



 **Land Transport NZ**
Ikiiki Whenua Aotearoa

Uniting the Bay

PUKERUA BAY NEIGHBOURHOOD ACCESSIBILITY PLAN

Porirua City Council, Pukerua Bay Residents Association

May 2008



 Porirua City Council

“ Crossing or getting onto State Highway 1 is becoming an ever-increasing problem for everyone who lives in Pukerua Bay. State Highway 1 divides our village. ”

Pukerua Bay resident

Acknowledgements:

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Forward

Managing the urban environment requires an integrated, adaptive, coordinated and above all participatory approach. Current urban planning increasingly reflects this understanding, but the rhetoric does not always translate into successful action.

This Neighbourhood Accessibility Plan was an inspired idea that has been realised through the combined efforts of a diverse group of people, who nevertheless share a common goal – for a safer, well connected community. This Plan is about ensuring sustainability, both social and environmental.

It is a Plan for the future, a plan that achieves the best possible outcomes for the broadest range of people. We view our Plan as a way forward; as a prime example of a coordinated, careful, and credible approach to a complex and long standing problem.

**Pukerua Bay Residents Association
May 2008**

Introduction

Having the country's main highway dissect your community presents a number of problems.

The safety and mobility of pedestrians, cyclists and motorists and the social and psychological impacts of community severance are all impacts that need to be urgently addressed in Pukerua Bay.

Over many years, the community of Pukerua Bay has worked to identify the problems associated with State Highway 1 (SH1) and has advocated for their mitigation. With the current understanding that, even with Transmission Gully, traffic volumes along the Pukerua Bay stretch of SH1 will remain high, there is a new urgency to address the impacts of the highway.

This Neighbourhood Accessibility Plan brings together the work of the community, Porirua City Council, Transit New Zealand and Land Transport New Zealand. It recommends actions to mitigate the impacts of SH1 on the Pukerua Bay community, while addressing wider and connected issues of environmental sustainability and positive health outcomes.



Purpose Statement

The community's picture for the future is for Pukerua Bay to be better connected and a safer community for pedestrians, cyclists and motorists whilst at the same time acknowledging the need for greater safety and efficiency for SH1 traffic. The community also wishes to make a positive and lasting contribution to the sustainability of the planet.

Approach

The approach to developing this Plan has been for the Pukerua Bay Residents Association and community, Porirua City Council, Transit New Zealand and Land Transport New Zealand to work together to:

- 1 Identify cyclists', pedestrians' and motorists' safety and access problems (real and perceived) in the community
- 2 Identify the extent to which these contribute to community severance and impact on community connectedness
- 3 Identify current initiatives that are contributing towards the mitigation of some of these impacts and
- 4 Develop and recommend actions that will mitigate these impacts.

The possibility of developing a Neighbourhood Accessibility Plan was raised at a meeting held between the Resident's Association, Porirua City Council, Transit New Zealand and Land Transport New Zealand in November 2007.

Subsequent meetings were held between the four parties in early 2008 and agreement reached on the framework for developing the Plan¹. In these discussions it was acknowledged that a considerable amount of consultation and research had already taken place to identify issues, priorities and actions and that these would form the basis for the Plan. The development of the Plan has been steered by a sub-committee of the Pukerua Bay Residents Association and Ian Barlow from Porirua City Council.

Limited scope

In the process of developing the Plan a number of issues were raised that fall outside the scope of the Plan. However these are important issues that require further discussion and action. Amongst them is the question of a bypass: the need for a bypass rated highly with respondents of the April 2008 Survey. In a recent Transit New Zealand report it was noted that "it is unlikely that any decision will be made on the future bypass until decisions on Transmission Gully are made"².

Objectives of the Plan

The objectives of this Plan were developed in line with the neighbourhood accessibility plans operational policy guideline of Land Transport New Zealand³. The objectives are as follows:

- 1 To make it safe to travel from one side of Pukerua Bay to the other, improving the connections and mobility of residents
- 2 To promote safe walking and biking within Pukerua Bay
- 3 To improve safety for pedestrians and cyclists
- 4 To promote the use of public transport
- 5 To reduce environmental emissions by reducing the reliance on short distance car trips

1 Appendix 1

2 Transit New Zealand SH1: Pukerua Bay Safety Improvements – Proposed Intersection Upgrades at Gray St, Teihana Rd and Pukerua Beach Rd – Scheme Assessment Report, P7, Section 3.4: February 2008.

3 Neighbourhood Accessibility Plans – Operational Policy. Land Transport New Zealand July 2007.

- 6 To increase the number of pedestrians, cyclists and public transport users in the community
- 7 To seek solutions that enhance the environmental landscape and contribute to the strong sense of community in Pukerua Bay
- 8 To support the efficiency (environmental emissions) and safety for traffic using SH1

The Issues

Driving A Wedge Through The Community

In New Zealand, the concept and understanding of community severance as it relates to the impact of roads and traffic is relatively underdeveloped. Our knowledge is largely informed by overseas research.

Many definitions of community severance exist but research has indicated that the concept of community severance is much more multifaceted than the division by, for example, arterial roads of people from services. In the UK report *Understanding Community Severance: Views of Practitioners and Communities*⁴ it is noted that if a large or increasingly busy road cuts through an area it can have the effect of driving a wedge through a community. This can limit people's ability or desire to move through that area, which in turn can reduce accessibility to services and damage local social networks and community 'cohesion'. The UK Department of Transport Social Exclusion Unit (SEU) report 'Transport and Social Exclusion: making the connections' (2003) states that it is the cumulative impact of psychological and physical barriers to movement and social participation created by the transport infrastructure that constitute 'community severance'.

Severance reduces the viability of non-motorised travel modes. The Victoria Transport Policy Institute⁵ in their research suggests that severance imposes a number of costs to pedestrians, cyclists and residents and notes that in several countries attempts have been made to quantify these costs in financial terms.

Understanding the impacts of severance to a community is seen as a prerequisite to determining the options and actions to mitigate those impacts.

Consideration of mitigation measures are not just confined to physical solutions such as bridges or underpasses; other measures such as information campaigns, signposting, environmental enhancements, community activities/actions also have a role to play. Considering a total 'mitigation strategy' rather than individual mitigation measures is an effective way of dealing with the various aspects of severance.

Community Severance In Pukerua Bay

Overseas studies⁶ have indicated that traffic volumes of 16000 vehicles per day/500 vehicles per hour create unfriendly streets and make a significant contribution to community severance. Current levels in Pukerua Bay are around 22000 vehicles per day.

Even with Transmission Gully, the daily numbers will remain at a daily level of 17000 vehicles per day.

The Pukerua Bay community has identified the multiple impacts on their village of SH1 and, together with Transit New Zealand, have identified significant safety issues with crossing from one side of the community to the other, particularly at peak times.

