSED ROAD</p> <p>22. PROPOSED ROAD</p> <p>23. PROPOSED ROAD</p> <p>24. PROPOSED ROAD</p>	<p>25. PROPOSED ROAD</p> <p>26. PROPOSED ROAD</p> <p>27. PROPOSED ROAD</p> <p>28. PROPOSED ROAD</p>	<p>29. PROPOSED ROAD</p> <p>30. PROPOSED ROAD</p> <p>31. PROPOSED ROAD</p> <p>32. PROPOSED ROAD</p>
---	---	--	---	---	---	---	---

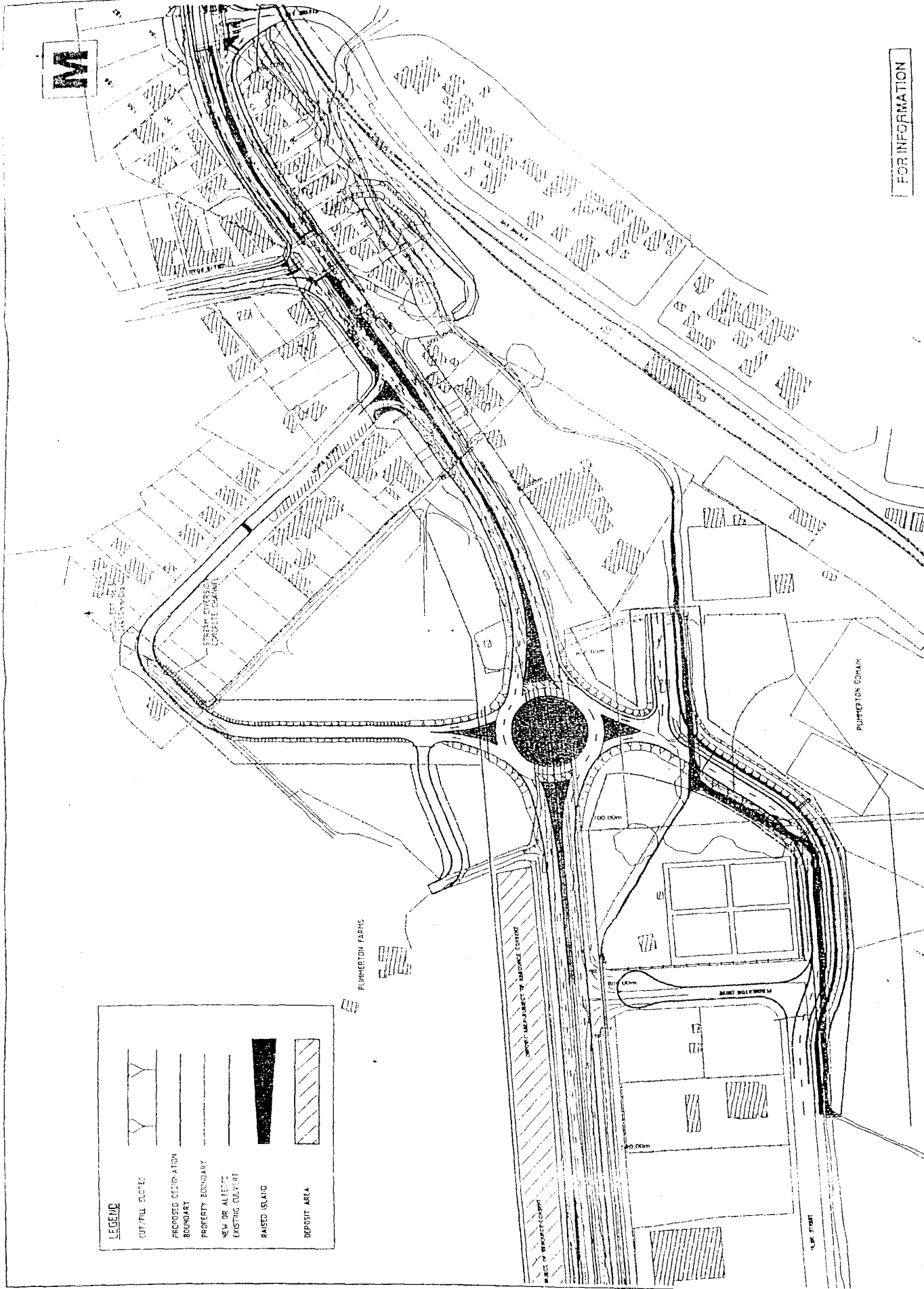
Beca Carter Hollings & Partner Ltd

2.8.8

M

**LEGEND**

- CUT/FILL SLOPE
- PROPOSED DESIGNATION
- BOUNDARY
- PROPERTY BOUNDARY
- NEW OR ALTERED EXISTING CULVERT
- RAISED ISLAND
- DEPOSIT AREA



FOR INFORMATION

<p>SHAW UPGRADE          50153/1188 TO RD 74/0.30          PLUMPTON - PARCMAIA          DIST 431M TO 1220M          30/03/2013</p>		<p>REDUCED GRADE/PLAN          PROPOSED ALIGNMENT          30/03/2013</p>													
<p><b>PROJECT INFORMATION</b></p> <p>Client: <b>Beca Carter Hollings &amp; Ferner Ltd</b>          Project: <b>Plumpton Road Upgrade</b>          Location: <b>Plumpton - Parcmaia</b>          Scale: <b>1:1000</b>          Date: <b>30/03/2013</b></p>															
<p><b>REVISIONS</b></p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>ISSUED FOR PERMIT</td> <td>30/03/2013</td> </tr> <tr> <td>2</td> <td>FOR APPROVAL FOR PERMIT</td> <td>30/03/2013</td> </tr> <tr> <td>3</td> <td>FOR APPROVAL FOR PERMIT</td> <td>30/03/2013</td> </tr> </tbody> </table>				NO.	DESCRIPTION	DATE	1	ISSUED FOR PERMIT	30/03/2013	2	FOR APPROVAL FOR PERMIT	30/03/2013	3	FOR APPROVAL FOR PERMIT	30/03/2013
NO.	DESCRIPTION	DATE													
1	ISSUED FOR PERMIT	30/03/2013													
2	FOR APPROVAL FOR PERMIT	30/03/2013													
3	FOR APPROVAL FOR PERMIT	30/03/2013													

**TRUST**  
 TRUSTEES OF THE ROAD

PLUMPTON COMMON

PLUMPTON FARMS

PLUMPTON ROAD

STREAM DIVERSION CONCRETE CHANNEL

RAISED ISLAND

DEPOSIT AREA

SECTION 2  
Land Requirement for Reduced Upgrade

2.2.2

# LAND REQUIREMENT PLAN

## LEGEND

ALL LAND TO BE DESIGNATED	TO BE SHOWN AS "LIMITED ACCESS ROAD"	TO BE SHOWN AS "ROAD STATE HIGHWAY"
NOT CURRENTLY SHOWN AS DESIGNATED IN PORHUA CITY PROPOSED DISTRICT PLAN		
CURRENTLY SHOWN AS DESIGNATED IN PORHUA CITY PROPOSED DISTRICT PLAN		

## NOTES:

- AREAS AND DIMENSIONS ARE APPROPRIATE ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY
- ALL OWNERS LISTED ARE THOSE KNOWN AS AT JULY 1991

## LAND REQUIRED FOR ROAD RESERVE

SHOWN	APPELLATION	ICT / DOCUMENT No	AREA
(A)	PT. TAUPU No. 118/1331	C.T. 260/878	2670m <sup>2</sup>

SITUATED IN BLOCK VII PAEKAKARIKI SURVEY DISTRICT

RLR A

PT. TAUPU No. 1  
118/1331  
C.T. 260/878  
LG & HJ BERGE  
AG STAPLES

STATE HIGHWAY No. 1  
LEGAL BY GAZ. 1941 p. 2053 (Proc. 3113)  
LIMITED ACCESS ROAD GN 989190  
IRREGULAR WIDTH - OVER 20m

EXTENT OF DESIGNATION  
RURAL SECTION PAREMATA - PLIMMERTON SECTION

## FOR INFORMATION

<p>Becca Carter Holdings &amp; Farmer Ltd Consulting Engineers</p> <p>Becca Carter Holdings &amp; Farmer Ltd Consulting Engineers</p>	<p>Original (A1) Scale: 1:1000 Date: 1991</p> <p>Revised (A2) Scale: 1:1000 Date: 1991</p>	<p>S.M. UPGRADE RP 953/11.88 TO RP 959/0.30 PLIMMERTON - PAREMATA</p>	<p>REDUCED UPGRADE LAND REQUIREMENT PLAN DIST. - 325m TO - 175m</p>	<p>ROADING 13203698 / 2001</p>
---	--	---	---	------------------------------------

5.2.11

Amended Vol. 1

Original area A1

LAND REQUIRED FOR ROAD RESERVE			
SHOWN	APPELLATION	C.T./DOCUMENT No.	AREA
(A)	RP TAUPD No.1 (B/133)	C.T. 26D/878	2670m <sup>2</sup>
(B)	RP TAUPD No.1 (B/133)	C.T. 26D/878	3910m <sup>2</sup>

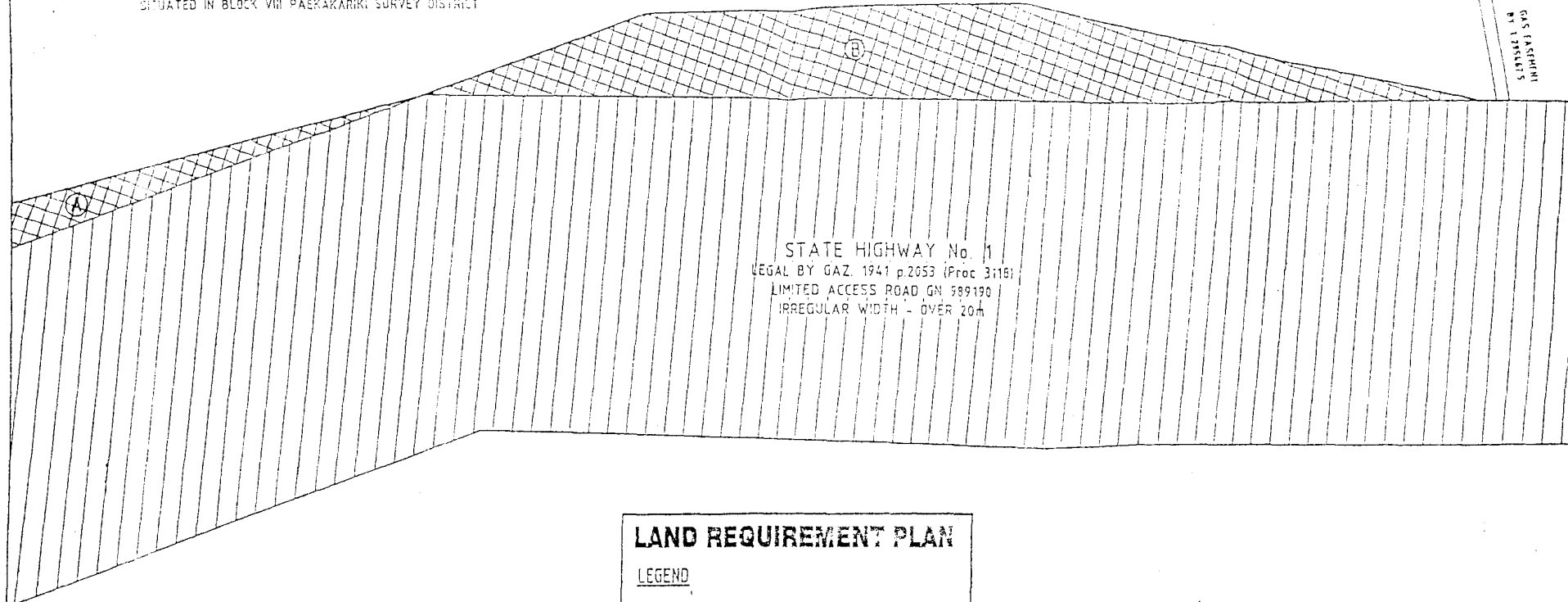
SITUATED IN BLOCK VIII PAKAKARIKI SURVEY DISTRICT

RP TAUPD No.1  
(B/133)  
C.T. 26D/878  
J.C. & M.D. BEINGE  
A.C. STAPLES



RLR **B**

GAS LASHMENT  
BY 17/05/2015



STATE HIGHWAY No. 1  
LEGAL BY GAZ. 1941 p.2053 (Proc 3118)  
LIMITED ACCESS ROAD GN 589190  
IRREGULAR WIDTH - OVER 20M

**LAND REQUIREMENT PLAN**

**LEGEND**

----- DISTING PROPERTY BOUNDARY

ALL LAND TO BE DESIGNATED	TO BE SHOWN AS "LIMITED ACCESS ROAD"	TO BE SHOWN AS "ROAD (STATE HIGHWAY)"
NOT CURRENTLY SHOWN AS DESIGNATED IN PORIRUA CITY PROPOSED DISTRICT PLAN		
CURRENTLY SHOWN AS DESIGNATED IN PORIRUA CITY PROPOSED DISTRICT PLAN		

**NOTES:**  
1. AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY.  
2. ALL OWNERS LISTED ARE THOSE KNOWN AS AT JULY 1997.

FOR INFORMATION

**Beca** **Carroll Holdings & Partner Ltd**  
Consulting Engineers

Drawn: DCA  
Checked: LJP  
Reviewed: LJP  
Date: 11/08/00



S.H.1. UPGRADE  
RP553/11.88 TO RP 265/0.30  
PLIMMERTON - PAREHATA

REDUCED UPGRADE  
LAND REQUIREMENT PLAN  
DIST. - 175m TO 175m

ROADING  
3200678 / 2002



SHOWN	APPELLATION	P.C.T./DOCUMENT No.	AREA
(C)	LOT 13 D.P. 48570	VESTED P.C.C.	900m <sup>2</sup>
(D)	LOT 12 D.P. 48569	VESTED P.C.C.	450m <sup>2</sup>
(E)	LOT 11 D.P. 48568	VESTED P.C.C.	490m <sup>2</sup>

SITUATED IN BLOCK VIII PAEKAKARIKI SURVEY DISTRICT

PT TAUPG No 1  
183/1331  
C.T 260/878  
IG & M.J BENCE  
A.C STAPLES

UAS EASEMIN  
BY 7 295667.5

STATE HIGHWAY No. 1  
LEGAL BY GAZ. 1941 p.2053 (Proc 3118)  
LIMITED ACCESS ROAD GN 989190  
IRREGULAR WIDTH - OVER 20m





LOT 13  
O.P. 48570  
DRAINAGE & PLANTATION RESERVE  
VESTED P.C.C.

LOT 12  
D.P. 48569  
DRAINAGE & PLANTATION RESERVE  
VESTED P.C.C.

LOT 11  
D.P. 42588  
DRAINAGE & PLANTATION RESERVE  
VESTED P.C.C.

### LEGEND

EXISTING PROPERTY BOUNDARY

ALL LAND TO BE DESIGNATED	TO BE SHOWN AS "LIMITED ACCESS ROAD"	TO BE SHOWN AS "TODAS (STATE HIGHWAY)"
NOT CURRENTLY SHOWN AS DESIGNATED IN POMEREA CITY PROPOSED DISTRICT PLAN		
CURRENTLY SHOWN AS DESIGNATED IN POMEREA CITY PROPOSED DISTRICT PLAN		

## NOTES.

1. AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY.

PLIMMERTON DRIVE  
LEGAL ROAD

FOR INFORMATION

**Beca Career Holdings & Partner Ltd**  
Consulting Engineers

[illegible]

**POST**  
NEW ZEALAND  
REGISTERED MAIL

S.H.1 UPGRADE  
RP953/11.08 TO RP 966/0630  
PLIMMERTON - PAPERATA

REDUCED UPGRADE  
LAND REQUIREMENT PLAN  
DIST 175m TO 525m

ROACING  
3200632 / Z0031

5.2.11

ALLIANCE

LAND REQUIRED FOR ROAD RESERVE			
SHOWN	APPELLATION	I.C.T./DOCUMENT No.	AREA
(E)	LOT 11 D.P. 48568	VESTED P.C.C.	490m <sup>2</sup>
(F)	SECTION 1 S.O. 35263	GAZ. 1988 p. 3663	330m <sup>2</sup>
(G)	SECTION 1 S.O. 36405	GAZ. 1994 p. 1633	2220m <sup>2</sup>

SITUATED IN BLOCK VIII PAKAKARIKI SURVEY DISTRICT



RLR D

REFER DRAWING  
2013 FOR LINK  
ROADS

STATE HIGHWAY No. 1  
LEGAL BY GAZ. 1941 p.2053 (Proc 3118)  
LIMITED ACCESS ROAD ON 789190  
IRREGULAR WIDTH - OVER 20m

LOT 11  
D.P. 48568  
DRAINAGE & PLANTATION RESERVE  
VESTED P.C.C.

