14 January 2026

Shubham (Shane) Sharma
s7(2)(a) [redacted]

Tēnā koe Shubham (Shane),

Request for Information – Local Government Official Information and Meetings Act (LGOIMA) 1987

We refer to your official information request dated 29 November 2025, seeking information on pedestrian safety near the Stokes Valley Roundabout and any related planning or assessments. Specifically, you requested:

1. *Has the council or Waka Kotahi received any previous complaints, reports, or requests regarding pedestrian safety or the need for a crossing at or near the Stokes Valley Roundabout? If so, please provide details and dates.*
2. *Have any risk assessments, traffic safety studies, or pedestrian safety audits been conducted for this location within the last 10 years? If yes, please provide copies of those reports.*
3. *Has there been any planning, proposal, or consideration for:*
   - *A pedestrian crossing (signalised or zebra)*
   - *A pedestrian refuge island*
   - *An overbridge/underpass*
   - *Speed limit change*
   - *Traffic calming measures in this area? Please provide relevant documents.*
4. *Are there any current or upcoming plans in the next 1–5 years to improve pedestrian safety at or near the Stokes Valley Roundabout?*

5. *Please provide any data relating to accidents, near-misses, or pedestrian-related incidents at or within 500 metres of the roundabout in the last 10 years.*

In addition… I would like the list and their priority levels in last 2 years and reasoning why they were more important and/or riskier than this Stokes V project and there aren't many 80 zones and busier roads than this one piece of eastern hutt which remains only connection for SV residents to SH2.

Answer:

Please refer to **Appendix 1** below, which details the correspondence in scope of your request and our decision on its release. Some information has been withheld under section 7(2)(a) of the LGOIMA, to protect the privacy of natural persons.

We have not located any formal risk assessments, pedestrian safety audits, or traffic safety studies for this location within the last 10 years. Accordingly, we are refusing this part of your request under section 17(g) of the LGOIMA because the information is not held.

In response to your comments about other projects taking priority and your request for a list of projects and their priority levels, please find attached:

1. A list of sites submitted to Waka Kotahi NZ Transport Agency for funding consideration for infrastructure improvements during the 2024–2027 period.
2. Council's Project Prioritisation Process, which was approved by Councillors on 31 August 2023 and guides how projects are assessed and ranked within Council's programme.

Since the submission was made, NZTA has approved some of the proposed sites. Based on the information available to us, these approvals appear to have been influenced by central government priorities.

However, NZTA has not provided detailed feedback outlining the specific criteria or factors used to approve or decline individual proposals.

Regarding crash data, this information is managed through the National Crash Analysis System, which is led by Waka Kotahi NZ Transport Agency. We understand that you submitted your request for information to NZTA also, and that they will respond to this part of your request in due course.

You have the right to seek an investigation and review by the Ombudsman of this response. Information about how to make a complaint is available at: **Office of the Ombudsman - Complaints**, or freephone 0800 802 602.

Please note that this response to your information request may be published on Hutt City Council's website: **Proactive releases - Hutt City Council**.

Ngā mihi nui

Rebekah van der Splinter
Senior Advisor, Official Information and Privacy

Appendix 1: Documents for release

Number	Date	Document Type	Title/Subject Line	Redaction Grounds
1	6 May 2022	Email	RE: [EXTERNAL] Stokes Valley Entrance Dangerous Pedestrian Crossing	Some information has been withheld under s7(2)(a).
2	28 March 2024	Service request / Enquiry Trace	Pedestrian Crossings Request (RFS 1039789)	Released to you in full.
3	28 March 2024	Email	RE: [EXTERNAL] Request for Pedestrian crossing by the roundabout in Stokes Valley	
4	6 May 2024	Email	RE: [EXTERNAL] Re: RFS-1039789	
5	16 November 2024	Email	FW: [EXTERNAL] Request for Speed Reduction and Safety Measures on Eastern Hutt Road	Some information has been withheld under s7(2)(a).
6	13 February 2025	Service request / Enquiry Trace	General Traffic Enquiries (RFS 1065332)	
7	13 February 2025	Email	Re: [EXTERNAL] Fwd: Problem reported successfully – RFS 1065332	

From: ContactHCC
To: s7(2)(a)
Subject: RE: [EXTERNAL] Stokes Valley Entrance Dangerous Pedestrian Crossing
Date: Friday, 20 May 2022 8:56:51 am

Kia ora s7(2)(a)
Thank you for your email.
We have logged the issue with our Road and Traffic Team and given it the reference number RFS 569772 .
If you would like more information about Hutt City Council and our services, please ring our Customer Contact Centre on 04 570 6666
or 0800 488 824.
Ngā mihi nui,
Edna
CUSTOMER SERVICES
HUTT CITY COUNCIL
30 Laings Rd
Private Bag 31912
Lower Hutt 5040
New Zealand
w: http://www.huttcity.govt.nz
e: CONTACT@HUTTCITY.GOVT.NZ
t: +64 4 570 6666 | 0800 488 824 (0800 HUTT CITY)