Parents on the eastern side of the village feel unable to let their children go to primary school, to the shops or to activities such as scouts by themselves and often elect to use cars to transport their children. Parents worry about their teenagers going to college, particularly in the morning peak hour when they cross at grade from the western side of the village to the railway stations' side. And although the accident statistics are relatively low, residents talk about a number of near misses when crossing SH1.

4 Understanding Community Severance: Views of Practitioners and Communities. Emma James, Anya Millington and Paul Tomlinson (TRL Ltd) for the Department for Transport (UK).

5 Transportation Costs and Benefit Analysis – Barrier Effects Victoria Transport Policy Institute Canada (www.vtppi.org) May 2007.

6 Fergus Tait (Transearch May 1996) – Appendix 6, Evidence at Mana Esplanade Hearing.

Residents express surprise that there has not been a death on the road. Local motorists have also identified major concerns over turning into SH1 from the Gray Street, Teihana Road West and Pukerua Bay Beach Road intersections, particularly at peak times. Long delays and unsafe manoeuvres have been identified and confirmed by Transit New Zealand studies of the area⁷.

Severance in the community is also contributed to by the Main Trunk Railway line, which passes to the east of SH1. This major transport link passing through the village, is not referred to in either survey, the only reference made being to young people bypassing SH1 by walking alongside the train track and going under the Pukerua Bay overbridge. This lack of reference could be due to several factors, including the focus of the surveys, severance issues caused by the Main Trunk Line being minor relative to those caused by SH1, the community's sense of urgency to mitigate SH1 impacts and the reality that any severance impacts caused by the main trunk line are not able to be easily mitigated.

The major arterial route is not just a physical barrier for pedestrian, cycle and vehicle movements – it has social and psychological implications for the community and is an impediment to the sense of community and social cohesion. There is no easy way to get from one side of the community to the other. Young people find it difficult to drop in on friends or play at the local park. Parents' desire to build their children's confidence and sense of responsibility through simple tasks such as sending them to the dairy or allowing them to go to cubs, or bike around the area, are curtailed by the perceived danger of SH1.

Census data indicates that people over 65 years of age are an increasing proportion of the community. Although statistics are not available, there are also residents in the community whose disabilities affect their mobility. SH1 presents particular risks for older people and those with disabilities – the location of and access to the existing overbridge makes it difficult for them to use.

Current and proposed subdivisions in the community will exacerbate the current situation.

Pukerua Bay is as close as one gets to an eco-village in a suburban setting in the Wellington region. The focus of the Residents Association on the development of a number of walkways and the advocacy of the marine reserve; the activities of the Pukerua Bay Primary School including their Walking School Bus, pupil's research projects and cycling project, point to a community that is conscious of both their environmental footprint and their health. These activities have contributed significantly to the social cohesion of the area and to some degree offset the negative impacts to social cohesion of SH1.

Safety and Access for Pedestrians and Cyclists

Crossing SH1⁸.

State Highway 1 forms a formidable barrier for pedestrians and cyclists trying to cross the highway.

More specifically:

- 1 Apart from the flush median and pedestrian refuges at the north end of the Village, there is no median to provide temporary refuge between lanes when crossing the highway, especially where the pedestrians are currently crossing to access the railway stations
- 2 Sight distances for crossing pedestrians are limited
- 3 Waiting times for pedestrians are long, particularly at peak times
- 4 Young people, older people and those with disabilities are particularly at risk in crossing SH1. Difficulty of access means the overbridge is not a viable option for many older people and those with mobility disabilities
- 5 At Teihana Road, the crossing of the highway is complicated by the adjacent intersection and southbound right turn bay
- 6 Peak weekday and weekend traffic on the state highway exacerbate this situation. In 2006, daily levels were at around 22000. Modelling by Greater Wellington Regional Council suggests volumes in 2016 could reach 26000 without Transmission Gully, or 17000 by 2021 if Transmission Gully is built

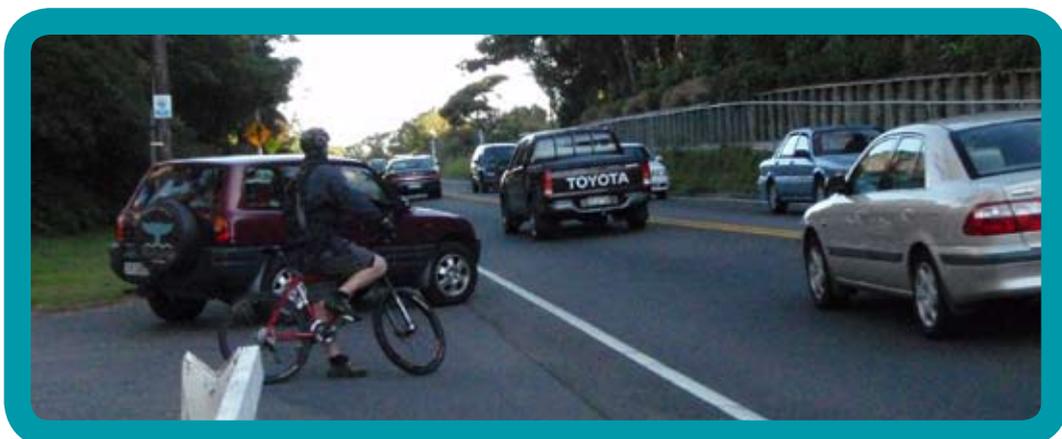
⁷ SH1: Pukerua Bay Safety Improvements – Proposed Intersection Upgrades at Gray Street, Teihana Road and Pukerua Bay Beach Road – Scheme Assessment Report February 2008.

⁸ SH1: Pukerua Bay Safety Improvements Proposed Pedestrian Facilities – Scheme Assessment Report Transit New Zealand December 2007.

- 7 Speeds within Pukerua Bay are often in excess of 50 km/h at the points where the majority of crossing movements are occurring
- 8 Visibility is impaired by vegetation and the road's winding course.
- 9 Lighting is inconsistent and poor at critical points, namely intersections and at the existing overbridge
- 10 The only shopping area at Pukerua Bay is on the northwest side of the Teihana Road West/SH1 intersection. Although small, it still attracts both vehicle and pedestrian traffic. Many of these pedestrian users are crossing the state highway at Teihana Road. Some of them also come from or continue on to the rail station, while others access properties on the east side of the highway
- 11 The two railway stations that service Pukerua Bay (Pukerua Bay and Muri stations) are on the east side of the township, which requires rail commuters living on the more populated west side of the highway to cross SH1
- 12 The only overbridge to cross the highway lies approximately halfway between the two stations. This overbridge serves the school and some train commuters, but does not naturally serve the commuter catchments at the north and south of the village
- 13 Young people have created their own informal pedestrian path to access the railway station and community facilities, crossing under the SH1 overbridge to the south of the village

Alongside State Highway 1

- The footpath along SH1 is narrow, poor quality in parts and feels dangerous. This is particularly apparent where footpaths meet SH1 – for example, at Wairaka and Pukerua Beach Roads.
- There is no continuous cycle path in Pukerua Bay connecting the north and south of the community, more specifically, connecting the Ara Harakeke walkway/cycleway with the cycle path along Centennial Highway
- Cyclists tend to ride on the footpath, as the main road is too dangerous
- There is a great safety concern regarding the Haunui Road/SH1 connecting walkway – it is a steep zigzag path with no barrier at the bottom end (SH1), which makes it a safety hazard for people running or cycling down the path
- Pedestrians crossing Wairaka Road cannot be seen by motorists turning off SH1 into this road. Almost all motor vehicles travel at or above the speed limit coming down the hill slope of SH1. This speed does not provide adequate braking distance when turning into Wairaka Road.



