



Waiopahu College

# **Cycleways Horowhenua**

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December 2017

**Introduction:**

As part of the proposed highway being built from Otaki to the North end of Levin, a cycleway is also being built. The Year 13 Geography class have teamed up with NZTA to conduct an investigation to find out what would be the best type of development to appeal to people. By doing this, we will be able to provide information to NZTA in order for them to develop a cycleway that provides what is required by its audience. We will find out what the cycleway should include, where it should be located based on people's risk tolerance, and what people will mainly use it for. The information gathered will be collated in order to develop a proposed cycleway based on the demands of the people that will utilise it.

**Background Information:**

The Otaki to north of Levin project is part of the Wellington Northern Corridor Road of National Significance (RoNS) (2). The purpose behind developing the highway is to improve safety, reliability, and efficiency between Wellington Airport and north of Levin via State Highway 1 (SH1) (2). The highway also offers opportunity to bypass traffic from townships, with the hope of improving safety within the township as traffic loads will be reduced (2). Currently, SH1 is in need of urgent safety and efficiency improvements. There have been a number of serious accidents on the road and these occurrences need to be reduced. The road also has 'pinch points' that slow the movement of traffic and do not allow for efficient transport (2). With these in mind, a new road is being developed that offers 4 lanes to ensure both safety and efficiency during transport.

Additional background information that was needed before conducting the research was to identify what categories different cyclists fall under. There are four main categories that people can put themselves in based on their risk tolerance towards cycling. These are,

- Strong and fearless.
  - These people choose to cycle regardless of the road or traffic conditions. They tend to be comfortable cycling next to fast moving traffic due to previous experience, and know how to interact with other traffic on the road (1).
- Enthused and confident.
  - These people will cycle with space from the traffic but are confident to cycle alongside motorway traffic. They prefer if there is allocated space for cyclists next to other traffic (1).
- Interested but concerned.
  - These people are interested in cycling but are wary about cycling next to other on road traffic. They would prefer separation from other motorway traffic, or clear cycleway lines on quieter roads (1).
- No way, no how.
  - These people do not choose to cycle no matter what facilities, or nature of the cycleway. It is important to keep in mind that these people may change their views around cycling and choose to cycle, but currently have no interest in cycling (1).

By knowing the categories that cyclists fall under, we are able to put forward a question that allows people to choose where they best fit. This will then allow us to put forward an appropriate cycleway proposal that caters for the majority of the people that will use it to develop a cycleway for their abilities and confidence.

## Hypothesis:

The ideal cycleway for the Otaki and North end of Levin highway needs to cater for the people who will utilise it.

I have chosen this hypothesis based on the following rationale,

- NZTA want us to help them find out who the proposed cycleway is to cater for. This is important in developing the cycleway as it will need to cater for its audience well for them to use it. For example, if most of the audience is unconfident in cycling on the main road with traffic, then a cycleway built on the main road will not be beneficial as it does not suit the audience's needs.
- The cycleway needs to cater for a range of people. This means that it must cater for people with ranging confidence and risk tolerance levels, as well as people with different skill levels. It also should cater for the people of Levin and Otaki by showing off some of the land within the districts to invite people into the community.
- This hypothesis allows us to see who will most likely use the cycleway when it is built, and to see whether building it will gather a large crowd of people or a small few. This information will also determine how the cycleway needs to be built and where.

## Methodology:

The approach we took in order to collect data regarding the cycleway was creating a survey. The main information we wanted to find out through this survey was who would be interested in using the cycleway, what would people like to see on the cycleway (bathrooms, water stations), and where people would like the cycleway to be located (urban, rural, scenic). We were interested in finding out this information as we believe it is most vital in developing a cycleway that appeals to the majority of people who would utilise it.