From: s7(2)(a)
Sent: Friday, 6 May 2022 8:17 am
To: ContactHCC
Subject: [EXTERNAL] Stokes Valley Entrance Dangerous Pedestrian Crossing
Hi There,
I've been taking the train to Wellington each weekday for work from Pomare Station. And trying to cross over the main intersection either side of the roundabout on Eastern Hutt Rd at the Stokes Valley entrance. It is very tricky and dangerous at peak times.
As an adult I can run across a small break in the traffic, which feels unsafe as many people are busy checking to see if they can get through the roundabout. This must be very dangerous for children trying to cross the busy Rd
Also, once I manage to get across Eastern Hutt Rd I then need to cross over Stokes Valley Rd to get to Holborn Drive. This is also very dangerous as I need to find a small gap and run across so I dont get hit.
A pedestrian overpass on the south side of the roundabout would allow all pedestrians to safely get across the busy road. And perhaps encourage more people to walk and use the train. Or a solution until the overpass is possible would be to add a couple of pedestrian crossings.
I hope that this email can be passed on the appropriate person.
Thank you,
s7(2)(a)

15/12/2025

Enquiry Trace Form

Enquiry: 1039789 **Logged by:** Internal Report A Problem **on** 28/03/2024 16:34

Service: Road and Traffic **Classification:** Request For Service

Subject: Pedestrian Crossings Request

Desc.: Dear HCC,

Can I please request for a pedestrian crossing by the roundabout in Stokes Valley on Eastern Hutt Road.

So many runners, dog walkers and cyclists pass this and given the busy road status it should have a pedestrian crossing for our safety.

Also, by the bus stop of stokes valley interchange, there are yellow lines for no reason by the town buses. That should be resident parks only as some people still park there to catch the buses for all day whereas we residents of 1 and 3 Stokes Valley road survive the hard way.

Can these issues have your consideration please.

Also, one suggestion from the community is to make the area infront of us, a small dog park like Karori in Wellington does. It is by the parking space by the Hutt river and people have their dogs off leash there anyway so better to make it fenced dog park for human and animal safety.

Cheers,
Shane

Site: Stokes Valley Road (R00216), Stokes Valley, Lower Hutt

Site Address: Stokes Valley Road **Area:** Stokes Valley

Location: 302 Stokes Valley, STOKES VALLEY **Ward:** Northern

Contact: Shane Sharma

Email: shanes211@outlook.com

Customer: 626001 **Time:** 28/03/2024 16:34 **Method:** IRAP

Name: Shane Sharma **Email:** shanes211@outlook.com

Address: 302 Stokes Valley, STOKES VALLEY

Current Status:

No.	Effective	Status	Officer	Follow up Date
5	20/05/2024 11:25:40 a	Call Closed	Arun Joy	

Notes: AJ:It has been identified that there are a significant number of pedestrians and cyclists crossing Eastern Hutt Road near Stokes Valley RAB. A proposal for a pedestrian crossing facility has been added to the minor works prioritization list, subject to funding.

Broken yellow lines (BYLs) are marked on the street to ensure the road is accessible at all times. The street width is 4-4.5 meters, which is very narrow, and will be blocked if cars are parked on both sides. Residents are instructed to contact the parking enforcement team if any vehicles are found parked on the BYLs.

The dog park does not fall under the transport team's responsibilities; the caller needs to submit a separate request to the concerned department.

15/12/2025

Enquiry Trace Form

Status history:

No.	Effective	Status	Officer	Notes
4	22/04/2024 08:49	Call Logged	Arun Joy	AJ:It has been identified that there are a significant number of pedestrians and cyclists crossing Eastern Hutt Road near Stokes Valley RAB. A proposal for a pedestrian crossing facility has been added to the minor works prioritization list, subject to funding Broken yellow lines (BYLs) are marked on the street to ensure the road is accessible at all times. The street width is 4-4.5 meters, which is very narrow, and will be blocked if cars are parked on both sides. Residents are instructed to contact the parking enforcement team if any vehicles are found parked on the BYLs. The dog park does not fall under the transport team's responsibilities; the caller needs to submit a separate request to the concerned department.
3	22/04/2024 08:49	Call Logged	Arun Joy	
2	28/03/2024 16:34	Call Logged	Evandro Scherer	Subject amended - Old : Request Information (ARRI) New : Pedestrian Crossings Request (RTPX)
1	28/03/2024 16:34	Call Logged	Hayley Craig	

Revised Status:

Name : ..... Signed : ..... Date : ..... Time : .....

From: Arun Joy
To: ContactHCC
Subject: RE: [EXTERNAL] Request for Pedestrian crossing by the roundabout in Stokes Valley
Date: Monday, 6 May 2024 10:40:32 am
Attachments: image001.png
ATT00001.png

Will do, thank you.