Safety and Access for Motorists entering into SH1

Residents have identified four problem intersections: Gray Street, Teihana Road, Pukerua Bay Beach Road and Wairaka Road. Transit New Zealand has undertaken assessments and options for Gray Street, Teihana Road and Pukerua Beach Road⁹. The main problems of the intersections are described as:

- Drivers turning right out of side roads have trouble merging with through traffic. Although right turn bays are provided at Gray St, Teihana Road and Pukerua Beach Road, the acceleration lanes downstream of the right turn bays are narrow and relatively short. This results in many right turners stopping or slowing down in the middle of the highway, waiting for a gap in through traffic
- Larger vehicles turning right need to negotiate a gap in the traffic in both directions before turning
- There is no taper for left turns into Teihana Road West, which can impede following through traffic
- At Gray Street, the proximity of the 100km/h zone with traffic still decelerating and the proximity of the rail overbridge results in right turning traffic from Gray Street having a very restricted acceleration path
- At Pukerua Beach Road, the skew angle of the side road forces most traffic turning left from the side road to encroach on the right turn bay. Also, because entry to SH1 is on an uphill slope, acceleration is slower and there is a greater likelihood of stalling in front of fast-moving cars.
- The approach to SH1 from Pukerua Beach Road is steep, which impedes sight lines and makes it more difficult to stop or accelerate
- The high volume of traffic, especially through AM and PM peaks, on fine days and long weekends, makes it difficult for side road traffic to join SH1, resulting in considerable traffic delay for these cars. This causes driver frustration and can lead to unsafe turning manoeuvres. Traffic demands on this stretch of road are predicted to increase at approximately 2 percent per annum
- Turning right into Wairaka Road from the north is difficult for those accessing pre-school services. There is no turning bay, the road is narrow, visibility limited and cars tend to drive above the speed limit.



⁹ SH1: Pukerua Bay Safety Improvements – Proposed Intersection Upgrades at Gray Street, Teihana Road and Pukerua Beach Road – Scheme Assessment Report: Transit New Zealand February 2008. The description is taken from the report. Additional comments about Wairaka Road are from survey information.

Environmental Sustainability and Healthy Living

SH1 is a significant barrier to environmental sustainability and healthy living, specifically because:

- Real and perceived dangers associated with SH1 discourage walking and cycling in the area
- Opportunities to develop young peoples' independence are curtailed
- Unnecessary short-distance car runs ferrying children to and from school, clubs and friends mean cars are less efficient, and emissions are increased by more usage
- Cars on SH1 are held up by right turning traffic, causing greater pollution than free moving traffic, which would be enabled by safe turning bays and separate walking and cycling lanes

In addition, there are limited park and ride facilities at the Pukerua Bay station and basically none at the Muri station. Distance from the stations as well as the need to carry shopping and work-related material means that many choose to park and ride, rather than walk, to the stations. However, lack of facilities limits even this as an option for some, who may alternatively decide to take their cars to work instead, or go to a station south or north of Pukerua Bay to find sufficient park and ride facilities.

Background

“A Community Split In Two”

Pukerua Bay has lived with SH1 bisecting its community for over 60 years and over that time witnessed the steady increase of the impacts of the highway on their community as the volume of traffic along SH1 continues to grow. Together with SH1, the Main Trunk Railway line also passes through the community to the east of SH1. The resulting severance, real and perceived, caused by the nation’s main highway and main trunk line dissecting the community has impacts on mobility, safety and community connectedness.

Pukerua Bay is often referred to by residents as the “village”. It is a community with a strong sense of identity and engages in a wide variety of local activities and issues beyond what might be expected of a community of its size. Protecting and enhancing the environment and achieving sustainability underpin a number of local projects initiated and led by residents and the Pukerua Bay primary school.

There is an active, long-standing Residents Association involved in a wide range of activities, including the Village Plan and managing the Pukerua Bay website. Over several years the community, through its Residents Association, has worked closely with Porirua City Council and Transit New Zealand to better understand their unique accessibility issues and to find workable and sustainable solutions. There is general agreement between the community, Porirua City Council and Transit New Zealand as to what the issues are and their severity.



Transit New Zealand has undertaken research and analysis of the issues and developed options to address some of them. Despite acknowledgement that there are serious severance, mobility and safety issues for the community and that these will only be exacerbated by future traffic growth, the narrow criteria of Cost Benefit Ratio (CBR) analysis means that the required ratio of 1 to trigger funding has not been reached. However Land Transport New Zealand advised the Western Corridor Plan Hearings Committee that:

“Land Transport New Zealand has no general policy that prevents funding of activities with Benefit/Cost Ratios of less than 1.

However, the Allocation Process requires that all improvement projects be assessed against three factors:

1. The seriousness and urgency of the transport issue or problem addressed
2. The effectiveness of the proposed solution in dealing with the issue
3. The economic efficiency of the proposal.

Economic efficiency is represented by the benefit/cost ratio (BCR) of the project (or package of projects).

Each activity is assessed against these factors and given a “profile”. Each year Land Transport determines the threshold profile for funding, depending on the funds likely to be available for the NLTP. Any examples with BCR significantly less than one would have to have very high ratings for seriousness and urgency and effectiveness to be considered for inclusion in the NLTP or later for funding approval.

With regard to Crown funding, Land Transport’s Programme and Funding Manual states “Land Transport NZ may use different thresholds for activities funded using regionally distributed, or Crown funds than those funded using nationally distributed funds.” In practice, this usually means acceptance of a lower threshold for BCR. However a decision to fund at significantly below 1 could only be taken by the Land Transport Board and only after consideration of the profile of the activity and its contribution to the objectives of the NZTS.¹⁰”

¹⁰ Proposed Western Corridor Plan: Hearing Sub-committee’s Report March 2006, p57.

An Overview of Pukerua Bay Village

The Community's Vision

Community of choice for residents and families seeking a friendly, small village in a peaceful, unspoiled natural setting, supported by good local infrastructure and facilities¹¹.

Setting

Pukerua Bay is a small seaside community at the southern end of the Kapiti Coast. In local government terms it is the northernmost suburb of Porirua City, 12 km north of the Porirua City Centre on SH1, and 33 km north of central Wellington.