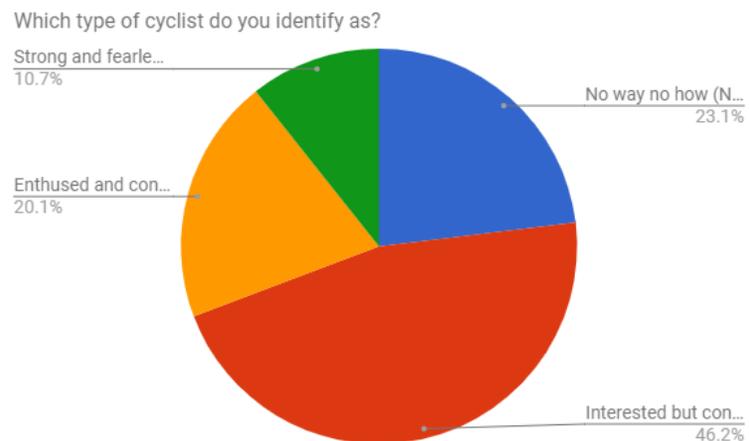
With the survey being created, we decided to make it available to people in two ways. The first way was submitting it as a google form, which allowed people to access it online. This appeals to youth audiences as they utilise technology, so having the survey online makes it of easy access to them. This makes people more likely to fill out the survey as it is all done online so they fill it out, submit it, and the results are collected almost instantly.

The second way was to go out in town and ask people to fill out the survey. People were located in main pedestrian points in Levin to ask people walking past to fill out the survey. This appeals to older audiences as it allowed people to fill out a paper survey instead of going online to complete it. This was also done to get people's opinions outside of the school community to make the results found a better representation of what the whole Horowhenua community would want in a cycleway.

## Analysis:

Our survey received a total of 270 responses from people within the Horowhenua District. Through our findings, a judgment can be made in regards to developing a cycleway that caters for the majority of the people who will utilise it.

One of the first questions asked was regarding what type of cyclist people identified as. This was asked because the responses



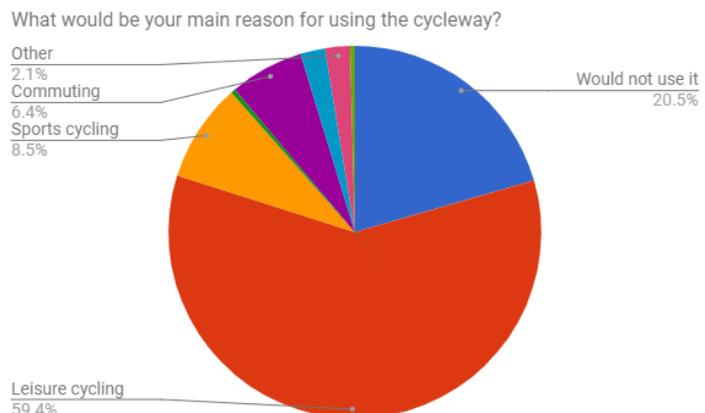
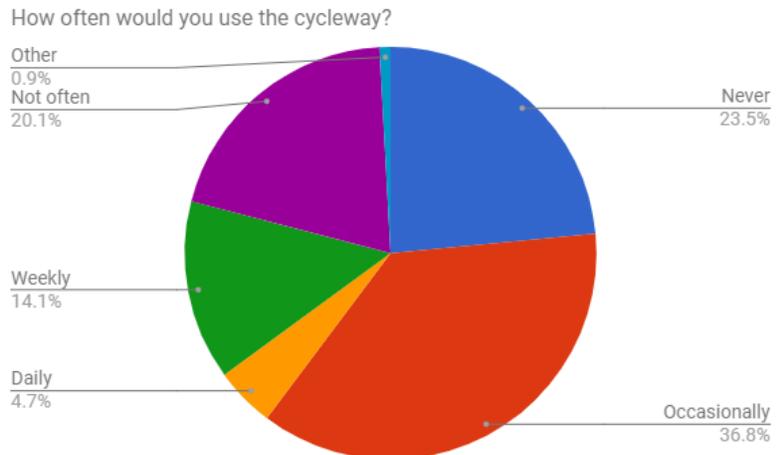
given, would then determine what type of cycleway should be developed. We allowed for four options for people to select from,

- Strong and fearless is represented in blue,
- Enthused and confident is represented in red,
- Interested but concerned is represented in yellow,
- And no way, no how is represented in green.