SEC. 1  
S.O. 35263  
GAZ. 1988 p.3663

SEC. 1  
S.O. 36405  
GAZ. 1994 p.1633

PLIMMERTON DRIVE  
LEGAL ROAD

REFER DRAWING  
2013 FOR LINK  
ROADS

## LAND REQUIREMENT PLAN

### LEGEND

EXISTING PROPERTY BOUNDARY

ALL LAND TO BE DESIGNATED	TO BE SHOWN AS "LIMITED ACCESS ROAD"	TO BE SHOWN AS "ROAD (STATE HIGHWAY)"
NOT CURRENTLY SHOWN AS DESIGNATED IN PAREMATA CITY PROPOSED DISTRICT PLAN		
CURRENTLY SHOWN AS DESIGNATED IN PAREMATA CITY PROPOSED DISTRICT PLAN		

### NOTES:

- AREAS AND DIMENSIONS ARE AT PRELIMINARY ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY
- ALL DIMENSIONS LISTED ARE THOSE SHOWN AS AT JULY 2011

### FOR INFORMATION

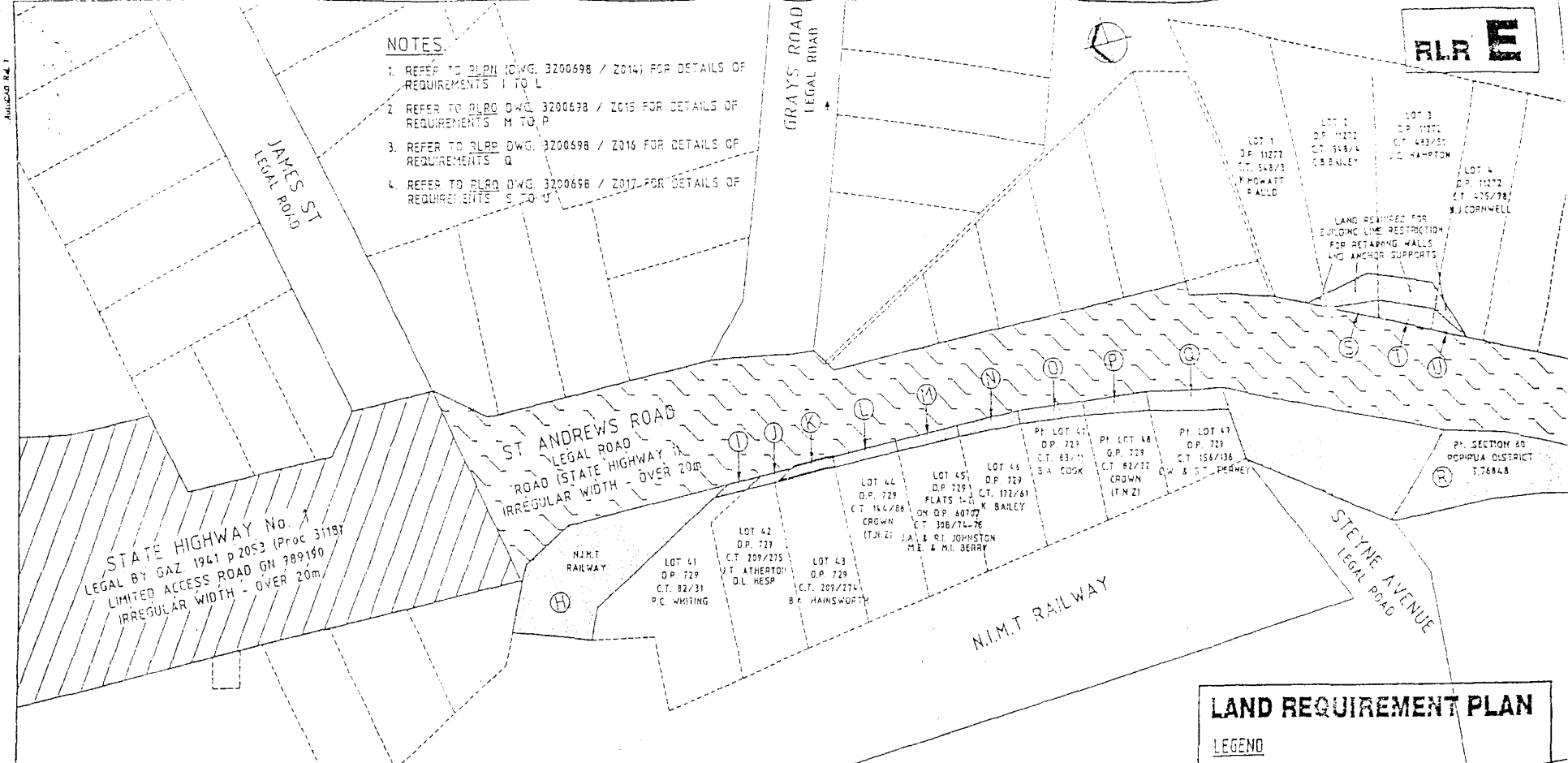
<b>Bees Carter Holdings &amp; Farmer Ltd</b> Consulting Engineers 1000		<b>SH1 UPGRADE</b> RP192/1188 TO RP 945/030 PLIMMERTON - PAREMATA		<b>REDUCED UPGRADE</b> LAND REQUIREMENT PLAN DIST 525m TO 900m		<b>ROADING</b> 3200498 / 2004	
--	--	---	--	--	--	----------------------------------	--

J.R.K.

HLR E

### NOTES.

1. REFER TO DLBN (DWG. 3200698 / 2014) FOR DETAILS OF REQUIREMENTS I TO L
2. REFER TO DLBO (DWG. 3200698 / 2015) FOR DETAILS OF REQUIREMENTS M TO P
3. REFER TO DLBO (DWG. 3200698 / 2016) FOR DETAILS OF REQUIREMENTS Q
4. REFER TO DLBO (DWG. 3200698 / 2017) FOR DETAILS OF REQUIREMENTS S TO U



LAND REQUIRED FOR ROAD RESERVE			
SHOWN	APPELLATION	C.T./DOCUMENT No.	AREA
(H)	WELLINGTON TO FOXTON RAILWAY	CROWN	749m <sup>2</sup>
(I)	LOT 41 D.P. 729	C.T. 82/31	20m <sup>2</sup>
(J)	LOT 42 D.P. 729	C.T. 209/275	20m <sup>2</sup>
(K)	LOT 43 D.P. 729	C.T. 209/274	36m <sup>2</sup>
(L)	LOT 44 D.P. 729	C.T. 144/86	41m <sup>2</sup>
(M)	LOT 45 D.P. 729	C.T. 308/74 - 75	43m <sup>2</sup>
(N)	LOT 46 D.P. 729	C.T. 172/61	48m <sup>2</sup>

SITUATED IN BLOCK VIII PAKAKARIKI SURVEY DISTRICT

LAND REQUIRED FOR ROAD RESERVE			
SHOWN	APPELLATION	C.T./DOCUMENT No.	AREA
(O)	PH. LOT 47 D.P. 729	C.T. 83/11	53m <sup>2</sup>
(P)	PH. LOT 48 D.P. 729	C.T. 82/22	64m <sup>2</sup>
(Q)	PH. LOT 49 D.P. 729	C.T. 156/136	96m <sup>2</sup>
(R)	PH. SEC 80 PORIRUA DIST.	T.76848	1200m <sup>2</sup>
(S)	LOT 2 D.P.11272	C.T. 548/4	26m <sup>2</sup>
(T)	LOT 3 D.P.11272	C.T. 483/50	55m <sup>2</sup>
(U)	LOT 4 D.P.11272	C.T. 475/98	18m <sup>2</sup>

SITUATED IN BLOCK VIII PAKAKARIKI SURVEY DISTRICT

## LAND REQUIREMENT PLAN

### LEGEND

ALL LAND TO BE DESIGNATED	TO BE SHOWN AS "LIMITED ACCESS ROAD"	TO BE SHOWN AS "ROAD (STATE HIGHWAY)"
NOT CURRENTLY SHOWN AS DESIGNATED IN PORIRUA CITY PROPOSED DISTRICT PLAN		
CURRENTLY SHOWN AS DESIGNATED IN PORIRUA CITY PROPOSED DISTRICT PLAN		

### NOTES:

1. AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY
2. ALL DIMENSIONS LISTED ARE THOSE KNOWN AS AT 2017.1997

### FOR INFORMATION

Project Name: <b>State Highway Upgrade</b>	Project No: <b>3200698 / 2005</b>	Project Stage: <b>Final</b>	Project Date: <b>2017.1997</b>
Project Location: <b>Porirua District</b>	Project Description: <b>State Highway Upgrade</b>	Project Objectives: <b>Upgrade State Highway</b>	Project Benefits: <b>Improved Road Safety</b>
Project Sponsor: <b>Porirua District Council</b>	Project Manager: <b>John Smith</b>	Project Engineer: <b>John Smith</b>	Project Designer: <b>John Smith</b>
Project Consultant: <b>John Smith</b>	Project Client: <b>Porirua District Council</b>	Project Reviewer: <b>John Smith</b>	Project Approver: <b>John Smith</b>

SHOWN	APPELLATION	C.T./DOCUMENT No.	AREA
(B)	PT. SEC 30 PORRUA DIST.	T. 768-L-8	12.00m <sup>2</sup>
(W)	PT. SEC 80 PORRUA DIST.	T. 768-L-8	670m <sup>2</sup>
(X)	LOT 1 O.P. 68933	C.T. 368/607	2270m <sup>2</sup>

SHOWN	APPELLATION	C.T./DOCUMENT NO.	AREA
(R)	PT. SEC 30 BORRUA DIST.	T. 765B-8	1200m <sup>2</sup>
(W)	PT. SEC 30 BORRUA DIST.	T. 765B-8	670m <sup>2</sup>
(X)	LOT 1 D.P. 68333	C.T. 368/607	2770m <sup>2</sup>

ST ANDREWS ROAD

LEGAL ROAD

POPE ST LEGAL ROAD

ROAD (STATE HIGHWAY 1)

IRREGULAR WIDTH - OVER 20m

(R)

PT. SECTION 80  
PORIRUA DISTRICT  
T. 148-8

N. I. M. T.  
RAILWAY

## LAND REQUIREMENT PLAN

QUEST

**BYRONELLE ALLEN PHILLIPS**

ALL LAND TO BE DESIGNATED	TO BE SHOWN AS "LIMITED ACCESS ROAD"	TO BE SHOWN AS "TRAIL OR CORRAL AS TRAIL (LIMITED HORSEWAGON)"
NOT CURRENTLY SHOWN AS DESIGNATED IN PERRILL CITY PARKS DISTRICT PLAN		
CURRENTLY SHOWN AS DESIGNATED IN PERRILL CITY PARKS DISTRICT PLAN		

407265.

1. NAMES AND ADDRESSES ARE APPROXIMATELY ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY.
2. ALL POINTS LISTED ARE THOSE KNOWN AS OF MAY 1997.

# MISSION

- REFER : NOR VOL II APP1 / PLAN 6 FOR AREA V AND SIGHT PLANES INCLUDED IN ORIGINAL APPLICATION BUT NOT REQUIRED IN REDUCED UPGRADE.

FOR INFORMATION

REDUCED UPGRADE  
LAND REQUIREMENT PLAN  
DIST 1254 TO 1550  
320594 / 2006  
ROADING

SH-1 UPGRADE  
0922/1138 TO 09 1257/0330  
CLIMBERION - PAREMATA

**THE NEW YORK PUBLIC LIBRARY**

[illegible]

**Barclay Currier Holdings & Partner Ltd**  
Consulting Engineers

[illegible]

AutocAD Plot

FILE 6

NOTES:

- ACHERON ROAD  
LEGAL ROAD

N. I. M. T. RAILWAY

SHOWN	APPELLATION	C.T./DOCUMENT No	AREA
(X)	LOT 1 D.P. 68333	C.T. 365/407	2270m <sup>2</sup>

SITUATED IN BLOCK VIII PAEKAKARIKI SURVEY DISTRICT

Approved by:                      Original size: A1

[illegible]

**THE NEW ZEALAND**

SRM. UPGRADE  
RP953/11.38 TO RP 969/0.30  
PLUMMETON - PAREMATA

REDUCED UPGRADE  
LAND REQUIREMENT PLAN  
DIST. 1650m TO 1975m

3200693 / 2007 A

LAND REQUIRED FOR ROAD RESERVE

SHOWN	APPEALATION	CT/DOCUMENTATION No	AREA
Part NN	LOT 1 OF 54278	CT 331/422	168m

SITUATED IN BLOCK VII PAKAKARNO SURVEY DISTRICT



RLR H

MANA VIEW ROAD

MANA ESPLANADE  
LEGAL ROAD  
ROAD (STATE HIGHWAY 11)  
IRREGULAR WIDTH - OVER 20m

DOLLY VARDEN CRESCENT

REDQUIB LANE  
(SERVICE LANE) LEGAL ROAD

STATION ROAD

PROPOSED BUS STOP

Part NN

### LAND REQUIREMENT PLAN

**LEGEND**

----- EXISTING PROPERTY BOUNDARY

ALL LAND TO BE DESIGNATED	TO BE SHOWN AS "LIMITED ACCESS ROAD"	TO BE SHOWN AS "ROAD (STATE HIGHWAY)"
NOT CURRENTLY SHOWN AS DESIGNATED IN PAKAKARNO CITY PROPOSED DISTRICT PLAN		
CURRENTLY SHOWN AS DESIGNATED IN PAKAKARNO CITY PROPOSED DISTRICT PLAN		

**NOTES:**

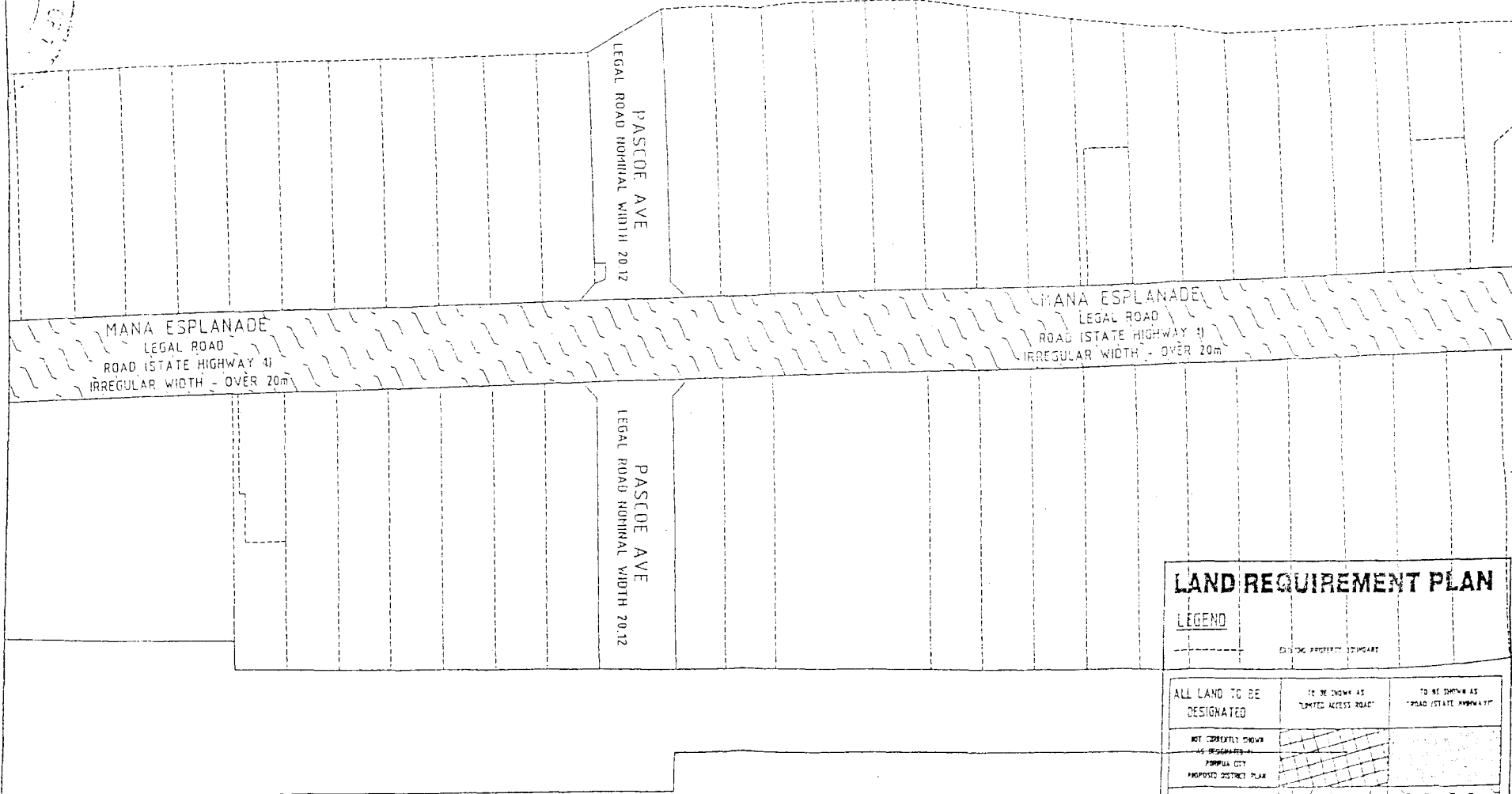
- AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY
- ALL DIMENSIONS LISTED ARE "AS SHOWN" AS AT JULY 1991

**NOTES**

- THE ONLY LAND REQUIREMENT FOR REDUCED UPGRADE IS PART OF NN FROM ORIGINAL APPLICATION
- REFER : NOR VOL II APP1 / PLAN B FOR AREAS Y TO Z , AA TO MM ; AND SIGHT PLANES INCLUDED IN ORIGINAL APPLICATION BUT NOT REQUIRED IN REDUCED UPGRADE.