The majority of Pukerua Bay is situated in a saddle between hills, about 60–90m above sea level. The coast around Pukerua Bay is fairly steep, with only a few houses nestled in a row behind the two sandy beach areas. In Maori, the words puke rua literally mean two hills. It is not clear, however, which hills the name refers to.

The community has a young population with a growing middle aged group moving into retirement. It is a commuting community with a significant number of residents commuting by train to work or for secondary and tertiary education. Income levels in the community are above the regional median.

History

The earliest people known to have lived at Pukerua are the Ngati Iri, who built a pa near today's Pa Road. Later, the Muaupoko settled in the area near what is now the northern end of Rawhiti Road. In the 1820s Ngati Toa defeated the Muaupoko and settled in the area where the iwi continue today as the mana whenua.

In 1849, the coach road north – today's Paekakariki Hill Road – was opened, bypassing Pukerua. The only access to Pukerua was by a foot track from Taupo (today's Plimmerton).

In 1927, Pukerua Bay School was officially opened and electricity put through from Plimmerton to Pukerua Bay. Hutt County Council authorised the erection of 13 street lamps.

The road from Plimmerton (known as the Old Pukerua Road) was properly formed in 1928.

In the 1950s and 1960s, Pukerua Bay saw significant growth of its residential population. The completed highway and electric train services made Pukerua Bay a viable choice to live for people commuting to work to Wellington. The present group of shops between Rawhiti Road and SH1 was built in 1969.

The 1970s saw significant changes and additions to the community. The community joined Porirua City, mainly to ensure that water and sewerage infrastructure concerns were addressed. Work was completed in 1984.

The overbridge over SH1 near Wairaka Road was opened on April 3, 1989, after a long fight by local residents, which included such measures as continually walking across the pedestrian crossing to hold up traffic.

For some twenty years, land to the east of Pukerua Bay was designated for a bypass route for SH1. The designation was in recognition of the projected levels of traffic predicted for SH1, and the impacts this would have on the community. As recently as 2006 at hearings for the Proposed Western Corridor, a 2 and 4 lane bypass at Pukerua Bay was considered. However the Hearings committee¹² rejected this proposal in favour of safety improvements. The Hearings Committee's recommendations have been adopted as part of the Greater Wellington Regional Council's Land Transport Strategy Western Corridor Plan.

11 Pukerua Bay Village Plan, 2007.

12 Proposed Western Corridor Plan, Hearing Sub-committee's Report, March 2006 P3, Table 1. Pg 45 – "SH1 currently divides the Pukerua Bay community. There is both a bottleneck at Pukerua Bay which has emerged since the opening of the Mana Expressway and a need to reduce speeds through the village to reduce traffic related injury and enable local access. We have already observed that the Pukerua Bay community and submitters do not see the various proposals for a bypass as acceptable. We note that they believe any severance effects associated with the current road can be mitigated by the provision of additional underpass, or pedestrian overbridge facilities or lights. We would encourage those proposals to be discussed at an early stage with the Pukerua Bay community. Pukerua Bay submitters said that they would accept the current problems with the bottleneck, which has developed since the opening of the Mana expressway, if the works noted above were undertaken combined with a firm commitment made to proceed with TGM."

The Western Corridor Plan, which is a Greater Wellington Regional Council (GWRC) strategy, identifies three initiatives that directly affect the Pukerua Bay community. These are:

- The proposed upgrade of train rolling stock
- Increased frequency of commuter train services during peak times to every 15 minutes
- Implementation of safety improvements in Pukerua Bay (with an indicative figure of \$2M from central government given).

Consistent with the concerns outlined, Transit New Zealand has undertaken a number of studies in relation to vehicle movements and pedestrian and cyclist’s safety in Pukerua Bay.

Throughout this period, Pukerua Bay residents and the Pukerua Bay Primary School have been active in not only identifying issues but in addressing them through a number of projects and activities.

Community Facilities and Services

There are a number of community organisations, educational services and businesses in Pukerua Bay.

Community Organisations and Services	Education	Businesses
Pukerua Bay Residents Assn	Pukerua Bay School	American Motorcycles
Pukerua Bay Website	Pre-School	Mr Carrad’s Farm
Walking School Bus	Playgroup	Flower growers
Cubs and Scouts	Kindergarten	Huntleigh Down Deer Farm
Tennis Club		UCA Children’s Music and book distributor
Toy Library		The Wool Shed
Monday Playgroup		The Red Shed farmstay and rental – Mosaics and pottery workshops
Pukerua After School Care		Pukerua Bay Store
Pukerua Bay soccer		Reds Hairdressers,
Pukerua Bay netball		Pukerua Bay Glass Studio
Pukerua Bay basketball		Cattery
Folk Club		Springhill Dance Academy
St Marks Church		Archways Book Store
St Marks Friendship Group		Multiple small businesses
St Marks Youth Group		
St Marks Coffee Morning		
Pukerua Bay Skate Inc.		
RSA Wairaka Rd		
Keep Porirua beautiful		
Historical Group		
Ecological Group		
Secret Valley Conservation Grp		
Nga Uruora Trust		
Methodist Church		
Pukerua Bay Library		

“ We don’t use our local shops, basically because we don’t enjoy the walk, i.e. crossing the highway.



Public Transportation

The community is served by two railway stations – Pukerua Bay Railway Station to the south and Muri Railway Station to the north. Parking is available for approximately 15 cars at Pukerua Bay Railway Station. There is no parking available at Muri Station. Trains run every 20 minutes in peak times.

In addition, there is a bus that takes some young people to Kapiti College and another that takes children to the Steiner School.

Future Growth

A new housing subdivision on the east side of SH1 (St Mary's Housing Development) with 45 sections has been approved and development begun with 10 new houses having been built to date. In addition, on the eastern side of SH1 there is a small block of land (Kays Farm) that is zoned residential but is undeveloped. A further development has been indicated by the owners of Carrads farm on the western side of the highway, which would add significant development at the southern end of Rawhiti Road if approved.

Pukerua Bay – A Destination For The Region

In addition to being a through route for SH1, Pukerua Bay has a number of destinations that attract the wider regional population including:

- Wairaka Reserve
- Brendan Beach
- Brendan Beach walkway
- Muri Reserve
- Greenmeadows Park (soccer)
- Tennis Courts
- Secret Valley (Waimapihi Stream)
- Raroa walkway
- Coastal walkway
- Skate Park
- Archway Book Shop

In addition there is the popular Ara Harakeke Cycle Way which begins in Plimmerton and currently finishes at the southern end of Pukerua Bay. Also, tours often visit Peter Jackson's family home and the beach and hillside locations where his early 'splatter' movies were shot.

Environmentally Aware Kids

Pukerua Bay School is an Enviro School. The school won the Green Gold Enviro Award in March 2008 and is the first school in the region to do so. Students, staff and the parent body are fully committed to exploring and implementing sustainable practices across a wide range of areas.