From the graph you can see that out of the 270 people that completed the survey, 46.2% identify themselves as an interested but concerned cyclist. This means that they are willing to cycle but are not entirely confident to cycle in challenging conditions such as alongside fast moving traffic, or along physically challenging tracks. From this, we can make a generalisation that most people who will be using the cycleway would prefer a cycleway away from traffic based on their risk tolerance. This links back to the hypothesis of the ideal cycleway for the Otaki and North end of Levin bypass needs to cater for the people who will use it, as it shows what risk tolerance the people who will utilize it have. We are able to use this information to develop an ideal cycleway that caters for the main people that will use it, them being categorised as interested but concerned cyclists.

Another question that was asked was, how often would you use the cycleway? This was asked to indicate how often the new cycleway would actually be used in order to see how dependent people would be on the cycleway. Out of the 270 people who filled out the survey, it was indicated that 36.8% of people would use the cycleway occasionally. This shows that the cycleway may not be their main transportation route and therefore would not need to utilise it everyday. From this we can make the generalisation that the cycleway does not need to have access into the townships as it is not the main transportation option of people within the community. However, 14.1% of the people surveyed indicated that they would utilise the cycleway weekly. This indicates that they may become dependent on the cycleway as a route of transport to work, school, etc. It is also important to keep in mind that people may start utilising the cycleway more when it is constructed. The Horowhenua District currently has cycleway lines on the main road that passes through the Levin township, but as indicated in the previous question, most people surveyed would prefer a cycleway away from other motorway traffic due to their risk tolerance. If a cycleway was of access to them and suits their risk tolerance, more people may start using it.

Another question that was asked was, what would be your main reason for using the cycleway? This was asked in

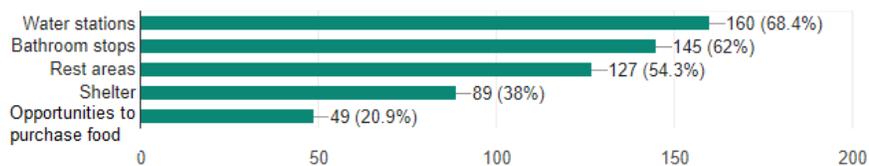


order to find out what the cycleway would be used for to then evaluate where it needed to be placed in order to cater for the intended use of it. From the 270 people surveyed, 59.4% indicated that they would use the cycleway for leisure cycling with only 6.4% indicating that they would use it for commuting. This shows that there is no urgent need to provide access routes into the townships along the cycleway as most people in the district would utilise the cycleway for leisure other than commuting to work or school etc. This means that the cycleway does not necessarily need to be a fast transport route to places as 59.4% of the people surveyed would use it for leisure. This links back to the hypothesis of the ideal cycleway for the Otaki and North end of Levin bypass needs to cater for the people who will use it, as it will not need to be designed for a source of fast transport, but more casual, leisure usage.

We asked for the people filling out the survey to indicate what types of facilities they would like to see on the cycleway. This was done in order to see what types of things would need to be considered in the

Please select the types of facilities you would like to see on the cycleway.

234 responses



development of the cycleway.