FOR INFORMATION

<b>Project Overview</b> <b>Beca Carter Hollings &amp; Ferner Ltd</b> Consulting Engineers Auckland, Wellington, Christchurch, Invercargill, New Plymouth, Tauranga Melbourne, Sydney, Brisbane, Port Moresby, Cairns, Perth, London		<b>Client</b> Tairāwhiti Date: 1991 Drawn: J.A.M. Checked: J.A.M. Scale: 1:1000 Date: 1991	<b>Project Details</b> S.H.1 UPGRADE RP 953/11.85 TO RP 969/0.30 PUNIMERTON - PAREMATA	<b>Reduced Upgrade</b> LAND REQUIREMENT PLAN DIST 1975 - TO 2320 13200499 / 2008	<b>Roading</b> ROAD DIST 1975 - TO 2320 13200499 / 2008
---	--	--	---	---	--



# LAND REQUIREMENT PLAN

LEGEND

EXISTING PROPERTY BOUNDARY

ALL LAND TO BE DESIGNATED	TO BE SHOWN AS "LIMITED ACCESS ROAD"	TO BE SHOWN AS "ROAD (STATE HIGHWAY N)"
NOT CURRENTLY SHOWN AS DESIGNATED - POKHARA CITY PROPOSED DISTRICT PLAN		
CURRENTLY SHOWN AS DESIGNATED IN POKHARA CITY PROPOSED DISTRICT PLAN		

## NOTES

1. NO NEW LAND REQUIREMENT FOR REDUCED UPGRADE
2. REFER : NOR VOL II APP1 / PLAN 9 FOR AREAS OO TO ZZ AND SIGHT PLANES INCLUDED IN ORIGINAL APPLICATION BUT NOT REQUIRED IN REDUCED UPGRADE.

- NOTES:
1. AREAS AND OVERSEERS ARE APPROPRIATE ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY
  2. ALL POWERS LISTED ARE THOSE GIVEN AS AT JULY 1997

## FOR INFORMATION

<p>Project Name: <b>Beca Carter Hollings &amp; Partner Ltd</b></p> <p>Client: <b>Consulting Engineers</b></p> <p>Location: <b>Manurewa, Auckland</b></p> <p>Scale: <b>1:1000</b></p> <p>Date: <b>10/07/00</b></p>	<p>Drawn: <b>100A</b></p> <p>Check: <b>100B</b></p> <p>Scale: <b>1:1000</b></p> <p>Date: <b>10/07/00</b></p>	<p>Project Name: <b>REDUCED UPGRADE</b></p> <p>Client: <b>100A</b></p> <p>Location: <b>100B</b></p> <p>Scale: <b>1:1000</b></p> <p>Date: <b>10/07/00</b></p>	<p>Project Name: <b>ROADING</b></p> <p>Client: <b>100A</b></p> <p>Location: <b>100B</b></p> <p>Scale: <b>1:1000</b></p> <p>Date: <b>10/07/00</b></p>
---	--	--	--

10.2.1

# LAND REQUIREMENT PLAN

ALA J

## LEGEND

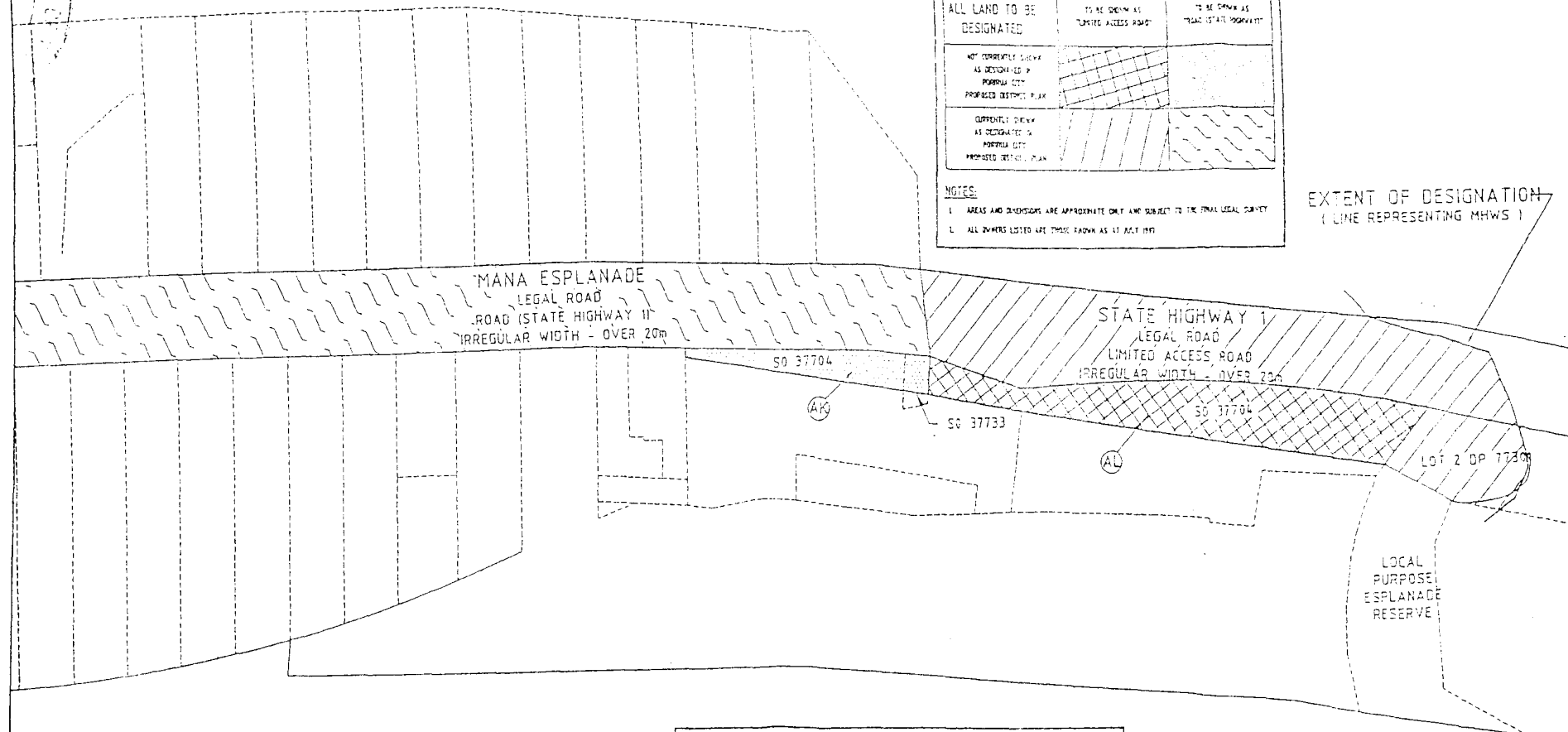
EXISTING PROPERTY BOUNDARY

ALL LAND TO BE DESIGNATED	TO BE DESIGN AS "LIMITED ACCESS ROAD"	TO BE DESIGN AS "LEGAL STATE HIGHWAY"
NOT CURRENTLY SHOWN AS DESIGNATED IN PORTLAND CITY PROPOSED DISTRICT PLAN		
CURRENTLY SHOWN AS DESIGNATED IN PORTLAND CITY PROPOSED DISTRICT PLAN		

## NOTES:

- AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY
- ALL OWNERS LISTED ARE THOSE SHOWN AS AT JULY 1997

EXTENT OF DESIGNATION  
(LINE REPRESENTING MHWS)



## LAND REQUIRED FOR ROAD RESERVE

SHOWN	APPELLATION	C.T./DOCUMENT No.	AREA
(AK)	SO 37704 SO 37733	G.N B.604.092	400m²
(AL)	SO 37704	G.N B.604.092	1450m²

## NOTE

- REFER : NCR VOL II APP1 / PLAN 10 FOR SIGHT PLANES INCLUDED IN ORIGINAL APPLICATION BUT NOT REQUIRED IN REDUCED UPGRADE.

## FOR INFORMATION

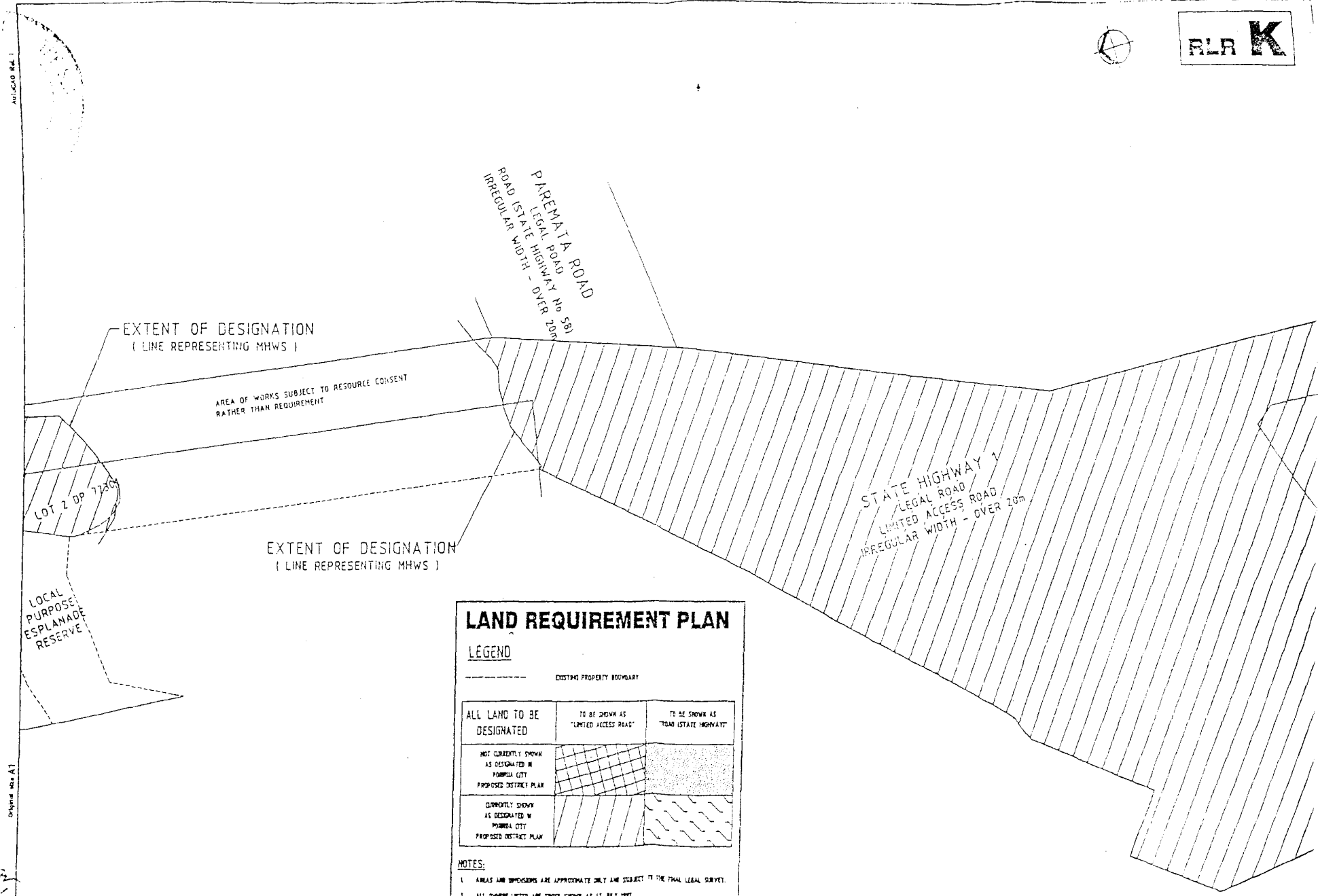
<p>Project: Beca Carter Hollings &amp; Ferner Ltd</p> <p>Consulting Engineers</p> <p>BECA</p>	<p>Client: S.H.1 UPGRADE</p> <p>Project: RP203/1133 TO RP 745/0.30</p> <p>Location: PUNMERVEN - PAREMATA</p>	<p>REDUCED UPGRADE</p> <p>LAND REQUIREMENT PLAN</p> <p>DIST 2715M TO 3100M</p>	<p>ROADING</p> <p>3200693 / Z010</p>
---	--	--	--------------------------------------



52.1K



RLR **K**



### LAND REQUIREMENT PLAN

LEGEND

----- EXISTING PROPERTY BOUNDARY

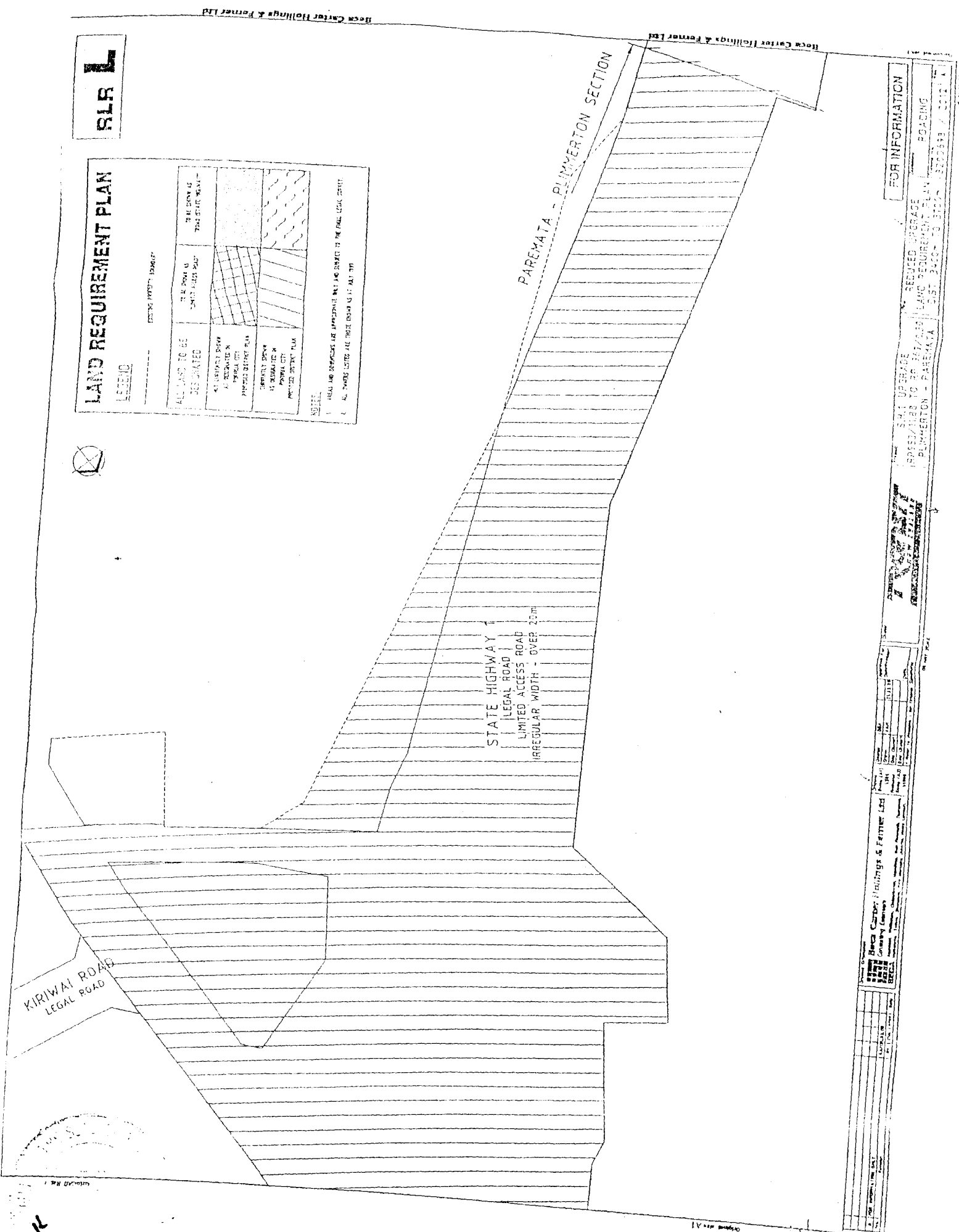
ALL LAND TO BE DESIGNATED	TO BE SHOWN AS "LIMITED ACCESS ROAD"	TO BE SHOWN AS "ROAD (STATE HIGHWAY)"
NOT CURRENTLY SHOWN AS DESIGNATED IN PAREMATA CITY PROPOSED DISTRICT PLAN		
CURRENTLY SHOWN AS DESIGNATED IN PAREMATA CITY PROPOSED DISTRICT PLAN		