The students identified two years ago that there needed to be a reduction in the use of fossil fuels and decided to lead by example.

In order to reduce the number of cars bringing students to school, the school has put in place a number of initiatives, including the Walking School Bus which involves parents being rostered to pick up children along three routes and take them to school.

The students also identified the need for students to choose an environmentally friendly way to get to school. They designed and had built four large sets of bike stands and the school runs a bikewise programme.



We have major safety concerns as our school community is divided by this road and on a daily basis we need to get our students safely to and from school, while strongly promoting the practice of walking or biking to school. Any efforts to reduce the impact of this major hazard would be fully encouraged from our perspective.

Pukerua Bay Deputy Principal

Census Data

Total Population and Households

At the 2006 census, Pukerua Bay’s population was 1716. Since the 1996 census there has been a steady increase in the population (5.7 percent). There are a total of 621 households, fifty three percent of these being on the west or coastal side of SH1.

The average household size is 2.8 compared to 3.1 for Porirua City and 2.7 for New Zealand.

Age

For the period over the last three censuses there have been increases in the younger and older age groups with a decline in 20–39 age groups. Currently 8 percent of the population is between 0–4, (nationally the figure is 6.7 percent) and 16 percent between 5 and 14 years of age. There has been a steady increase in those 40 years of age and over with 8.3 percent of population over 65 and significant increases in the 45 – 64 age group.

Income

The median household income in Pukerua Bay is \$67,900, compared to \$62,400 for Porirua City and \$51,400 for New Zealand.

Car Ownership per Household

Over 50 percent of households in Pukerua Bay own two or more vehicles. This percentage is understandable as Pukerua Bay is predominantly a “family” community with limited public transport and work places. Most commercial services and secondary and tertiary education institutions are several kilometres away.

Percentage of Car Ownership per Household 2006

	No Vehicle	One Vehicle	Two Vehicles	Three Vehicles
Pukerua Bay	3.3%	41%	39%	13%
Porirua City	10%	35%	35.5%	13.5%
New Zealand	8%	36%	36%	15%

Means of Travelling to Work

Pukerua Bay has an above average number of people working from home. The position and nature of the community as well as anecdotal evidence suggests that the lifestyle and rural feel of the community is attractive for those seeking to work from their homes. For those who commute to work, use of private vehicles is lower than both Porirua City and the rest of the region. A high uptake in the use of public transport (18 percent) and to a lesser extent an above average number of people working from home (8.5 percent) accounts for this.

The comparatively lower number of people biking or walking to work is accounted for by the location and distance of Pukerua Bay to the main centres for employment in the region.

The use of public transport by college and tertiary students travelling north or south by train or bus is not captured by census data. As all college aged and tertiary students have to travel out of the community, then it can be assumed that a large percentage of this group (approx 250) do so by train or bus.

Comparing car ownership figures (above) with means of commuting to work it can be reasonably concluded that despite multiple car ownership, many commuters prefer to use public transport.

Percentage of Total Main Means of Travel to Work 2006

	Work at Home	Private vehicle	Passenger Private vehicle	Walk Bike	Public Transport
Pukerua Bay	8.5	49.7	3.7	1	18.7
Porirua City	4.9	54	7.5	3.3	11.4
Wellington Region	5.7	48	5.3	10	13.4



Make it easier to get from railway station at Pukerua Bay to the shops without having to walk down to the overbridge. People endanger their lives trying to walk across the highway.

National Statistics and Trends¹³

In assessing the current situation in Pukerua Bay as well as options, key statistics reflecting patterns of travel at a national level are of assistance.

- 75 percent of trips made are by motor vehicle, one third of these trips are under 2kms in length and two-thirds are less than 6kms (New Zealand Travel Survey);
- Walking accounts for 20 percent of all household travel trips, and 25 percent of walking trips are made by children, young people and seniors (NZTS);
- Cycling accounts for 2 percent of all trips, mostly made by children and young adults (NZTS) – but there is evidence in Porirua that most cyclists are adults;
- Domestic transport contributes 42 percent of total CO2 emissions and accounts for 40 percent of total energy use for New Zealand (NZTS);
- Between 1990 and 1998 the number of cycling trips in New Zealand reduced by 39 percent (NZ Walk/Cycle Strategy) and New Zealanders undertook approximately 400,000 fewer journeys solely on foot per day (NZ Pedestrian Profile, 2000);
- Around 10 percent of NZ households do not own a motor vehicle (NZWCS);
- Over a third of New Zealanders are insufficiently active to benefit their health, and physical inactivity is estimated to contribute to 9 percent of deaths per annum (NZWCS); and
- Recent perception surveys suggest that only 57 percent of adults would allow children to walk to school and 37 percent would allow children to cycle to school (NRB 2005 quoted in RLTS p27).

Existing Situation SH1

Road Alignment¹⁴

The state highway through Pukerua Bay consists of a series of relatively tight curves. A windy road ultimately means limited visibility. Development and extensive tree cover close to the road edge also restricts sight distance.

SH1 immediately south of Pukerua Bay is a four-lane divided highway with an open speed limit of 100 km/hr. On the approach to Pukerua Bay the highway reduces to two lanes with a posted speed of 70 km/hr. Just 220m to the north the 50 km/hr speed zone begins.

The Teihana Road West intersection is approximately 190m north of the 50 km/hr sign.

Weku Road 2, which accesses the Muri Station, is 1km to the north of Teihana Road West. Between these two intersections, approximately 300m north of Teihana Road, there is an old and what some residents describe as “ugly” pedestrian footbridge crossing SH1. The bridge connects the school to the eastern side of the village and, as it falls between the two railway stations, it only serves a small number of commuters.

The approach to Pukerua Bay from the north is via Centennial Highway, a two-lane windy road that climbs up to Pukerua Bay. The speed on this section of road is 80 km/hr before reducing to 70 km/hr entering the village and then further reduces down to 50 km/hr.

¹³ Porirua Transportation Strategy Stage 1: Overall Strategy Scope Walking, Cycling and TDM Strategies, Tim Kelly Transportation Planning Ltd, January 2008.

¹⁴ Description taken from SH1: Pukerua Bay Improvements Proposed Pedestrian Facilities.

“ *Crossing or getting onto SH1 is becoming an ever increasing problem for everyone who lives in Pukerua Bay. SH1 divides our village and because it winds through the village it creates blind spots.* ”

Traffic Volume

The 2006 Annual Daily Traffic Volume (AADT) north of Pukerua Bay was 21,993, while the traffic count site at Pukerua Bay north of Wairaka Road, which is between Teihana Road and Weku Road 2 is 23,095¹⁵. Greater Wellington Regional Council Modelling carried out in 2005 predicts that without Transmission Gully the AADT through Pukerua Bay in 2016 will be 26,000 and with Transmission Gully the AADT in 2021 will be 17,000¹⁶.