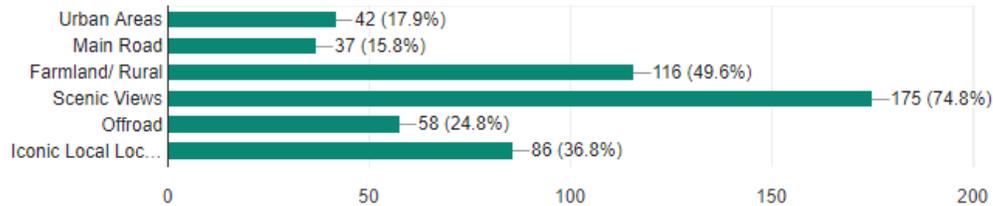
Out of the options provided, water stations, bathroom stops, and rest areas were selected the most as the facilities to include on the cycleway. These facilities could either be built with the cycleway or the cycleway could be developed to lead to already built facilities in the Horowhenua District. This could be an opportunity to bring people into the townships in order for them to access these facilities indicated. Also, in the 'Other' option, people indicated that an air pump is wanted on the cycleway. This should be included in the cycleway as it is designed for bikes so providing an air pump will be of use to people. Another thing that was expressed was to have the cycleway 'untouched' and free of facilities. Based on the majority wanting some facilities this may not be the best option but needs to be considered. This can be achieved by having parts of the cycleway having access to facilities, but other parts completely free of facilities. This question is of importance as including facilities in the development of the cycleway that people have asked for, will make the cycleway ideal to the people who will utilise it. This backs up the hypothesis of the ideal cycleway for the Otaki and North end of Levin bypass needs to cater for the

people who will use it, as it provides us with information regarding the facilities people who will use the cycleway, want to have.

One of the questions within the survey asked what landscapes people would prefer the cycleway to go through. The placement of the cycleway can hugely influence who will use it, so it makes sense to include a

### What landscapes would you prefer the cycleway to go through?

234 responses

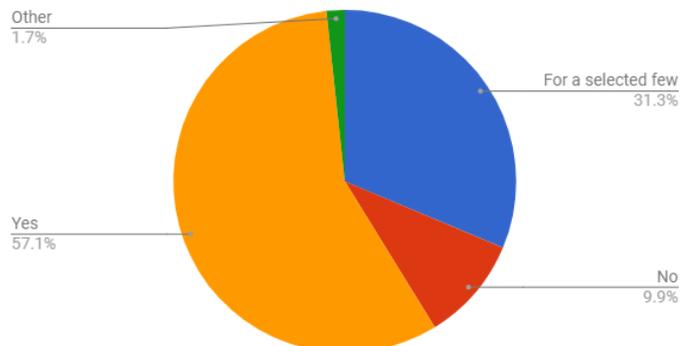


question where people can identify what landscapes they want the cycleway to go through.

Out of the 270 people who filled out the survey, 175 indicated that they would want the cycleway to go through scenic views. As well as this, 116 indicated that wanted it to go through rural areas with only 42 people wanting it to go through urban areas. This shows that maybe the focus of the cycleway should be through rural areas that offer cyclists with scenic views of the Otaki and Horowhenua regions. This also links back to how often people would use the cycleway, and what they would use it for. A generalisation made was that most people would use the cycleway occasionally for leisure use. This makes sense to then see popular interests in having the cycleway go through scenic views and rural areas as the people who will use the cycleway have indicated that they would mainly utilise it for leisure. This links back to the hypothesis of the ideal cycleway for the Otaki and North end of Levin bypass needs to cater for the people who will use it, as the people who will utilise it want it to pass through scenic, rural areas. Therefore, the ideal cycleway for the people who will utilise it would be to have it going through scenic areas.

Another question asked was if people thought building the cycleway was a worthwhile cause to put money towards. This was asked in order to let people know that there will be an added cost for building the cycleway, and also to find out if building the cycleway actually appealed to people as a facility to have in the Horowhenua District. 57.1% of the

Developing a cycleway will incur an added cost. Do you think this is a worthwhile cause?



270 people surveyed indicated that it was a worthwhile cause, which shows that people do think that it will be a good utilised facility in the district. 31.3% indicated that it would be a worthwhile cause for a selected few, which was to be expected as not all people in the district will choose to cycle, despite having the facility built. From this arose the idea of providing a walkway/ runway in the cycleway to appeal to a wider crowd of people. I believe this should be considered in the development of the cycleway as it could appeal to a lot more people, especially those that do not enjoy or choose to cycle. By allowing space for a walkway, I believe more people will want to use the cycleway as it appeals to a wider range of people by giving options and choice to either cycle, walk, or run.