**NOTES:**

1. AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY.
2. ALL OWNERS LISTED ARE THOSE KNOWN AS AT JULY 1997.

FOR INFORMATION

Project Name: <b>Beas Carter Holdings &amp; Partner Ltd</b> Consulting Engineers: <b>Beas Carter Holdings &amp; Partner Ltd</b> Address: <b>10/11, 12/13, 14/15, 16/17, 18/19, 20/21, 22/23, 24/25, 26/27, 28/29, 30/31, 32/33, 34/35, 36/37, 38/39, 40/41, 42/43, 44/45, 46/47, 48/49, 50/51, 52/53, 54/55, 56/57, 58/59, 60/61, 62/63, 64/65, 66/67, 68/69, 70/71, 72/73, 74/75, 76/77, 78/79, 80/81, 82/83, 84/85, 86/87, 88/89, 90/91, 92/93, 94/95, 96/97, 98/99, 100/101, 102/103, 104/105, 106/107, 108/109, 110/111, 112/113, 114/115, 116/117, 118/119, 120/121, 122/123, 124/125, 126/127, 128/129, 130/131, 132/133, 134/135, 136/137, 138/139, 140/141, 142/143, 144/145, 146/147, 148/149, 150/151, 152/153, 154/155, 156/157, 158/159, 160/161, 162/163, 164/165, 166/167, 168/169, 170/171, 172/173, 174/175, 176/177, 178/179, 180/181, 182/183, 184/185, 186/187, 188/189, 190/191, 192/193, 194/195, 196/197, 198/199, 200/201, 202/203, 204/205, 206/207, 208/209, 210/211, 212/213, 214/215, 216/217, 218/219, 220/221, 222/223, 224/225, 226/227, 228/229, 230/231, 232/233, 234/235, 236/237, 238/239, 240/241, 242/243, 244/245, 246/247, 248/249, 250/251, 252/253, 254/255, 256/257, 258/259, 260/261, 262/263, 264/265, 266/267, 268/269, 270/271, 272/273, 274/275, 276/277, 278/279, 280/281, 282/283, 284/285, 286/287, 288/289, 290/291, 292/293, 294/295, 296/297, 298/299, 300/301, 302/303, 304/305, 306/307, 308/309, 310/311, 312/313, 314/315, 316/317, 318/319, 320/321, 322/323, 324/325, 326/327, 328/329, 330/331, 332/333, 334/335, 336/337, 338/339, 340/341, 342/343, 344/345, 346/347, 348/349, 350/351, 352/353, 354/355, 356/357, 358/359, 360/361, 362/363, 364/365, 366/367, 368/369, 370/371, 372/373, 374/375, 376/377, 378/379, 380/381, 382/383, 384/385, 386/387, 388/389, 390/391, 392/393, 394/395, 396/397, 398/399, 400/401, 402/403, 404/405, 406/407, 408/409, 410/411, 412/413, 414/415, 416/417, 418/419, 420/421, 422/423, 424/425, 426/427, 428/429, 430/431, 432/433, 434/435, 436/437, 438/439, 440/441, 442/443, 444/445, 446/447, 448/449, 450/451, 452/453, 454/455, 456/457, 458/459, 460/461, 462/463, 464/465, 466/467, 468/469, 470/471, 472/473, 474/475, 476/477, 478/479, 480/481, 482/483, 484/485, 486/487, 488/489, 490/491, 492/493, 494/495, 496/497, 498/499, 500/501, 502/503, 504/505, 506/507, 508/509, 510/511, 512/513, 514/515, 516/517, 518/519, 520/521, 522/523, 524/525, 526/527, 528/529, 530/531, 532/533, 534/535, 536/537, 538/539, 540/541, 542/543, 544/545, 546/547, 548/549, 550/551, 552/553, 554/555, 556/557, 558/559, 560/561, 562/563, 564/565, 566/567, 568/569, 570/571, 572/573, 574/575, 576/577, 578/579, 580/581, 582/583, 584/585, 586/587, 588/589, 590/591, 592/593, 594/595, 596/597, 598/599, 600/601, 602/603, 604/605, 606/607, 608/609, 610/611, 612/613, 614/615, 616/617, 618/619, 620/621, 622/623, 624/625, 626/627, 628/629, 630/631, 632/633, 634/635, 636/637, 638/639, 640/641, 642/643, 644/645, 646/647, 648/649, 650/651, 652/653, 654/655, 656/657, 658/659, 660/661, 662/663, 664/665, 666/667, 668/669, 670/671, 672/673, 674/675, 676/677, 678/679, 680/681, 682/683, 684/685, 686/687, 688/689, 690/691, 692/693, 694/695, 696/697, 698/699, 700/701, 702/703, 704/705, 706/707, 708/709, 710/711, 712/713, 714/715, 716/717, 718/719, 720/721, 722/723, 724/725, 726/727, 728/729, 730/731, 732/733, 734/735, 736/737, 738/739, 740/741, 742/743, 744/745, 746/747, 748/749, 750/751, 752/753, 754/755, 756/757, 758/759, 760/761, 762/763, 764/765, 766/767, 768/769, 770/771, 772/773, 774/775, 776/777, 778/779, 780/781, 782/783, 784/785, 786/787, 788/789, 790/791, 792/793, 794/795, 796/797, 798/799, 800/801, 802/803, 804/805, 806/807, 808/809, 810/811, 812/813, 814/815, 816/817, 818/819, 820/821, 822/823, 824/825, 826/827, 828/829, 830/831, 832/833, 834/835, 836/837, 838/839, 840/841, 842/843, 844/845, 846/847, 848/849, 850/851, 852/853, 854/855, 856/857, 858/859, 860/861, 862/863, 864/865, 866/867, 868/869, 870/871, 872/873, 874/875, 876/877, 878/879, 880/881, 882/883, 884/885, 886/887, 888/889, 890/891, 892/893, 894/895, 896/897, 898/899, 900/901, 902/903, 904/905, 906/907, 908/909, 910/911, 912/913, 914/915, 916/917, 918/919, 920/921, 922/923, 924/925, 926/927, 928/929, 930/931, 932/933, 934/935, 936/937, 938/939, 940/941, 942/943, 944/945, 946/947, 948/949, 950/951, 952/953, 954/955, 956/957, 958/959, 960/961, 962/963, 964/965, 966/967, 968/969, 970/971, 972/973, 974/975, 976/977, 978/979, 980/981, 982/983, 984/985, 986/987, 988/989, 990/991, 992/993, 994/995, 996/997, 998/999, 1000/1001, 1002/1003, 1004/1005, 1006/1007, 1008/1009, 1010/1011, 1012/1013, 1014/1015, 1016/1017, 1018/1019, 1020/1021, 1022/1023, 1024/1025, 1026/1027, 1028/1029, 1030/1031, 1032/1033, 1034/1035, 1036/1037, 1038/1039, 1040/1041, 1042/1043, 1044/1045, 1046/1047, 1048/1049, 1050/1051, 1052/1053, 1054/1055, 1056/1057, 1058/1059, 1060/1061, 1062/1063, 1064/1065, 1066/1067, 1068/1069, 1070/1071, 1072/1073, 1074/1075, 1076/1077, 1078/1079, 1080/1081, 1082/1083, 1084/1085, 1086/1087, 1088/1089, 1090/1091, 1092/1093, 1094/1095, 1096/1097, 1098/1099, 1100/1101, 1102/1103, 1104/1105, 1106/1107, 1108/1109, 1110/1111, 1112/1113, 1114/1115, 1116/1117, 1118/1119, 1120/1121, 1122/1123, 1124/1125, 1126/1127, 1128/1129, 1130/1131, 1132/1133, 1134/1135, 1136/1137, 1138/1139, 1140/1141, 1142/1143, 1144/1145, 1146/1147, 1148/1149, 1150/1151, 1152/1153, 1154/1155, 1156/1157, 1158/1159, 1160/1161, 1162/1163, 1164/1165, 1166/1167, 1168/1169, 1170/1171, 1172/1173, 1174/1175, 1176/1177, 1178/1179, 1180/1181, 1182/1183, 1184/1185, 1186/1187, 1188/1189, 1190/1191, 1192/1193, 1194/1195, 1196/1197, 1198/1199, 1200/1201, 1202/1203, 1204/1205, 1206/1207, 1208/1209, 1210/1211, 1212/1213, 1214/1215, 1216/1217, 1218/1219, 1220/1221, 1222/1223, 1224/1225, 1226/1227, 1228/1229, 1230/1231, 1232/1233, 1234/1235, 1236/1237, 1238/1239, 1240/1241, 1242/1243, 1244/1245, 1246/1247, 1248/1249, 1250/1251, 1252/1253, 1254/1255, 1256/1257, 1258/1259, 1260/1261, 1262/1263, 1264/1265, 1266/1267, 1268/1269, 1270/1271, 1272/1273, 1274/1275, 1276/1277, 1278/1279, 1280/1281, 1282/1283, 1284/1285, 1286/1287, 1288/1289, 1290/1291, 1292/1293, 1294/1295, 1296/1297, 1298/1299, 1300/1301, 1302/1303, 1304/1305, 1306/1307, 1308/1309, 1310/1311, 1312/1313, 1314/1315, 1316/1317, 1318/1319, 1320/1321, 1322/1323, 1324/1325, 1326/1327, 1328/1329, 1330/1331, 1332/1333, 1334/1335, 1336/1337, 1338/1339, 1340/1341, 1342/1343, 1344/1345, 1346/1347, 1348/1349, 1350/1351, 1352/1353, 1354/1355, 1356/1357, 1358/1359, 1360/1361, 1362/1363, 1364/1365, 1366/1367, 1368/1369, 1370/1371, 1372/1373, 1374/1375, 1376/1377, 1378/1379, 1380/1381, 1382/1383, 1384/1385, 1386/1387, 1388/1389, 1390/1391, 1392/1393, 1394/1395, 1396/1397, 1398/1399, 1400/1401, 1402/1403, 1404/1405, 1406/1407, 1408/1409, 1410/1411, 1412/1413, 1414/1415, 1416/1417, 1418/1419, 1420/1421, 1422/1423, 1424/1425, 1426/1427, 1428/1429, 1430/1431, 1432/1433, 1434/1435, 1436/1437, 1438/1439, 1440/1441, 1442/1443, 1444/1445, 1446/1447, 1448/1449, 1450/1451, 1452/1453, 1454/1455, 1456/1457, 1458/1459, 1460/1461, 1462/1463, 1464/1465, 1466/1467, 1468/1469, 1470/1471, 1472/1473, 1474/1475, 1476/1477, 1478/1479, 1480/1481, 1482/1483, 1484/1485, 1486/1487, 1488/1489, 1490/1491, 1492/1493, 1494/1495, 1496/1497, 1498/1499, 1500/1501, 1502/1503, 1504/1505, 1506/1507, 1508/1509, 1510/1511, 1512/1513, 1514/1515, 1516/1517, 1518/1519, 1520/1521, 1522/1523, 1524/1525, 1526/1527, 1528/1529, 1530/1531, 1532/1533, 1534/1535, 1536/1537, 1538/1539, 1540/1541, 1542/1543, 1544/1545, 1546/1547, 1548/1549, 1550/1551, 1552/1553, 1554/1555, 1556/1557, 1558/1559, 1560/1561, 1562/1563, 1564/1565, 1566/1567, 1568/1569, 1570/1571, 1572/1573, 1574/1575, 1576/1577, 1578/1579, 1580/1581, 1582/1583, 1584/1585, 1586/1587, 1588/1589, 1590/1591, 1592/1593, 1594/1595, 1596/1597, 1598/1599, 1600/1601, 1602/1603, 1604/1605, 1606/1607, 1608/1609, 1610/1611, 1612/1613, 1614/1615, 1616/1617, 1618/1619, 1620/1621, 1622/1623, 1624/1625, 1626/1627, 1628/1629, 1630/1631, 1632/1633, 1634/1635, 1636/1637, 1638/1639, 1640/1641, 1642/1643, 1644/1645, 1646/1647, 1648/1649, 1650/1651, 1652/1653, 1654/1655, 1656/1657, 1658/1659, 1660/1661, 1662/1663, 1664/1665, 1666/1667, 1668/1669, 1670/1671, 1672/1673, 1674/1675, 1676/1677, 1678/1679, 1680/1681, 1682/1683, 1684/1685, 1686/1687, 1688/1689, 1690/1691, 1692/1693, 1694/1695, 1696/1697, 1698/1699, 1700/1701, 1702/1703, 1704/1705, 1706/1707, 1708/1709, 1710/1711, 1712/1713, 1714/1715, 1716/1717, 1718/1719, 1720/1721, 1722/1723, 1724/1725, 1726/1727, 1728/1729, 1730/1731, 1732/1733, 1734/1735, 1736/1737, 1738/1739, 1740/1741, 1742/1743, 1744/1745, 1746/1747, 1748/1749, 1750/1751, 1752/1753, 1754/1755, 1756/1757, 1758/1759, 1760/1761, 1762/1763, 1764/1765, 1766/1767, 1768/1769, 1770/1771, 1772/1773, 1774/1775, 1776/1777, 1778/1779, 1780/1781, 1782/1783, 1784/1785, 1786/1787, 1788/1789, 1790/1791, 1792/1793, 1794/1795, 1796/1797, 1798/1799, 1800/1801, 1802/1803, 1804/1805, 1806/1807, 1808/1809, 1810/1811, 1812/1813, 1814/1815, 1816/1817, 1818/1819, 1820/1821, 1822/1823, 1824/1825, 1826/1827, 1828/1829, 1830/1831, 1832/1833, 1834/1835, 1836/1837, 1838/1839, 1840/1841, 1842/1843, 1844/1845, 1846/1847, 1848/1849, 1850/1851, 1852/1853, 1854/1855, 1856/1857, 1858/1859, 1860/1861, 1862/1863, 1864/1865, 1866/1867, 1868/1869, 1870/1871, 1872/1873, 1874/1875, 1876/1877, 1878/1879, 1880/1881, 1882/1883, 1884/1885, 1886/1887, 1888/1889, 1890/1891, 1892/1893, 1894/1895, 1896/1897, 1898/1899, 1900/1901, 1902/1903, 1904/1905, 1906/1907, 1908/1909, 1910/1911, 1912/1913, 1914/1915, 1916/1917, 1918/1919, 1920/1921, 1922/1923, 1924/1925, 1926/1927, 1928/1929, 1930/1931, 1932/1933, 1934/1935, 1936/1937, 1938/1939, 1940/1941, 1942/1943, 1944/1945, 1946/1947, 1948/1949, 1950/1951, 1952/1953, 1954/1955, 1956/1957, 1958/1959, 1960/1961, 1962/1963, 1964/1965, 1966/1967, 1968/1969, 1970/1971, 1972/1973, 1974/1975, 1976/1977, 1978/1979, 1980/1981, 1982/1983, 1984/1985, 1986/1987, 1988/1989, 1990/1991, 1992/1993, 1994/1995, 1996/1997, 1998/1999, 2000/2001, 2002/2003, 2004/2005, 2006/2007, 2008/2009, 2010/2011, 2012/2013, 2014/2015, 2016/2017, 2018/2019, 2020/2021, 2022/2023, 2024/2025, 2026/2027, 2028/2029, 2030/2031, 2032/2033, 2034/2035, 2036/2037, 2038/2039, 2040/2041, 2042/2043, 2044/2045, 2046/2047, 2048/2049, 2050/2051, 2052/2053, 2054/2055, 2056/2057, 2058/2059, 2060/2061, 2062/2063, 2064/2065, 2066/2067, 2068/2069, 2070/2071, 2072/2073, 2074/2075, 2076/2077, 2078/2079, 2080/2081, 2082/2083, 2084/2085, 2086/2087, 2088/2089, 2090/2091, 2092/2093, 2094/2095, 2096/2097, 2098/2099, 2100/2101, 2102/2103, 2104/2105, 2106/2107, 2108/2109, 2110/2111, 2112/2113, 2114/2115, 2116/2117, 2118/2119, 2120/2121, 2122/2123, 2124/2125, 2126/2127, 2128/2129, 2130/2131, 2132/2133, 2134/2135, 2136/2137, 2138/2139, 2140/2141, 2142/2143, 2144/2145, 2146/2147, 2148/2149, 2150/2151, 2152/2153, 2154/2155, 2156/2157, 2158/2159, 2160/2161, 2162/2163, 2164/2165, 2166/2167, 2168/2169, 2170/2171, 2172/2173, 2174/2175, 2176/2177, 2178/2179, 2180/2181, 2182/2183, 2184/2185, 2186/2187, 2188/2189, 2190/2191, 2192/2193, 2194/2195, 2196/2197, 2198/2199, 2200/2201, 2202/2203, 2204/2205, 2206/2207, 2208/2209, 2210/2211, 2212/2213, 2214/2215, 2216/2217, 2218/2219, 2220/2221, 2222/2223, 2224/2225, 2226/2227, 2228/2229, 2230/2231, 2232/2233, 2234/2235, 2236/2237, 2238/2239, 2240/2241, 2242/2243, 2244/2245, 2246/2247, 2248/2249, 2250/2251, 2252/2253, 2254/2255, 2256/2257, 2258/2259, 2260/2261, 2262/2263, 2264/2265, 2266/2267, 2268/2269, 2270/2271, 2272/2273, 2274/2275, 2276/2277, 2278/2279, 2280/2281, 2282/2283, 2284/2285, 2286/2287, 2288/2289, 2290/2291, 2292/2293, 2294/2295, 2296/2297, 2298/2299, 2300</b>
---