Pedestrian Movements¹⁷

Apart from the flush median and pedestrian refuges at the north end of the Village there is no median to provide temporary refuge between lanes when crossing the highway, especially where the pedestrians are currently crossing to access the rail stations. An informal pedestrian path is being used under the SH1 overbridge to the south of the village by young people from both sides of the community accessing the railway station and community facilities.

“ *Not sure if you are aware or not but some local children bypass both SH1 and the train track by going under the Pukerua Bay overbridge, walking alongside the train tracks. Quite a dangerous path! But less dangerous than crossing SH1.* ”

Where pedestrians cross at Teihana Road the sight distance from the kerb in both directions equates to about 5 seconds.

Further north, at the bottom of the zigzag path, where pedestrians cross to access Muri Station, the sight distance also equates to about 5 seconds when looking to the south. The crossing point from the east to west side of the highway is undertaken north of the zigzag path because of the very restrictive sight distance on the inside of the curve.

“ *We would love a foot bridge/underpass to the shops. It is only a 5 min walk for us from home to the shops – but we always get in the car because it is not safe crossing SH1 at peak times with small children. Our 7 year old does the walking school bus – but because Te Motu has no footpath I do not want her to walk this route on her own (without an adult) at other times. Even as she gets older I would not feel safe about it.* ”

Two pedestrian surveys were undertaken by Transit New Zealand in 2004 for a continuous 2 hour morning and evening count to represent typical AM and PM weekday peak periods. This survey also measured approximate waiting times, which ranged from 1 to 109 seconds, with an average delay per pedestrian of 38 seconds. During the survey, observations were made on the pedestrians crossing the highway, including 3 instances of pedestrians stuck in the middle of the road, in one case for up to 66 seconds, and at least 3 observations of vehicles sounding their horns and cases of braking by vehicles to avoid pedestrians crossing the highway.



15 Transit New Zealand Report SH1: Pukerua Bay Safety Improvements Proposed Pedestrian Facilities Scheme Assessment Report December 2007, p3.

16 Porirua City Council Submission on the Proposed Western Corridor Plan Appendices – Appendix 1

17 Transit NZ Report SH1: Pukerua Bay Safety Improvements Proposed Pedestrian Facilities Scheme Assessment Report December 2007, p4.

The survey result was extrapolated, using the weekly train timetable, and it was assessed that 1006 train passengers were crossing the highway between Monday and Friday in the peak hours and 377 non-train passengers with an additional 600 crossing in the weekday off peak. The total volumes calculated for the weekend were 512, which total 2495 pedestrians crossing the highway at this location during a 7 day week. This is an average daily pedestrian crossing number of 356 per day

In the household survey undertaken in 2008 a number of respondents referred to how unsafe they felt cycling or walking alongside SH1 particularly between Haunui Rd and preschool facilities and shops.



We find it far too dangerous walking two preschoolers between Haunui Road and Preschool/ Kindergartens/shops/Secret Valley /Beach/Toy library etc. We do it reasonably often but it is very stressful and we know we are taking a risk, which we are consistently trying to minimize as we walk. We do this because for all the obvious reasons (i.e. petrol costs, pollution, etc) and because we want our children to be “walkers” not “car riders



Underpass at the shops!!

Not so much an issue of allowing us to do things more often, but it would take only 5 minutes to walk to the shops instead of 15 (i.e. 10 minutes return rather than 30 minutes round trip). I always use the overbridge with my children but it is time consuming and I fear the day when my kids are older and they decide to try crossing SH1 to get to “the other side”.

Accidents¹⁸

The Land Transport New Zealand (LTNZ) accident database for the past 5 years (2002 to 2006 inclusive) for the section of SH1 within the Pukerua Bay township shows that there have been 25 reported crashes over the length of the state highway, measured from the 70 km/hr speed limit signs at either end. One of these accidents was serious; there were 3 minor injury accidents and 21 non-injury accidents. None of these accidents involved cyclists or pedestrians. Another 3 crashes have been reported as of August 2007, all non-injury accidents, and again none involving pedestrian accidents. The accidents in 2007 were all in the vicinity of Teihana Road West intersection.

However, these recorded accidents do not identify the near misses and evasive action observed during surveys and site visits undertaken by Transit and the anecdotal comments of near misses by residents.



A crossing (bridge or tunnel) is long overdue at the shops on SH1. The current situation is appalling and will result in injury and death if it remains as it is.

Traffic Speeds

Speeds within Pukerua Bay are often in excess of 50 km/hr at the points where the majority of crossing movements are occurring. This is likely to be because of the high volume of through traffic, the 100 km/hr and 80 km/hr speed limits on either side of Pukerua Bay, the gradient of the road going north and the relative closeness of the two main pedestrian crossings to the nearby higher speed zones.

¹⁸ P4, section 2.4 SH1: Pukerua Bay Safety Improvements Proposed Pedestrian Facilities – Scheme Assessment Report Transit New Zealand December 2007.

In the second half of 2007 a speed board was installed on the highway heading south at the point where the road slopes down towards Centennial Highway. Transit New Zealand has recorded speeds before the speed board was introduced and for three separate periods after it was introduced.

The following figures¹⁹ summarise the information of recorded speeds before the speed board was introduced and for a period in December 2007, when the speed board had been in operation for three months.

Speeds recorded between 27 July 2007 and 3 August 2007 were as follows:

● Average Speed	58km/h
● 85%ile Speed	61km/h
● % above	92.44%

Speeds recorded post speed board installation between 4 December 2007 and 21 December 2007 were as follows:

1 Average Speed	57km/h
2 85%ile Speed	59km/h

Although the speed board seems to have had some impact, average speeds are still well above the limit of 50km/h.

“ *I walk regularly early in the morning (5 am) and traffic even at that time is often hurtling through above the speed limit. During the day it is impossible to cross the road other than over the bridge at the school. I have also noticed that it is becoming increasingly difficult to pull out into morning traffic (even going with the traffic) and to be able to merge into north bound traffic at 5 pm (going North) is a frightening experience!*

“ *My children need to cross at the top of the Beach Road which is dangerous once again due to the speed of cars turning off SH 1 and lack of indicators*

What The Community Says

Two household surveys have been undertaken in the last two years. The first was carried out by the Residents Association in 2006/07 and this formed the basis for the Pukerua Bay Village Plan, which was submitted to Porirua City Council for consideration and adoption in 2007.

The second survey has been undertaken jointly by the Residents Association and Porirua City Council as part of the development of the Neighbourhood Accessibility Plan.

Both surveys' findings are consistent in relation to identifying what the community values and issues are.

In addition, the second survey sought to establish how behaviour would change if crossing SH1 was made safer. Results suggest that walking and cycling would increase and the use of short term car journeys would reduce (for example, to the primary school).

Village Plan 2006²⁰

In 2006 the Pukerua Bay Resident's Association undertook a survey²¹ of their community to identify the key issues of concern and the priorities for action. The responses formed the basis for the Village Plan.