### **Conclusion:**

Looking at the discussion above, it is clear to see the generalised pattern of what people within the Horowhenua District would want in a cycleway. It is important to consider what they want in the development of the cycleway as the ideal cycleway needs to appeal to the needs of its audience (people who will use it). There is no point in developing a cycleway that goes against what people want as it is unlikely that people will use it.

The ideal cycleway for the Otaki and North end of Levin highway needs to cater for the people who will utilise it. Based on the information found from locals of the district, most want a cycleway that runs through rural, scenic, and iconic locations in the Horowhenua District. From this, the cycleway should be developed around scenic views for the purpose of leisure cycling as identified by the public interest. This means that the cycleway should be easy to ride along without much difficulty and challenge as the people who will utilise it want to use it for leisure purposes. Because of this, they do not want a cycleway that will challenge them physically, but want a cycleway that is enjoyable to cycle on and offers great views. Because most people have identified that they will use the cycleway for leisure, there is no need for the cycleway to be a fast route of transport. This means that it could weave through different locations in the Horowhenua District as time is not an important factor to consider.

Also identified by the group surveyed, facilities such as water stations, bathrooms, and rest areas are wanted to be accessed on the cycleway. This could offer an opportunity to bring the cycleway into the township of Levin in order for people to access these facilities. This also brings people into the town, whereas developing a cycleway next to the highway will distance them from town. There needs to be a few facilities along the cycleway such as an air pump and a water station for people to have easy access to without the need to go into the township.

One of the things that I believe needs to be considered is developing a walkway on the cycleway. I believe that this will encourage a larger crowd to utilise the cycleway as even if they do not cycle, they can walk along the cycleway and enjoy the scenic views of the Horowhenua District. Developing this may also change people's views on paying an added cost for the development of the cycleway. 31.3% of the people surveyed said that the cycleway is a worthy cause only for a selected few. If they knew that a walkway would also be developed, I believe that this percentage will drop as it now appeals to more people and to those that don't cycle.

Overall, I recommend that the cycleway is developed to go through scenic views in the Horowhenua District. I also recommend that it allows for access to facilities highlighted by the public, and the water stations and an air pump is developed along the cycleway. I strongly recommend that the cycleway also allows for a walkway as I believe it will encourage more people to utilise the facility.

**Evaluation:**

The process of this research report involved a number of steps. First we had to educate ourselves and become familiar with the project of the new road going in, and how to categorize people based on their risk tolerance to see who the cycleway needed to cater for. This was done by going on to the NZTA website and reading over the project reports of the proposed road. From this we familiarised ourselves with the options for where the new highway could go, to then see where a possible cycleway could go. On this website, we also found information about different types of cyclists and what they would need in a cycleway. From this we were able to develop a survey to find out who would use the cycleway, and what was needed to be developed for this group. Because we educated ourselves first, the questions for the survey flowed easy as we knew what information we needed to find in order to make a suggestion for the proposed cycleway.

**Reliability-** Our survey was reliable as the questions asked were written in a way that was clear to the person filling out the survey. This meant that people were able to answer the question truly as they knew what each was asking of them, which ultimately meant that our results were reliable and true to the person supplying the data. The survey was also reliable because the questions were not changed and people only had the option to fill it out once. This meant that the options stayed the same throughout the data collection so everyone surveyed had the same questions to answer. Also, because we only allowed them to fill out the survey once, more than one survey with their opinions were not used in collating the data. This avoided the occurrence of one person answering the survey multiple times to change the percentages to favour their opinions. This ensures reliability as the collated data represented all the people surveyed once, and did not see people answering multiple surveys.