SLR L

LAND REQUIREMENT PLAN

LEGEND

EXISTING PROPERTY BOUNDARY

ALL LAND TO BE DESIGNATED	THE ROAD IS LIMITED ACCESS ROAD	THE ROAD IS THAT STATE ROAD
ALL UNPAVED ROADS A. RESERVE IN PUBLIC CITY PROPOSED STREET PLAN	DESIGNATED ROAD IS RESERVE IN PUBLIC CITY PROPOSED STREET PLAN	

NOTES

1. REAL AND PROPOSED ARE APPROXIMATE BUT ARE SUBJECT TO THE FINAL LEGAL SURVEY
2. ALL SHOWN LINES ARE THEORETICAL AND ARE NOT TO BE TAKEN TOO

FOR INFORMATION

541 UPGRADE  
1995/21/28 TO 30 311/010  
PLIMMERTON - PAREMATA  
DIST. 3000 TO 3100 3200000 / 00121

RECEIVED  
1995/21/28

DATE	TIME	BY	FOR
1995/21/28	10:00	10:10	10:10

Becca Carter Holdings & Partner Ltd

DATE	TIME	BY	FOR
1995/21/28	10:00	10:10	10:10

7/3/2

Original with A1

1/3

# LAND REQUIRED FOR ROAD RESERVE

SHOWN	APPELLATION	C.T./DOCUMENT NO.	AREA
(AB)	PT LOT 2 D.P. 43007	C.T. 450/678	1645m <sup>2</sup>
(AC)	LOT 3 D.P. 79321	C.T. 450/677	1680m <sup>2</sup>
(AD)	SEC 1 S.O. 35263	GAZ 1986 p3663	712m <sup>2</sup>
(AE)	SEC 1 S.O. 36405	GAZ 1994 p1635	215m <sup>2</sup>
(AF)	PT LOT 67 D.P. 17993	GAZ 1994 p1635	7000m <sup>2</sup>
(AG)	PART TAUPD No1	C.T. 260/878	6350m <sup>2</sup>
(AH)	LOT 21 D.F. 9683	C.T. 527/298	469m <sup>2</sup>
(AI)	LOT 2 DP 42679	VESTED P.C.C.	213m <sup>2</sup>
(AJ)	LOT 1 DP 42679	C.T. 18C/493	380m <sup>2</sup>
(AN)	PART TAUPD No1	C.T. 260/878	72m <sup>2</sup>

SITUATED IN BLOCK VIII PAEKAKARIKI SURVEY DISTRICT

PT TAUPD No.1  
18/1331  
C.T. 260/878  
IG & H.J. BENGGE  
AC STAPLES

REFER 2001 - 2012 FOR STATE HIGHWAY No 1

## LAND REQUIREMENT PLAN

### LEGEND

ALL LAND TO BE DESIGNATED	TO BE SHOWN AS "LIMITED ACCESS ROAD"	TO BE SHOWN AS "ROAD (STATE HIGHWAY)"
NOT CURRENTLY SHOWN AS DESIGNATED IN PAREMATA CITY PROPOSED DISTRICT PLAN		
CURRENTLY SHOWN AS DESIGNATED IN PAREMATA CITY PROPOSED DISTRICT PLAN		

### NOTES:

1. AREAS AND CORRIDORS ARE APPROXIMATE ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY
2. ALL OWNERS LISTED ARE THOSE SHOWN AS AT JULY 1997

### FOR INFORMATION

S.H.1 UPGRADE RPS93/1188 TO RP 947/030 PLUMMERTON - PAREMATA	REDUCED UPGRADE LAND REQUIREMENT PLAN LINKS ROADS PAREMATA	ROADING 3200692 / 2013
--	--	---------------------------

Prepared by:  
Beca Carter Hollings & Partner Ltd  
Consulting Engineers

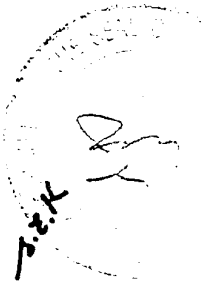
Checked by:  
Name (A1)  
Date  
Name (A2)  
Date

Scale: 1:1000  
Date: 11/08/03  
By: [Signature]

AKK

RLP M

Beca Carter Hollings & Partner Ltd



SECTION 3  
Detail Requirement Plan  
Reduced Upgrade

**ST ANDREWS ROAD (STATE HIGHWAY 1)**

**LEGEND**

- EXISTING PROPERTY BOUNDARY
- PROPOSED DESIGNATION BOUNDARY FOR "ROAD 1 STATE HIGHWAY 1"
- AREA SUBJECT TO RESURFACING CONSENTS

**NOTES**

1. AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY
2. ALL OWNERS LISTED ARE THOSE KNOWN AS AT JULY 1991

**PROPOSED KERB**

**EXISTING DESIGNATION BOUNDARY**

**PROPOSED FOOTPATH**

**LOT 1**  
DP 729  
CT 82/31  
P.C. WHITING

**LOT 2**  
DP 729  
CT 109/215  
J.T. ADERTON  
D.L. HEBB

**LOT 3**  
DP 729  
CT 201/214  
B.A. HAINSWORTH

**LOT 4**  
DP 729  
CT 141/16  
J.N.Z.

**FOR INFORMATION**

**ROAD UPGRADE**  
SUPPLEMENTARY  
LAND REQUIREMENT PLAN 1303098 / 2014

**REVISIONS**

NO.	DATE	BY	DESCRIPTION
1	10/11/15	J.A.	ISSUED FOR TENDERS

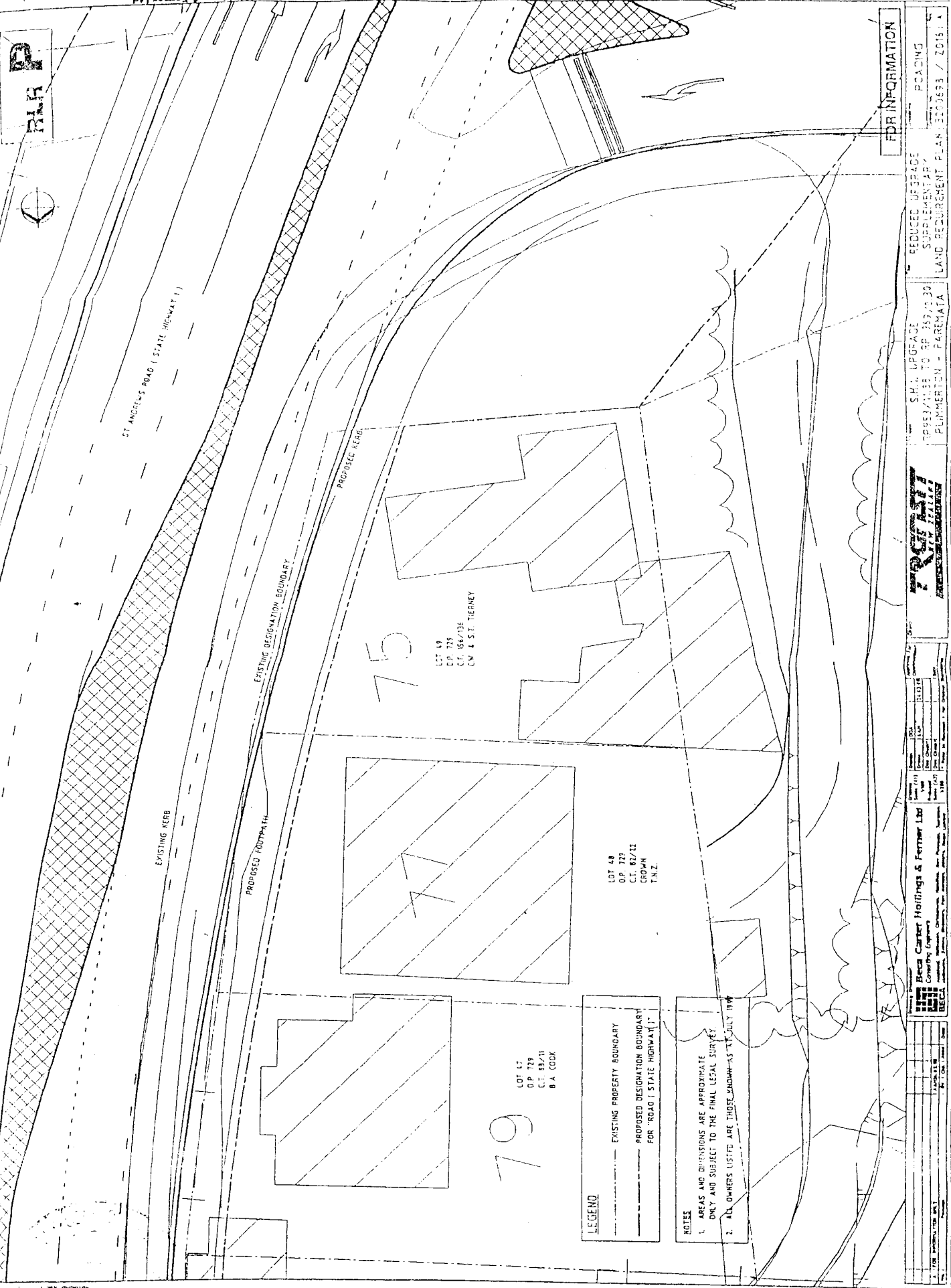
**Beca Carter Hollings & Partner Ltd**  
Consulting Engineers

**10/11/15**

 <b>Beca Carter Hollings &amp; Partner Ltd</b> Consulting Engineers 100, Market Street, Auckland, New Zealand Tel: +64 9 308 9000 Fax: +64 9 308 9001 Email: <a href="mailto:info@bca.co.nz">info@bca.co.nz</a> Website: <a href="http://www.bca.co.nz">www.bca.co.nz</a>		<b>REDACTED</b> 100, Market Street, Auckland, New Zealand Tel: +64 9 308 9000 Fax: +64 9 308 9001 Email: <a href="mailto:info@bca.co.nz">info@bca.co.nz</a> Website: <a href="http://www.bca.co.nz">www.bca.co.nz</a>	
A. THE PROJECT LOCATION 100, Market Street, Auckland, New Zealand		B. THE PROJECT DESCRIPTION 100, Market Street, Auckland, New Zealand	
C. THE PROJECT SCOPE 100, Market Street, Auckland, New Zealand		D. THE PROJECT BUDGET 100, Market Street, Auckland, New Zealand	
E. THE PROJECT RISK 100, Market Street, Auckland, New Zealand		F. THE PROJECT SCHEDULE 100, Market Street, Auckland, New Zealand	
G. THE PROJECT TEAM 100, Market Street, Auckland, New Zealand		H. THE PROJECT CONTACTS 100, Market Street, Auckland, New Zealand	
I. THE PROJECT DOCUMENTS 100, Market Street, Auckland, New Zealand		J. THE PROJECT RESULTS 100, Market Street, Auckland, New Zealand	
K. THE PROJECT CONCLUSIONS 100, Market Street, Auckland, New Zealand		L. THE PROJECT RECOMMENDATIONS 100, Market Street, Auckland, New Zealand	



7/2/14



**LEGEND**

— EXISTING PROPERTY BOUNDARY

— PROPOSED DESIGNATION BOUNDARY FOR "ROAD (STATE HIGHWAY 1)"

**NOTES**

1. AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY.

2. ALL OWNERS LISTED ARE THOSE KNOWN AS AT JULY 1996

**FDR INFORMATION**

REDUCED UPGRADE  
SUPPLEMENTARY  
LAND REQUIREMENT PLAN 520693 / 201514

SMALL UPGRADE  
PROPOSED TO SP 363/030  
PUMPHURTON - PAREHATA

**BECA CARTER HOLDINGS & FERRIER LTD**  
CONSULTING ENGINEERS

**BECA**  
CONSULTING ENGINEERS

NO.	DATE	BY	FOR
1	15/07/96	BECA	BECA
2	15/07/96	BECA	BECA
3	15/07/96	BECA	BECA
4	15/07/96	BECA	BECA
5	15/07/96	BECA	BECA
6	15/07/96	BECA	BECA
7	15/07/96	BECA	BECA
8	15/07/96	BECA	BECA
9	15/07/96	BECA	BECA
10	15/07/96	BECA	BECA

**BECA CARTER HOLDINGS & FERRIER LTD**  
CONSULTING ENGINEERS

**BECA**  
CONSULTING ENGINEERS

RLR



**LEGEND**  
--- EXISTING PROPERTY BOUNDARY  
--- PROPOSED DESIGNATION BOUNDARY  
FOR "ROAD 1 STATE HIGHWAY 1"

**NOTES**  
1. AREAS AND DIMENSIONS ARE APPROXIMATE  
ONLY AND SUBJECT TO THE FINAL LEGAL SURVEY  
2. ALL OWNERS LISTED ARE THOSE KNOWN AS AT JULY 1977

186

182

LOT 2  
DP 11272  
CT 543/4  
CB BAILEY

LOT 4  
DP 11272  
CT 543/4  
KJ CORNWELL

LOT 3  
DP 11272  
CT 543/4  
JC HAMPTON

LAND REQUIRED FOR BUILDING LINE  
RESTRICTION FOR RETAINING WALLS  
AND ANCHOR SUPPORTS

LOCATION OF PROPOSED RETAINING WALL

EXISTING DESIGNATION BOUNDARY

LOT 1  
DP 11272  
CT 543/4  
KJ CORNWELL  
R. AULD

PROPOSED KERB

PROPOSED FOOTPATH

ST ANDREWS ROAD (STATE HIGHWAY 1)

FOR INFORMATION

Project Name		Scale		Date	
Becca Carter Holdings & Partner Ltd		1:1000		10/10/77	
Project No		Sheet No		Drawing No	
1001		1001		1001	
Project Description		Project Location		Project Status	
SH 1 UPGRADE		PUNHEPTON - GARDEN		FOR INFORMATION	
8853/118 TO RD 215/230		SUPPLEMENTARY		ROAD	
LAND REQUIREMENT PLAN		2007		8	



APPENDIX 2  
Properties subject to this designation

✓  
K.H.