Having a cohesive, safe and environmentally conscious community was identified as very important by over 60 percent of respondents. Protection of the environment and safe walking and cycling were top priorities, strongly favoured by over 70 percent of respondents.

¹⁹ Transit New Zealand, PowerPoint presentation.

²⁰ Appendix 3, Village Plan.

²¹ Appendix 4, Village Survey Results.

Eighty per cent of respondents identified that key issues were enforcing the 50km/h speed limit on SH1, improving safe access across SH1, intersection improvements, traffic calming measures and a safe walking cycling environment.

The Village Plan contains a number of recommendations relating to pedestrian, cyclist and motorist safety and accessibility. These are included in the Neighbourhood Accessibility Plan proposed actions.

The community indicated an interest in extending and providing additional cycle paths, upgrading existing recreational areas, extending and maintaining walking tracks and paths around the community, and finally ensuring safety in the area of the then-proposed pedestrian underpass.

Village Survey April 2008²² – Uniting the Bay

Of the 621 households in Pukerua Bay, 207 or 33 percent responded to this survey.

Most respondents live on the primary school or western side of SH1. More than half have children at home, usually in one and two-child households. The largest proportion have primary school-aged children.

Improving Movement around Pukerua Bay

Respondents' suggestions about changes that could make it easier and safer to move in, out and around Pukerua Bay most commonly include building an overbridge or underpass, followed by building a bypass and introducing mechanisms to reduce traffic speed and improve safety.

Crossing SH1

Households cross SH1 on a regular basis for a wide range of reasons, but especially for socialising; club and sporting activities; going to/from work; cycling/keeping fit; and community/church activities.

Household Members Needing To Cross Sh1

Activity	Need to cross SH1		Total	
	Yes (#)	Yes (%)	Yes	No
Socialising	146	93%	11	157
Going to/from the local shops	89	61%	56	145
Going to/from the local beach	94	67%	47	141
Cycling/keeping fit	109	79%	29	138
Going to/from work	117	87%	17	134
Club and sporting activities	89	89%	11	100
Community/Church activities	72	73%	26	98
Attending school	45	66%	23	68
Taking children to/from school	30	56%	24	54
Taking children to/from early childhood services	16	39%	25	41
Other	34	94%	2	36

Travel in and out of Pukerua Bay

Survey respondents travel in and out of Pukerua Bay on a frequent basis, by car, on foot, or using public transport. Of the households surveyed:

- Most have members driving in and out of side roads onto SH1 on a daily basis and more than 75 percent experience some degree of difficulty getting onto SH1 from these side roads;
- Almost all have members crossing SH1 by foot on a regular or semi-regular basis;
- Over 50 percent have household members who currently travel by train or school bus on a regular basis. Analysis of the travel patterns of 330 Pukerua Bay commuters show that just over half travel by train or bus at least weekly;
- Sixty-seven percent of households expect this would stay the same if trains ran more frequently.

²² Appendix 5, Uniting the Bay Survey results and questionnaire.

Mode of Travel within Pukerua Bay

Depending on their household location, and that of the activity, the mode of travel that householders use varies.

The activities they are most likely to walk or cycle to are: cycling/keeping fit; going to/from the local shops; going to/from the local beach; taking children to/from school; taking children to/from early childhood services; and community/church activities.

The activities they are most likely to drive to are socialising; club and sporting activities; and going to and from work.

There are no activities for which the majority of households usually use public transport.

Usual mode of transport to activities

Activity	Mode of travel			Total
	Car	Walking biking	Public transport	
Going to/from the local beach	62	94	7	163
Going to/from the local shops	42	107	9	158
Cycling/keeping fit	14	130	3	147
Socialising	108	30	4	142
Going to/from work	88	4	44	136
Club and sporting activities	86	21	8	115
Community/Church activities	46	50	1	97
Attending school	13	29	23	65
Taking children to/from school	20	32	4	56
Taking children to/from early childhood services	12	16	2	30
Other	12	12	4	28

Preferred Solutions

The features that are most valued for their capacity to unite the local community are safe walking and biking in the Bay, and a safe crossing over SH1. A safe crossing at the shops would be preferred over a safe crossing at Muri station. In noting this result, the Residents Association observes that the catchment for Teihana Rd is larger than for Muri Station, for a number of reasons including population and where community facilities are located.

Features that unite the Pukerua Bay community

Activity	Level of value given				
	High	Somewhat	Neutral	Not particularly	Not at all
Safe crossing over SH1	88%	10%	2%	>1%	<1%
Safe walking and biking	83%	16%	>1%	0%	>1%
School/community environmental activities	53%	35%	11%	1%	1%
Extension to Ara Harakeke cycleway	44%	35%	15%	4%	2%
Bus walking to school	38%	27%	27%	1%	8%
Improved parking at the shops	19%	34%	28%	10%	9%

The Impact on Modes of Travel with Safe Crossing Options

Overall, respondents expect that each of the safe-crossing options will increase householders' inclination to walk and cycle to specified activities.

25 percent of respondents with school age children indicated that their children would walk or cycle to school more often, with another 10 percent indicating they would allow their children to walk to various activities, including school, if there were safe crossing options.

The shops-option (Teihana Road) is anticipated to have the greatest effect, because of its geographic location and proximity to a number of community facilities.

A crossing at Muri Station was likely to have slightly less impact on how primary school children travelled to school, with 19 percent of respondents saying their children would walk or cycle to school more often and 4.5 percent saying they would allow their children to walk to various local activities, including school or the railway station.

Mode of transport with safe crossing at the shops

Activity	Mode of travel			Total
	Car	Walking biking	Public transport	
Attending school	9	43	20	72
Taking children to/from school	13	40	5	58
Taking children to/from early childhood services	6	21	3	30
Going to/from work	77	11	38	126
Club and sporting activities	70	35	6	111
Socialising	74	67	8	149
Going to/from the local beach	47	97	22	166
Going to/from the local shops	24	125	23	172
Community/Church activities	34	60	1	95
Cycling/keeping fit	16	144	17	177
Other	10	11	2	23

Mode of transport with safe crossing at Muri Station

Activity	Mode of travel			Total
	Car	Walking biking	Public transport	
Attending school	3	36	13	52
Taking children to/from school	7	28	4	39
Taking children to/from early childhood services	6	14	1	21
Going to/from work	53	4	30	87
Club and sporting activities	44	30	8	82
Socialising	47	55	9	111
Going to/from the local beach	26	80	54	160
Going to/from the local shops	19	77	62	158
Community/Church activities	27	42	86	155
Cycling/keeping fit	8	115	1	124
Other	4	12	3	19

Use of Community Amenities

The survey results show considerable community use of local amenities, especially the Brendon Beach walkway; Ara Harakeke cycleway; Coastal walkway; Secret Valley (Waimapihi Stream); Wairaka Reserve; and Raroa walkway. Respondents expect their households' use of local amenities to increase if a safe crossing is established at the shops (especially Secret Valley and the Ara Harakeke cycleway) or at Muri Station (especially Muri Reserve and Brendan Beach walkway).