**Validity-** Our results from the survey may not be entirely valid to represent the whole Horowhenua Community. This is because it was shared with students within the school more than any other groups of the community. This meant that we saw a bigger turnout of results from 14- 18 year olds (39.4%), compared to any other age group. It may also not be that valid as only Waiopahu College students had access to the survey and not the other local school of Horowhenua. This could make the results less valid as it only allowed for Waiopahu students to voice their opinion and not the Horowhenua students. To further improve the validity of the results, we should open the survey up to Horowhenua students. Also, we should ask the Horowhenua District Council to upload the survey on their website so that people in the community can access it. Although we went into the township of Levin and got people to fill out the survey, to improve the validity of the results, we should aim to reach a larger crowd of people within the community by getting the council involved.

**Strengths and weaknesses-** Throughout the research process, there were a few strengths and weaknesses that we came across. The first weakness that we improved on was our wording of the questions in the survey. We had to make sure that the questions, and answers, were easily understood to allow for people to fill out the survey without having to stop and comprehend what we were asking of them. How we achieved this was by creating a document that had all the questions on it before actually putting together the survey. This allowed us to go through all of the questions and make changes to them to make them easier to understand. An example of this was when we asked people to identify 'Which type of cyclist' they were. The optional answers to this question were originally strong and fearless, enthused and confident, interested but concerned, and no way, no how. After looking at this question again, we realised that we shouldn't assume that people know what these options mean, so we added on a short description next to each one. This allowed people to answer the question as they were told what each option meant and could therefore place themselves in a category. The language we used also reaches out to people as it is descriptive but not complicated. We found that by using 'enthused and confident' etc,

connected better with people as they were not big words that people had to know the meaning to. Instead, the words used were easy to understand and relate to.

Another weakness from our research process was not monitoring where people could access the survey from. Originally, we decided that we wanted the survey online through google forms, on the school website, in paper copies in town (when people went into town), and on our Facebook pages. We know that people accessed in through google forms and in paper copy from being in town, but we did not follow up whether it was on the school website or on our own personal social media accounts. Because we just assumed that the survey was accessed through all of these, we didn't actually check and see where people could access it from. If we were to do this differently, we would make the survey accessible via social media, the school website, through google forms, and in paper copy. Asking the council to put it on their website might be beneficial to for people in the wider community. This would allow us to make sure that the survey could be accessed from a range of places to get a larger number of results from a wider range of people.

A strength we had throughout this research process was that we had two different ways of collecting data. We submitted the survey as a google form so that people could access it online. We found that this was very successful as it is easier for some people to fill out the form online in their own time, other than to fill it out on paper. We sent this form to Waiopēhu College's community (parents, teachers, and students) in the attempt to get as much local voice as possible from our contacts list. However, just sharing it with the school community does not give a fair representation of the total population of the Horowhenua District. This is why we also printed put paper copies of the survey and went into the township of Levin to ask locals of their opinions. This gave a better representation of what majority of the community wants in a cycleway, and was done so that a recommendation for the cycleway can be made to suit the majority of people. Doing this outside of school also allowed us to get voices from a larger range of ages instead of just 14- 18 year olds from school. This better improves our results as it is collating data from all age groups, instead of a selected few. To further improve on this we could get Horowhenua District Council involved and ask them to share the survey on their website and social media sites. This could then mean that the survey is of access to a large group of people. This could have then allowed us to make a recommendation of a cycleway that suits a bigger majority of the district.

**Alternative methods-** I believe in order to get data from a large number of people, a survey is the best method to do so. However, other methods that could have been used to improve the reliability and validity of the results found could be to have multiple ways of accessing the survey (as mentioned previously, council etc) and to have focus groups. By having focus groups, we are able to sit down and talk to 6-10 people who are interested in voicing their opinion about the cycleway. These people can represent the different groups within the community to voice their interests and concerns regarding the cycleway. This would be an effective way of communicating ideas as it is a limited number of people, and we are all together face to face to bounce ideas off of each other.

## References

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