Properties subject to this designation

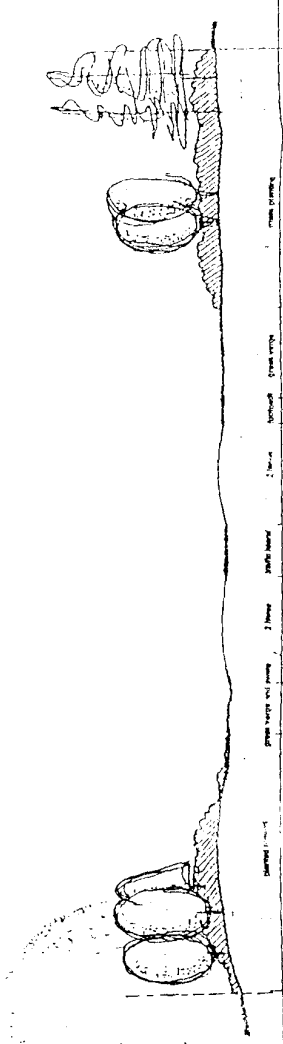
Property Address	Land Req. Plan Reference	Legal Description
Vested PCC (Lot 13 DP 48570)	C	Lot 13, DP 48570, Vested PCC
Vested PCC (Lot 12 DP 48569)	D	Lot 12, DP 48569, Vested PCC
188 St Andrews Road		DP 11272, CT 548/3
186 St Andrews Road	S	Lot 2 DP 11272, CT 548/4
184 St Andrews Road	T	Lot 3 DP 11272, CT 483/50
182 St Andrews Road	U	Lot 4 DP 11272, CT 475/98
91 St Andrews Road	I	Lot 41 DP 729, CT 82/31
89 St Andrews Road	J	Lot 42 DP 729, CT 209/275
87 St Andrews Road	K	Lot 43 DP 729, CT 209/274
85 St Andrews Road	L	Lot 44 DP 729, CT 144/86
83 a St Andrews Road	M	Lot 45 DP 729, CT 30B/74-75
81 St Andrews Road	N	Lot 46 DP 729, CT 172/61
79 St Andrews Road	O	Pt Lot 47 DP 729, CT 83/11
77 St Andrews Road	P	Pt Lot 48 DP 729, CT 82/22
75 St Andrews Road	Q	Pt Lot 49 DP 729, CT 156/136
Recreation Reserve	AC	Lot 3 DP 79321, CT 45D/677
89 PT Lot 2 DP 43007	AB	Pt Lot 2 DP 43007, CT 45D/678
Plimmerton Railway Station Entrance	H	Wellington to Foxton Railway, Crown
Plimmerton Domain	AE	Sec 1, SO 36405, Gaz 1994 p 1635
Plimmerton Domain	AF	Pt Lot 67 DP 17993, Gaz 1994 p 1635
Plimmerton Domain	G	Section 1, SO 36405, Gaz 1994 p 1635
Plimmerton Domain	F & AD	Section 1 SO 35265, Gaz 1988 p 3663
Mana Esplanade (SO 37704 & SO 37733)	AK & AL	SO 37704 and SO 37733, GN B 604092
71 Mana Esplanade	NN	Lot 1, DP 64208, CT 33A/922
Mana Esplanade	X	Lot 1 DP 68833, CT 36B/607
Main Road Plimmerton	A & B & AG & AM	Pt Taupo No 1 (B/135), CT 26D/878
Lot 11 DP 48568	E	Lot 11 DP 48568, Vested PCC
James Street	AJ	Lot 1 DP 42679, CT 18C/493
James Street	AH	Lot 21 DP 9683, CT 527/298
Goat Point Railway Land	R & W	Pt Sec 80 Proirua Dist, T 76848
Drainage Reserve	AI	Lot 2 DP 42679, Vested PCC
TOTAL	31	

5.2K

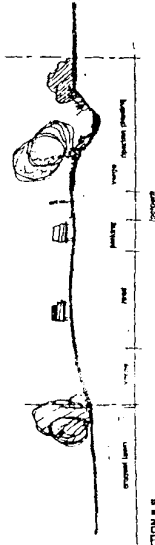
APPENDIX 3  
Landscape Concept Plans and Figures

Handwritten signature and date: 11/12

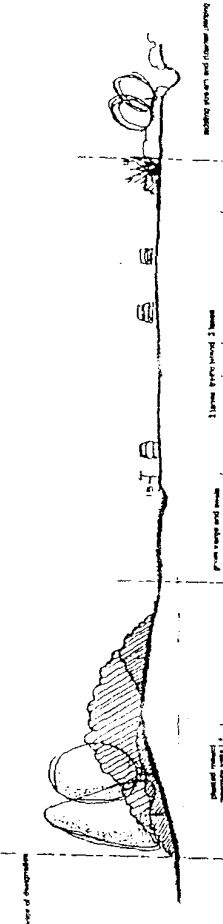




SECTION AA  
ST ANDREW ROAD



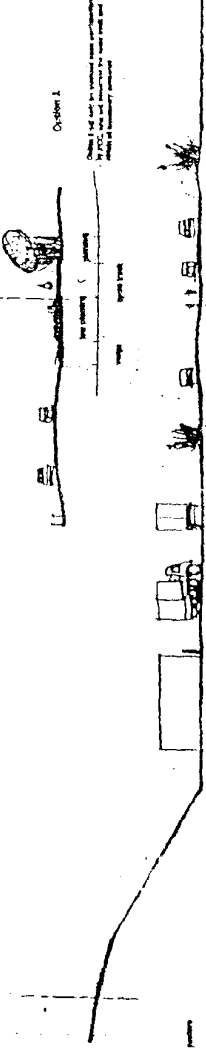
SECTION BB  
ULRIC ST & STREAM



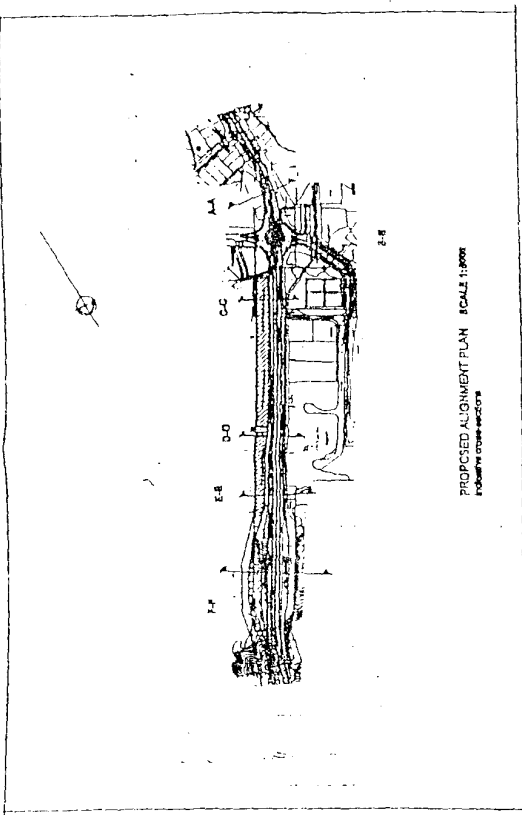
SECTION CC  
MAIN ROAD SOUTH OF PLUMBERY DRIVE



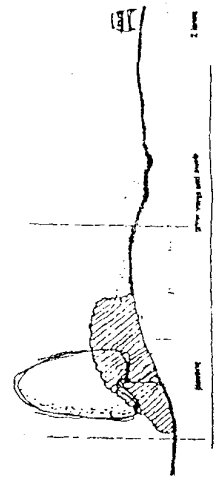
SECTION DD  
MAIN ROAD NORTH BY INDUSTRIAL ESTATE



SECTION EE  
MAIN ROAD NORTH NEAR WEDG BRIDGE



PROPOSED ALIGNMENT PLAN  
SCALE 1:2000  
FUTURE CONSIDERATIONS



SECTION FF  
MAIN ROAD NORTH NEAR WEDG BRIDGE

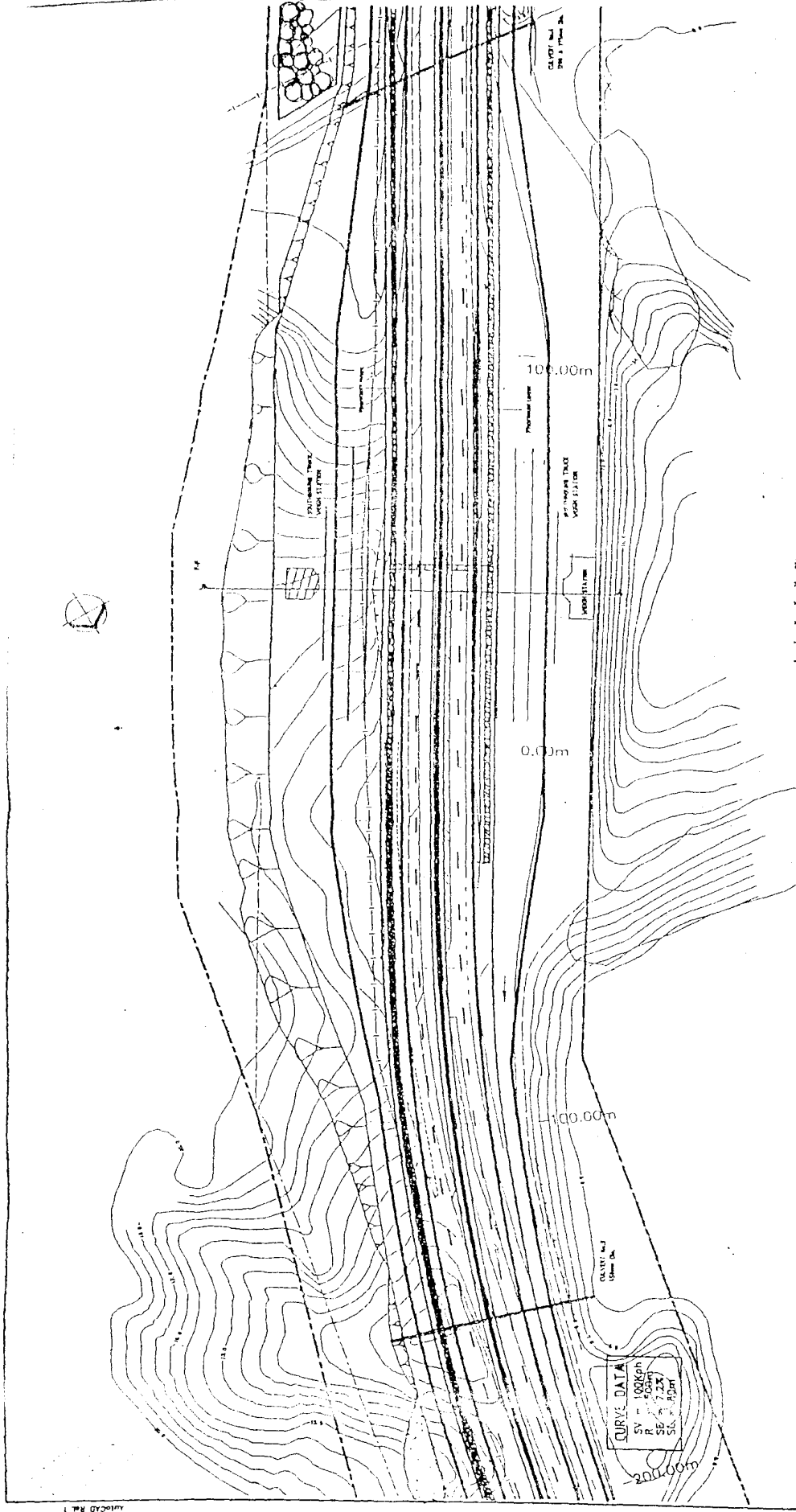
# CONCEPT PLAN 1B

LANDSCAPE CONCEPT  
FUTURE CONSIDERATIONS  
SCALE 1:2000 (A4)  
DATE June 2009

see LSC 07720-00/07

SECTION FF  
WEDG BRIDGE

52.4



**GENERAL NOTES**  
 1. THESE DRAWINGS ARE AT PRELIMINARY DESIGN STAGE  
 2. SHOWING THE PROPOSED ALIGNMENT AND GENERAL  
 INTERSECTION LAYOUTS  
 3. CENTRAL ALIGNMENT 3.5m WIDE WITH BARRIER  
 4. THROUGH LANE WIDTHS 3.5m

**LEGEND**

CUT/FILL	SYMBOL
PROPOSED ROAD	SYMBOL
PROPERTY BOUNDARY	SYMBOL
NEW OR ALTIUD	SYMBOL
EXISTING ELEVATION	SYMBOL

# CONCEPT PLAN 1C

FOR INFORMATION

<p>Black Carter Holdings &amp; Personnel Ltd          Planning &amp; Design          100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1130, 1131, 1132, 1133, 1134, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1147, 1148, 1149, 1150, 1151, 1152, 1153, 1154, 1155, 1156, 1157, 1158, 1159, 1160, 1161, 1162, 1163, 1164, 1165, 1166, 1167, 1168, 1169, 1170, 1171, 1172, 1173, 1174, 1175, 1176, 1177, 1178, 1179, 1180, 1181, 1182, 1183, 1184, 1185, 1186, 1187, 1188, 1189, 1190, 1191, 1192, 1193, 1194, 1195, 1196, 1197, 1198, 1199, 1200, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220, 1221, 1222, 1223, 1224, 1225, 1226, 1227, 1228, 1229, 1230, 1231, 1232, 1233, 1234, 1235, 1236, 1237, 1238, 1239, 1240, 1241, 1242, 1243, 1244, 1245, 1246, 1247, 1248, 1249, 1250, 1251, 1252, 1253, 1254, 1255, 1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269, 1270, 1271, 1272, 1273, 1274, 1275, 1276, 1277, 1278, 1279, 1280, 1281, 1282, 1283, 1284, 1285, 1286, 1287, 1288, 1289, 1290, 1291, 1292, 1293, 1294, 1295, 1296, 1297, 1298, 1299, 1300, 1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309, 1310, 1311, 1312, 1313, 1314, 1315, 1316, 1317, 1318, 1319, 1320, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1331, 1332, 1333, 1334, 1335, 1336, 1337, 1338, 1339, 1340, 1341, 1342, 1343, 1344, 1345, 1346, 1347, 1348, 1349, 1350, 1351, 1352, 1353, 1354, 1355, 1356, 1357, 1358, 1359, 1360, 1361, 1362, 1363, 1364, 1365, 1366, 1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374, 1375, 1376, 1377, 1378, 1379, 1380, 1381, 1382, 1383, 1384, 1385, 1386, 1387, 1388, 1389, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414, 1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422, 1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430, 1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438, 1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446, 1447, 1448, 1449, 1450, 1451, 1452, 1453, 1454, 1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462, 1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478, 1479, 1480, 1481, 1482, 1483, 1484, 1485, 1486, 1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502, 1503, 1504, 1505, 1506, 1507, 1508, 1509, 1510, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518, 1519, 1520, 1521, 1522, 1523, 1524, 1525, 1526, 1527, 1528, 1529, 1530, 1531, 1532, 1533, 1534, 1535, 1536, 1537, 1538, 1539, 1540, 1541, 1542, 1543, 1544, 1545, 1546, 1547, 1548, 1549, 1550, 1551, 1552, 1553, 1554, 1555, 1556, 1557, 1558, 1559, 1560, 1561, 1562, 1563, 1564, 1565, 1566, 1567, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1577, 1578, 1579, 1580, 1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588, 1589, 1590, 1591, 1592, 1593, 1594, 1595, 1596, 1597, 1598, 1599, 1600, 1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654, 1655, 1656, 1657, 1658, 1659, 1660, 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678, 1679, 1680, 1681, 1682, 1683, 1684, 1685, 1686, 1687, 1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702, 1703, 1704, 1705, 1706, 1707, 1708, 1709, 1710, 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1762, 1763, 1764, 1765, 1766, 1767, 1768, 1769, 1770, 1771, 1772, 1773, 1774, 1775, 1776, 1777, 1778, 1779, 1780, 1781, 1782, 1783, 1784, 1785, 1786, 1787, 1788, 1789, 1790, 1791, 1792, 1793, 1794, 1795, 1796, 1797, 1798, 1799, 1800, 1801, 1802, 1803, 1804, 1805, 1806, 1807, 1808, 1809, 1810, 1811, 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819, 1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2</p>	
--	--



# CONCEPT PLAN 1E



DEPOSIT AREA SUBJECT OF RESOURCE CONSENT

DEPOSIT AREA SUBJECT OF RESOURCE CONSENT

00.00m

00.00m

00.00m

00.00m

CLAYTON  
ON 1/1/2014

## GENERAL NOTES

1. THESE DRAWINGS ARE AT PRELIMINARY DESIGN STAGE
2. SHOWING THE PROPOSED ALIGNMENT AND GENERAL INTERSECTION LAYOUT
3. CENTRAL MEDIAN 15M WIDE WITH BARRIER
4. THROUGH LANE WIDTHS 3.5M

## LEGEND

- CUT/FILL SLOPES
- PROPOSED DESIGNATION BOUNDARY
- PROPERTY BOUNDARY
- NEW OR ALTERED EXISTING CULVERT
- DEPOSIT AREA

ULRICH STREET

FOR INFORMATION

<b>Black Carter</b> Consulting Engineers 100/101 Main Street, Auckland Phone: 09 308 1000 Fax: 09 308 1001 Email: info@blackcarter.co.nz Website: www.blackcarter.co.nz		SMALL UPGRADE PROPOSED ALIGNMENT DIST 15M TO 525M LAG 0.000000 LAG 0.000000	LAG 0.000000 LAG 0.000000
---	--	---	------------------------------

25



# GENERAL NOTES

- 1) CENTRAL MEDIAN 15m WIDE WITH NORTH OF R/ABOUT
- 2) RAISED CENTRAL MEDIAN FOR R/ABOUT AND SOUTH
- 3) THROUGH LANE NORTH OF R/ABOUT TAPER FROM 35m WIDE TO 5.5m WIDE
- 4) THROUGH LANE SOUTH OF R/ABOUT TAPER FROM 4.0m WIDE TO 3.5m & 3.0m WIDE
- 5) FOOTPATHS ARE 2.0m WIDE