Expected use of amenities with a crossing at the shops

Amenities	Increase	Decrease	Stay same
Secret Valley (Waimapihi Stream) (n=166)	36%		64%
Ara Harakeke cycleway (n=164)	31%		70%
Muri Reserve (n=155)	25%		75%
Skate park (n=137)	25%		75%
Coastal walkway (n=165)	24%		76%
Greenmeadows Park (n=143)	21%		79%
Brendan Street walkway (n=168)	20%		80%
Raroa walkway (n=148)	20%		80%
Other local clubs (n=129)	18%		82%
Wairaka Reserve (n=158)	17%		83%
Tennis club (n=138)	15%		85%



Guiding Strategies and Policies

There are a number of principles, strategies and policies that underpin the possible options proposed in the Pukerua Bay Neighbourhood Accessibility Plan.

The policies and strategies exist on three levels:

- National
- Regional
- Local

Overall, the various documents and research represent a changing emphasis in planning and management of transportation, with a stronger emphasis on:

- A balanced consideration of all transportation modes
- Managing instead of accommodating rising travel demands
- Promoting more sustainable forms of travel
- Reducing reliance upon fossil fuels
- Involving the community in problem identification and solutions.

Also taken into account are a number of strategies that set goals with respect to health and environmental sustainability.

These strategies and policies are consistent with and support the objectives of this Plan and can be found in Appendix 6.

The Proposed Neighbourhood Accessibility Plan

Proposed actions can be categorised in the following ways:

- Engineering
- Promotional
- Environmental/Amenities
- Education
- Enforcement.

Given the long-standing severance, safety and mobility issues, a number of viable actions have already been implemented. They are included in the Plan in order to present a “total package” and to demonstrate and acknowledge the work already undertaken within the community.

To minimise repetition, the national, regional and local policies that underpin each option are identified, but all proposed actions are consistent with policies and strategies noted in Appendix 6.

It should be noted that as part of the Western Corridor Plan Hearings in 2006, the Hearings Committee, in declining the bypass option, recommended that safety improvements in Pukerua Bay should be undertaken. This recommendation has since been adopted by the Greater Wellington Regional Council, with a budget of \$2M indicated.

Finally, each option is assessed in terms of the objectives adopted by this Neighbourhood Accessibility Plan and noted at the beginning of this Plan.

A summary is given below, for current and proposed actions. This is followed by information presented in chart form to provide an overview at a glance.

What Is Already Being Done

The community has adopted a number of initiatives to address long standing severance, mobility and accessibility issues. They have also taken the lead with various promotional activities. Much of this work is reflected in the Village Plan²³ which was presented to Porirua City Council in 2007 and has subsequently formed the basis for continuing work, including work with Transit New Zealand on safe crossing and intersection issues.

An example of a recommendation already actioned is the installation of a speed board heading north along SH1.

Pukerua Bay School staff, pupils and families have participated in a number of initiatives in response to concerns about safety, health and the environment. The School is an Enviro School and in March of this year was awarded a Green Gold Enviro Award – the first school in the region to receive the award. The award recognised the school and community's initiatives around promoting walking and biking to school and research and promotional work focused on environmental sustainability. Wider community activities, such as developing, maintaining and promoting walkways in the area, have added to environmental sustainability.

A particularly pleasing initiative is the commitment to upgrade train rolling stock and to increase the frequency of services in peak hours. The April 2008 survey shows that despite commuters already being relatively high users of public transport, the initiatives are likely to result in an increase in the level of public transport usage.

Proposed Actions

There are a number of proposed actions to address the issues described in this Plan. Some of the bigger projects are beyond the resources and capacity of the local community to resolve itself, and require input and investment from central and local government. These are also the projects that will have the biggest impact on mitigating the effects of SH1 on mobility, safety and community severance.

A considerable amount of research and work has already been undertaken by Transit New Zealand and Porirua City Council. Options to improve the safe crossing of SH1 by pedestrians, cyclists and motorists have been identified. It is now time to resolve funding before further consultations take place with the community on the crossings and intersection improvements of SH1.

Safe access for pedestrians and cyclists across two key points of SH1 – Teihana Road and Muri Station – has been identified as a priority for the community. Both Porirua City Council and Transit New Zealand's research and assessments concur that there are serious severance, safety and mobility issues caused by SH1 cutting through the village; and with traffic volumes predicted to increase in the near future, safer options for pedestrians and cyclists need to be put in place. Survey results indicate that each of the safe-crossing options will increase householders' inclination to walk and cycle to specified activities.

Twenty five percent of respondents with school age children indicated that their children would walk or cycle to school more often, with another 10 percent indicating that they would allow their children to walk to various activities, including school if there were safe crossing options.

There is currently an existing overbridge, which serves some but not most train commuters, but is nevertheless an important link to the school from the eastern side of the village. The overbridge is dilapidated and lighting in its vicinity is poor. Upgrading work needs to be urgently considered.

Time delays, disruption in flows of SH1 traffic, speeding traffic, near misses, and both real and perceived barriers posed by SH1 makes work on improving intersection layouts a priority. Transit New Zealand²⁴ has undertaken the work and identified options.

In addition to crossing SH1, access for pedestrians and cyclists, particularly along the western side of the state highway, is poor. The footpath quality, safety at particular intersections and lighting are of concern. Continuing the Ara Harakeke Walkway/Cycleway²⁵ by widening the footpath and upgrading it to a combined footpath/cycle path along State Highway 1 will not only improve facilities for the local community but also contribute to a valuable regional asset by connecting the cycleway from the south to Centennial Highway. The extension of the walkway/cycleway will also facilitate the promotion of regional events such as the annual Porirua Family "Wheels" Day and Plimmerton Fun Run.

²³ Appendix 3.

²⁴ Appendix 7 SH1: Pukerua Bay Safety Improvements – Proposed Intersection Upgrades at Gray Street, Teihana Rd and Pukerua Beach Rd – Scheme Assessment Report: Transit New Zealand February 2008.

²⁵ Appendix 9 Ara Harakeke Walkway and Cycleway Plans, Porirua City Council.

Speed along SH1 through Pukerua Bay continues to be an issue. Despite a speed board being installed going north along the highway, the impact on reducing speeds has been relatively minor, with the average speed still around 57km/h. Suggested strategies for further consideration include:

- Reviewing the effectiveness of signage along the Pukerua Bay section (on both sides)
- Use of speed cameras (or other enforcement strategies)
- Removing the 70km/h zone to the north and reducing the speed to 50km/h and
- Introducing a “welcome” sign at the northern end of the village as a signal to motorists that they are entering a suburban area.

“

A lot of people roar through Pukerua Bay and never get below 70–75kph. It’s terrifying to try to either cross the road or walk alongside it.