# LEGEND

- CUT/FILL SLOPES
- PROPOSED CENTRELINE
- BOUNDARY
- NEW OR ALTERED
- EXISTING CURBLINE
- RAISED ISLAND
- DEPOSIT AREA

DEPOSIT AREA SUBJECT OF RECORD CONSENT

PROPOSED CURBLINE

PROPOSED CENTRELINE

BOUNDARY

NEW OR ALTERED

EXISTING CURBLINE

RAISED ISLAND

DEPOSIT AREA

# CONCEPT PLAN 1F

1:100 TO LINES STREET  
FIELD SHEET 001 FOR  
FAL CONVENTION

CURVE DATA	
SV	25.00m
CV	100.00m
SE	4.83%

EXISTING CURBLINE ENTRANCE

ROADWAY CLIP

SCALE

FOR INFORMATION

LANDSCAPE CONCEPT

ROADWAY

REDUCED UPGRADE/PLAN

PROPOSED ALIGNMENT

DIST 22m TO 27m

SHALL UPGRADE

CR/SS/10.00 TO RP 355/0.00

PLUMMERTON - PARDUNA

PLUMMERTON DRIVE

ULSTON STREET

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

EXISTING CURBLINE

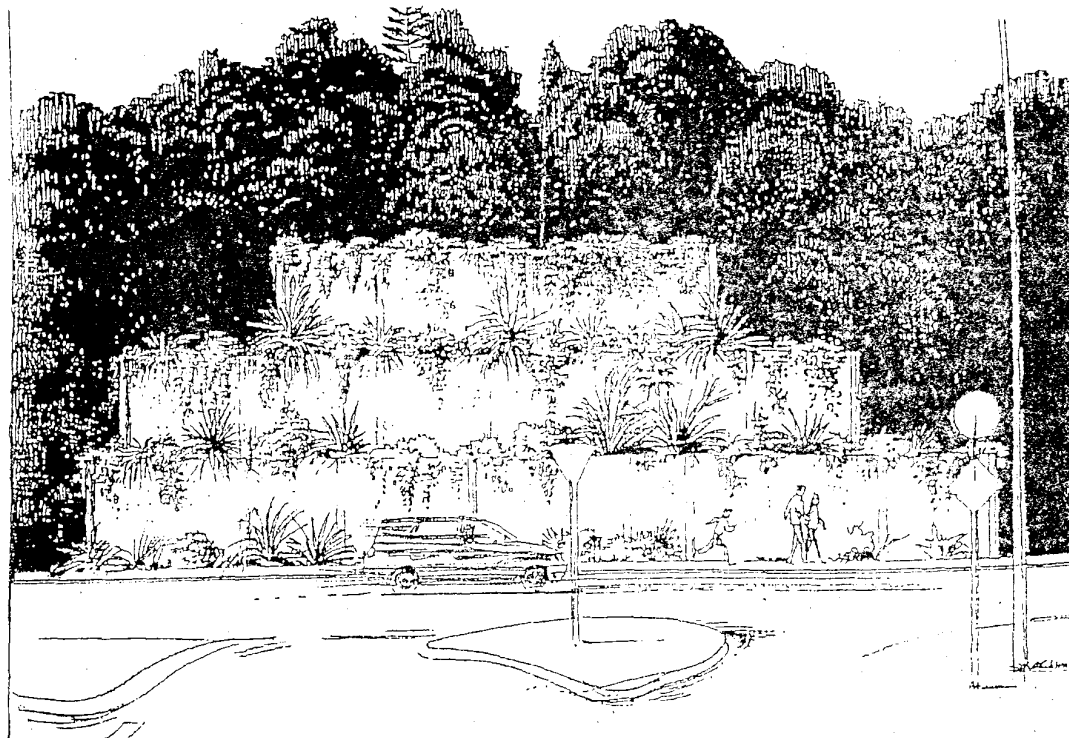
NEW OR ALTERED

EXISTING CURBLINE

NEW OR ALTERED

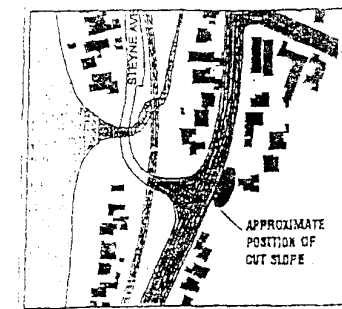
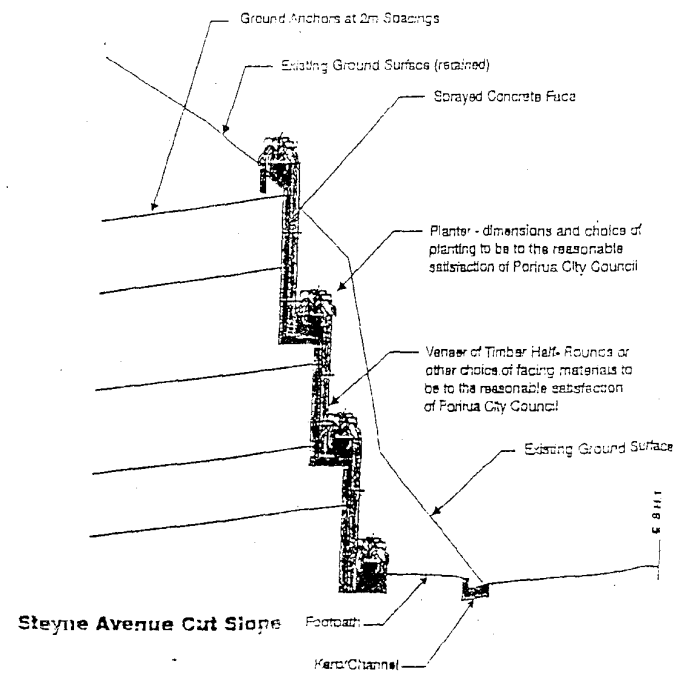


1.2K



Veneer of timber half rounds or other choice of facing material to be to the reasonable satisfaction of Porirua City Council

Steyne Avenue Cut Face Landscape Concept Plan View From Steyne Avenue Pilmerton



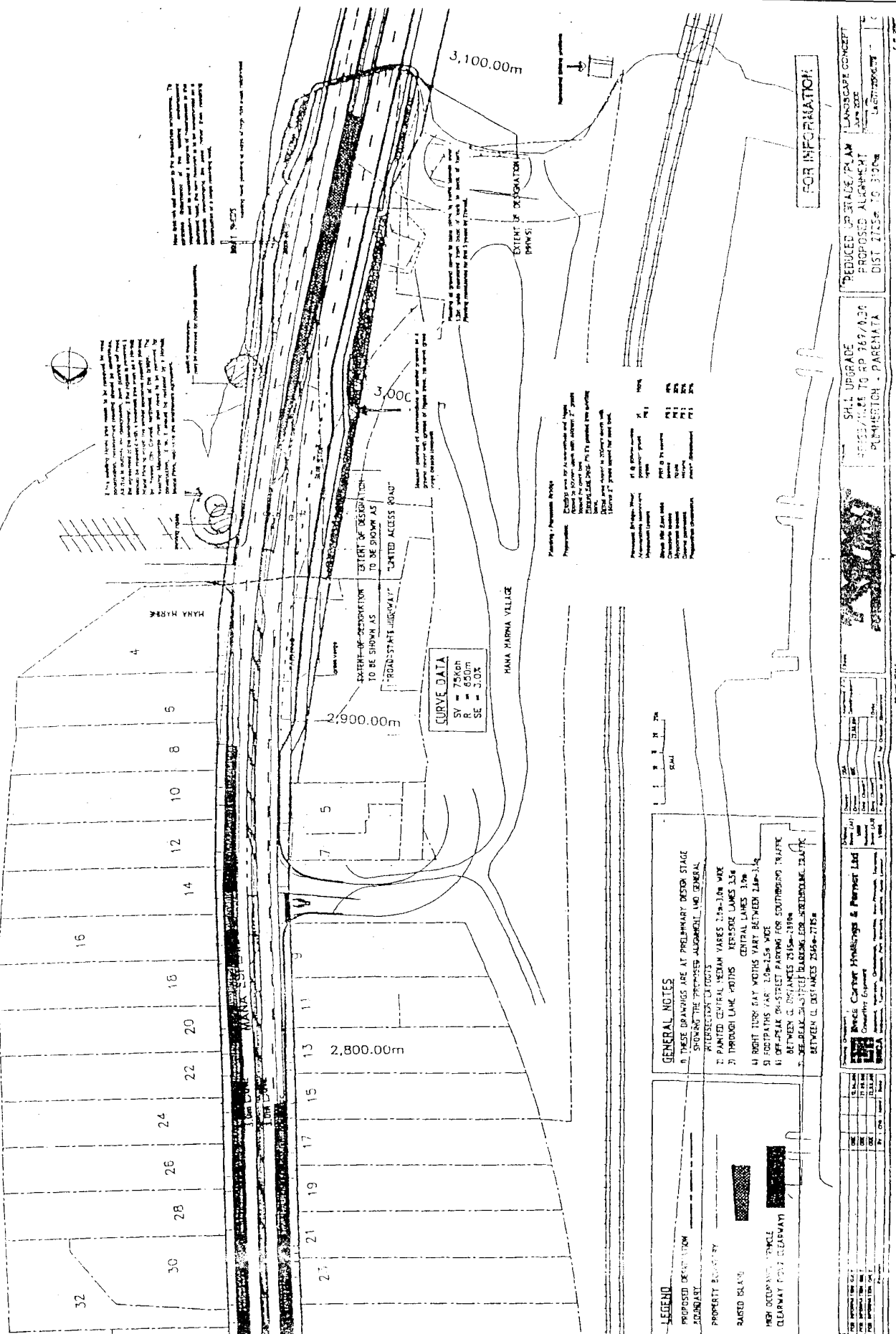
STEYNE AVENUE CUT-FACE  
CONCEPT PLAN  
(Indicative Only - Not to Scale)

CONCEPT PLAN 2

1.2K



# CONCEPT PLAN 4A



FOR INFORMATION:

**LEGEND**

PROPOSED DRIVE FROM ADJACENT

PROPERTY BOUNDARY

PAVED BLVD

HIGH OCCUPANCY VEHICLE CLEARWAY (20' CLEARWAY)

**GENERAL NOTES**

1. THESE DRAWINGS ARE AT PRELIMINARY DESIGN STAGE. SHOWING THE PROPOSED ALIGNMENT AND GENERAL INTERSECTION DETAILS.

2. PAINTED CENTRAL RESERVES VARIES 2.5m-3.0m WIDE.

3. THROUGH LANE WIDTHS CENTRAL LINES 10m.

4. RIGHT TURN LANE WIDTHS VARY BETWEEN 2.0m-3.0m.

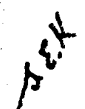
5. FOOTPATHS (AR 1.0m-1.5m WIDE).

6. OFF-PEAK ON-STREET PARKING FOR SOUTHERN TRAFFIC BETWEEN 2.0m-3.0m.

7. SEE BLVD DRAINAGE FOR SOUTHERN TRAFFIC BETWEEN 2.0m-3.0m.

<b>SHL UPGRADE</b> <b>REDUCE TO 100% TO 100% TO 100%</b> <b>REDUCE TO 100% TO 100% TO 100%</b> <b>REDUCE TO 100% TO 100% TO 100%</b>		<b>LANDSCAPE CONCEPT</b> <b>LANDSCAPE CONCEPT</b> <b>LANDSCAPE CONCEPT</b> <b>LANDSCAPE CONCEPT</b>	
<b>SHL UPGRADE</b> <b>REDUCE TO 100% TO 100% TO 100%</b> <b>REDUCE TO 100% TO 100% TO 100%</b> <b>REDUCE TO 100% TO 100% TO 100%</b>		<b>LANDSCAPE CONCEPT</b> <b>LANDSCAPE CONCEPT</b> <b>LANDSCAPE CONCEPT</b> <b>LANDSCAPE CONCEPT</b>	

Baron & Ferner



NOTE: THESE ARE PRELIMINARY DESIGN PLANS ISSUED TO ACCOMPANY NOTICE OF REQUIREMENT AND APPLICATIONS FOR RESOURCE COMMENTS.

**Bea Carter Holdings & Farmers Ltd.**

[illegible]

DOCS SUR -  
LANDSCAPE CONCEPT



APPENDIX 4  
Frontage Reinstatement Options

2.5K



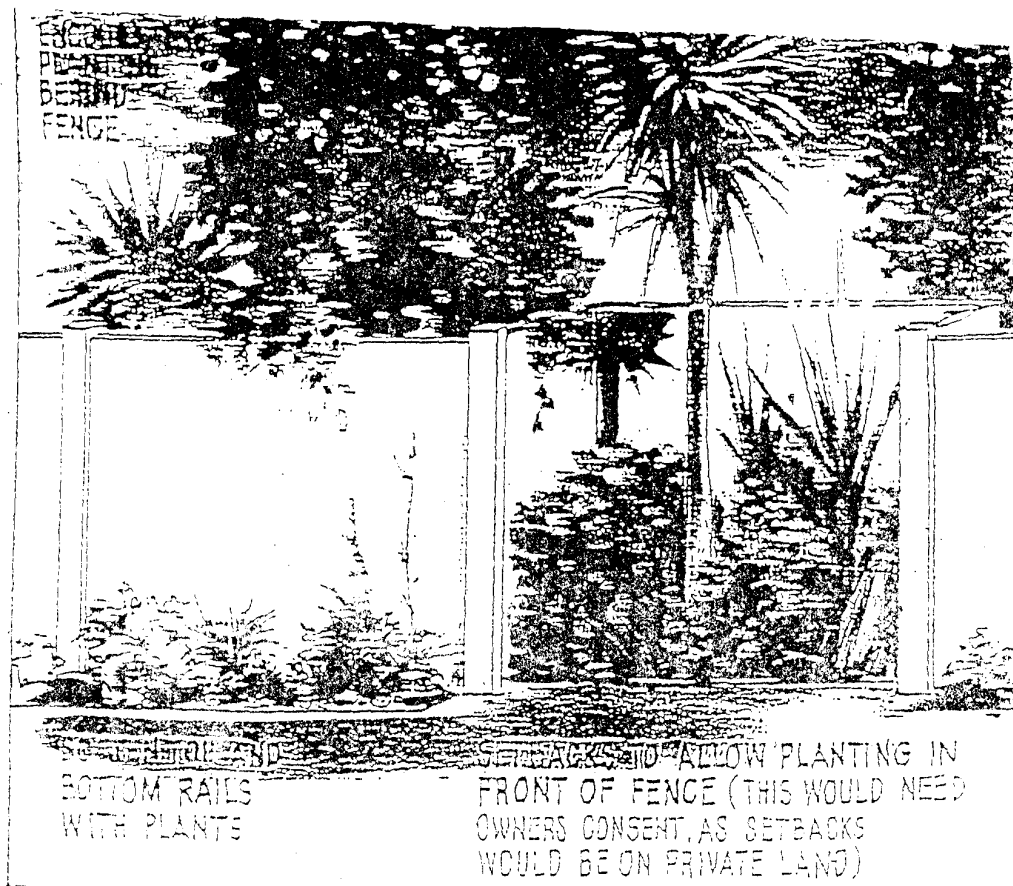


FIGURE 2 SETBACKS

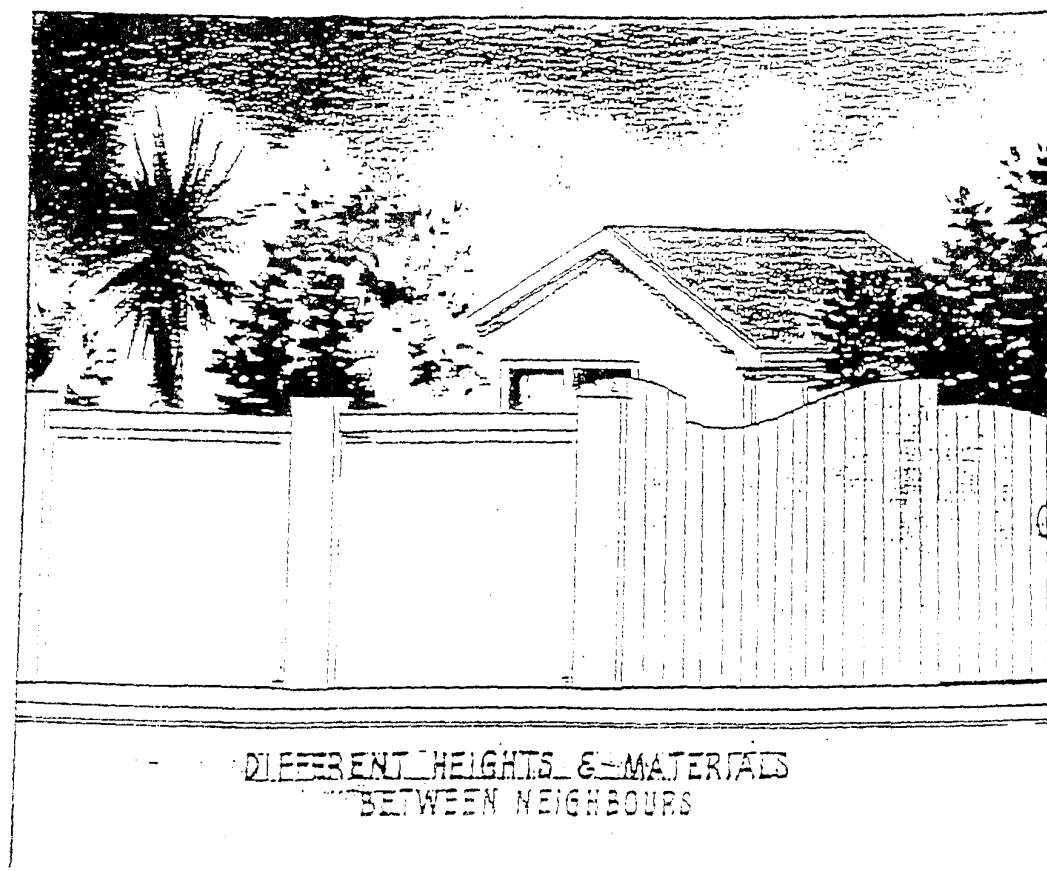


FIGURE 3 VARYING HEIGHTS



FIGURE 4 VARYING HEIGHTS

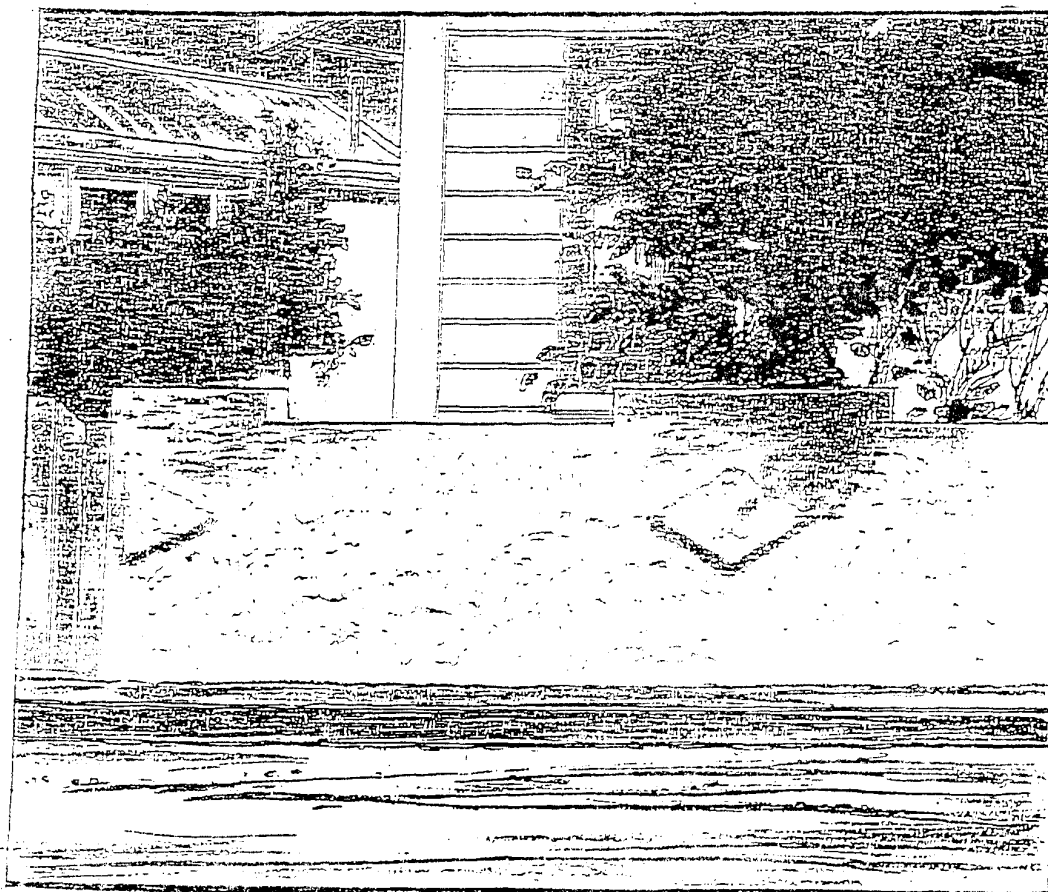


FIGURE 5 VARYING HEIGHTS



FIGURE 6 CONTINUOUS FOUNDATION

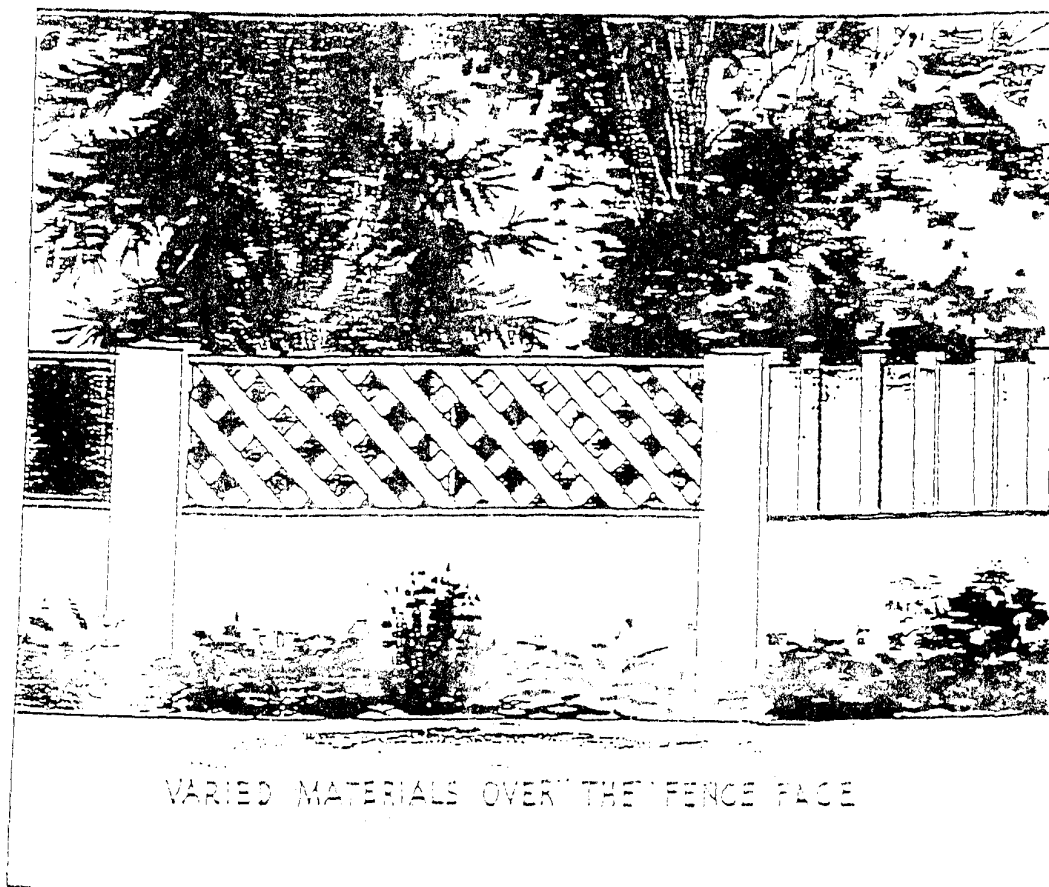


FIGURE 7 VARIED MATERIALS OVER THE FENCE FACE

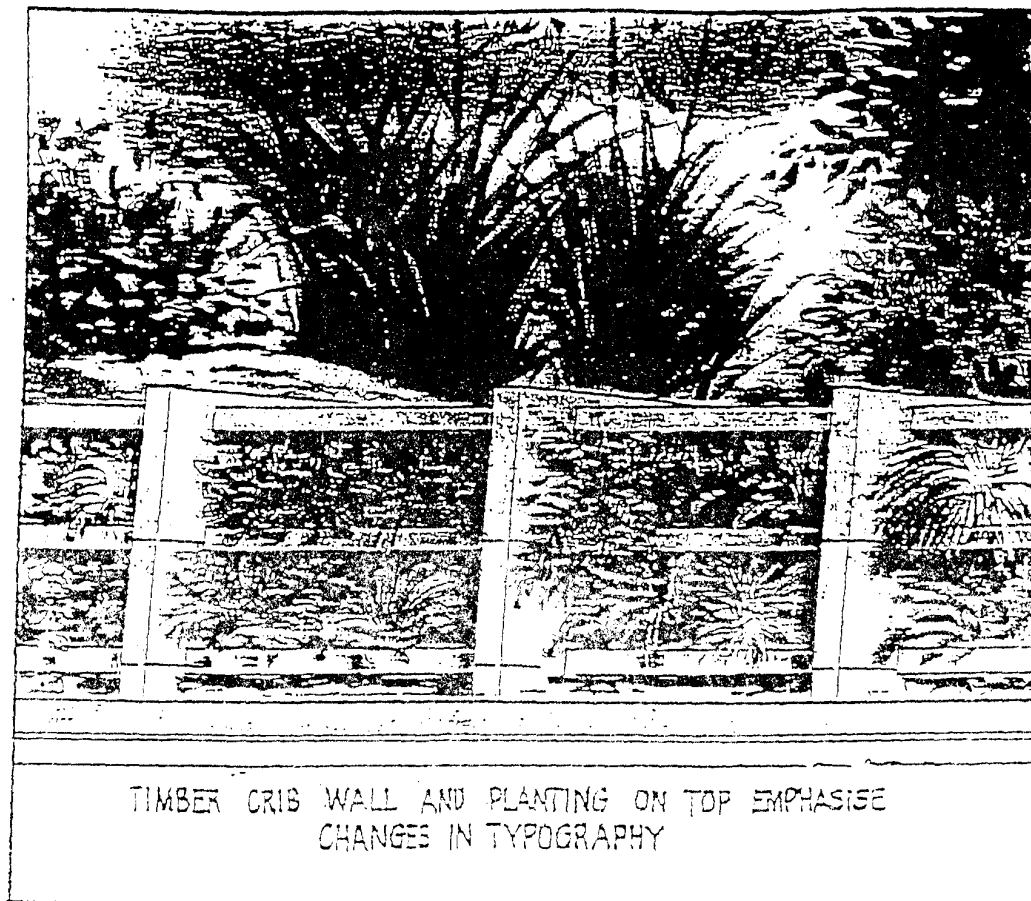


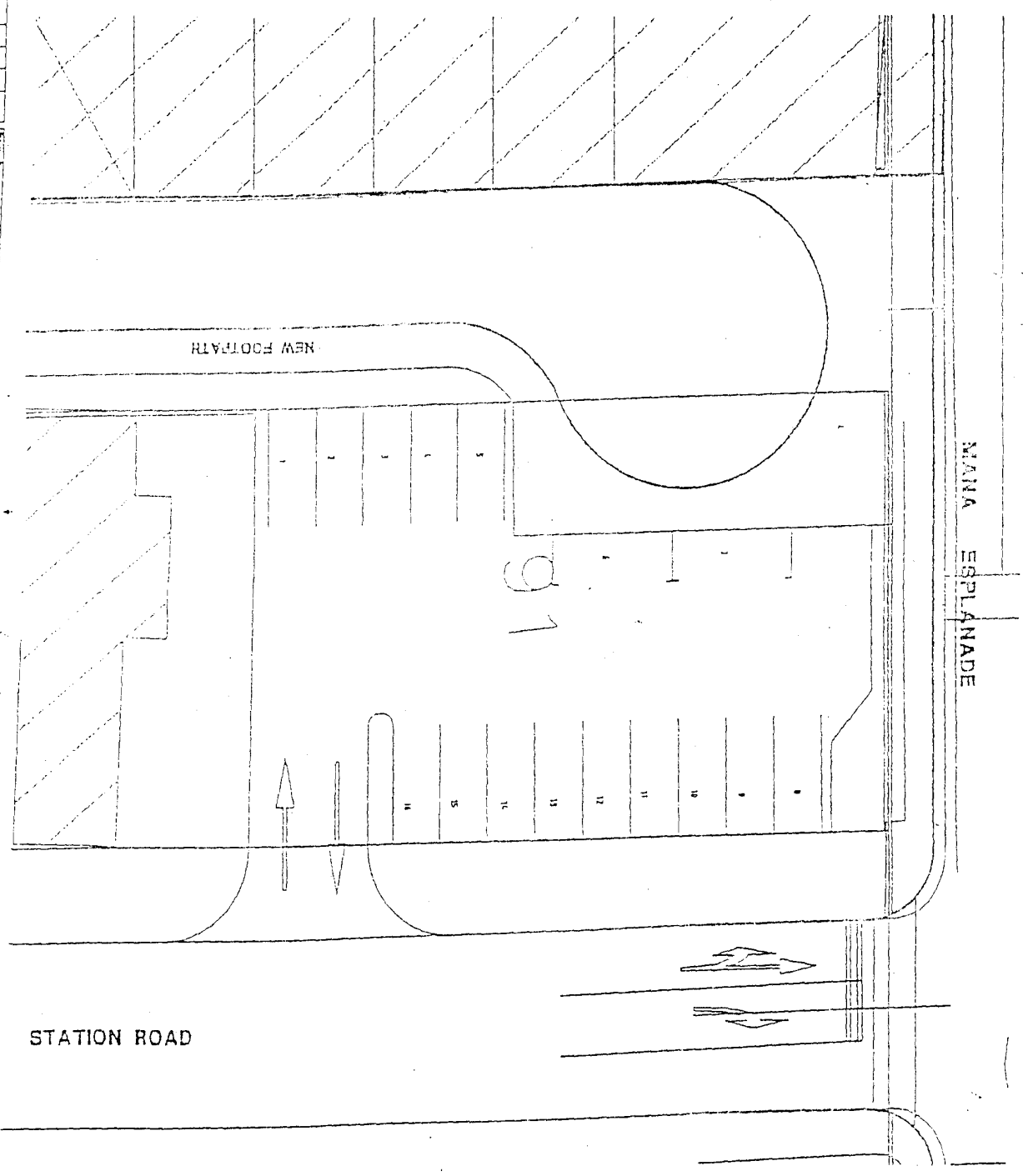
FIGURE 8 PLANTING

2.2.2.

2.2.2.

APPENDIX 5  
Carpark at Redoubt Lane

*[Handwritten signature]*  
*[Handwritten initials]*  
*[Handwritten text]*



MAIN ESPLANADE

NEW FOOTPATH

STATION ROAD

91

FOR INFORMATION

SITE UPGRADE  
REPSA/100 TO RP 969/0 30  
PHEMERID - PARISHATA

71 AREA ESPLANADE  
3200490/SK01

EXISTING ROADWAY  
EXISTING ROADWAY

DECK CANTONMENT  
CANTONMENT  
CANTONMENT

DECK CANTONMENT  
CANTONMENT  
CANTONMENT

DECK CANTONMENT  
CANTONMENT  
CANTONMENT

APPENDIX 6  
Noise Monitoring sites

2

2.2.1.

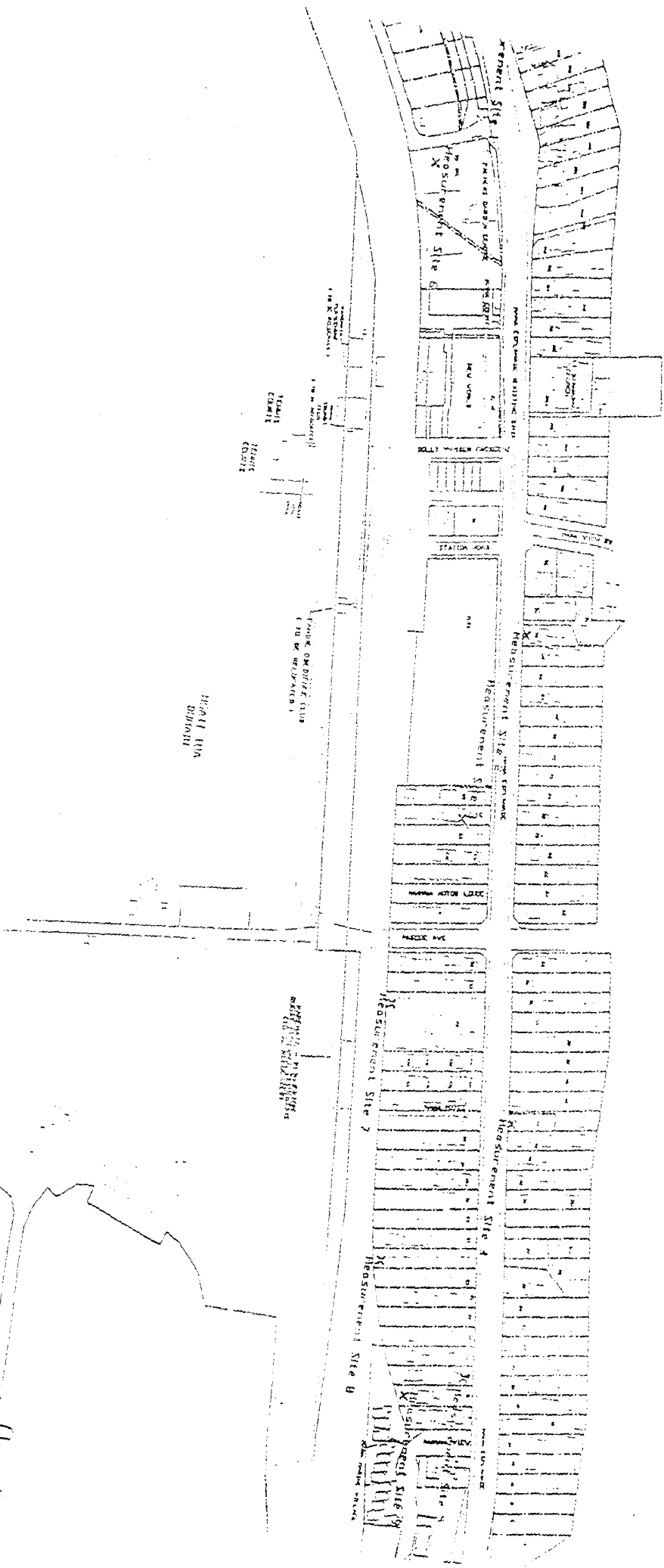


Figure 1  
Noise Monitoring Sites

200