Arun Joy
Roading Engineer

Hutt City Council, 30 Laings Road, Hutt Central, Lower Hutt 5010
P: M: W: www.huttcity.govt.nz

From: ContactHCC
Sent: Monday, May 6, 2024 9:50 AM
To: Arun Joy
Subject: FW: [EXTERNAL] Request for Pedestrian crossing by the roundabout in Stokes Valley

Good morning Arun,
Can you please look into RFS 1039789 and get back to the customer.
Thank you,
Billie

CUSTOMER SERVICES
Hutt City Council, 30 Laings Road, Hutt Central, Lower Hutt, Lower Hutt 5010
P: 04 570 6666 **M: W:** [www.huttcity.govt.nz]www.huttcity.govt.nz

From: Shane Sharma <shanes211@outlook.com>
Sent: Friday, May 3, 2024 10:15 PM
To: ContactHCC <contact@huttcity.govt.nz>
Subject: Re: [EXTERNAL] Request for Pedestrian crossing by the roundabout in Stokes Valley

Kia ora team,
Any update on this case please?
Cheers,
Shane
Get Outlook for iOS

From: ContactHCC <contact@huttcity.govt.nz>
Sent: Thursday, March 28, 2024 4:34:57 PM
To: Shane Sharma <shanes211@outlook.com>
Subject: RE: [EXTERNAL] Request for Pedestrian crossing by the roundabout in Stokes Valley

Kia ora Shane,

Thank you for your email.

We have logged a request with Road and Traffic and given it the reference number RFS 1039789.

Did you know that you can report a problem on our website? Go to our report a problem page at https://maps.huttcity.govt.nz/RAP/viewer/

If you would like more information about Hutt City Council and our services, please ring our Customer Contact Centre on 04 570 6666 or 0800 488 824.

Thank you,
Billie
CUSTOMER SERVICES
Hutt City Council, 30 Laings Road, Hutt Central, Lower Hutt, Lower Hutt 5010
P: 04 570 6666 **M: W:** [www.huttcity.govt.nz]www.huttcity.govt.nz

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From: Shane Sharma <shanes211@outlook.com>
Sent: Thursday, March 28, 2024 4:14 PM
To: ContactHCC <contact@huttcity.govt.nz>
Subject: [EXTERNAL] Request for Pedestrian crossing by the roundabout in Stokes Valley
Dear HCC,
Can I please request for a pedestrian crossing by the roundabout in Stokes Valley on Eastern Hutt Road.
So many runners, dog walkers and cyclists pass this and given the busy road status it should have a padestrian crossing for our safety.
Also, by the bus stop of stokes valley interchange, there are yellow lines for no reason by the townhouses. That should be resident parks only as some people still park there to catch the buses for all day whereas we residents of 1 and 3 Stokes Valley road survive the hard way.
Can these issues have your consideration please.
Also, one suggestion from the community is to make the area infront of us, a small dog park like Karori in Wellington does. It is by the parking space by the Hutt river and people have their dogs off leash there anyway so better to make it fenced dog park for human and animal safety.
Cheers,
Shane
Get Outlook for iOS

From: ContactHCC
To: Shane Sharma
Subject: RE: [EXTERNAL] Re: RFS-1039789
Date: Monday, 24 March 2025 8:57:53 am
Attachments: image001.png
image002.png
image003.png

Kia ora Shane,
Sorry to hear you have not received a response yet. I have forwarded this through to Arun so he can get back to you as soon as possible.
Many thanks,
Bayleigh

From: Shane Sharma
Sent: Saturday, 22 March 2025 9:59 am
To: ContactHCC
Cc: Information Requests
Subject: Fw: [EXTERNAL] Re: RFS-1039789

Kia ora team,
Still waiting to hear back on this below and wondering if Arun if no longer with HCC. If he is still HCC employee then he should have been responding under the public service act.
Can you please advise me on the below as soon as possible and I ask all communication and documentation re this project under the LGOIMA and expect an acknowledgement as well as a response back under 20 working days. Thank you

From: Shane Sharma <shanes211@outlook.com>
Sent: Sunday, March 9, 2025 9:03 PM
To: Arun Joy <Arun.Joy@huttcity.govt.nz>
Subject: Re: [EXTERNAL] Re: RFS-1039789

Kia ora Arun,
Reaching out again on the pedestrian crossing by the Stokes Valley Roundabout.
Can you please update me on the status of this project of HCC. I see some unnecessary work being done in Hutt City but this work request that may save lives of people of Stokes Valley including elderly and children should be more than just minor work.
Please let me know as soon as possible as I need fo update the Stokes Valley Community about this.
Ngā mihi
Shane
Get Outlook for iOS

From: Arun Joy <Arun.Joy@huttcity.govt.nz>
Sent: Monday, August 5, 2024 9:35:01 AM
To: Shane Sharma <shanes211@outlook.com>
Subject: RE: [EXTERNAL] Re: RFS-1039789

Good morning Shane,
Thank you for following up on this matter.
I have noted my response on Confirm, accessible to the customer center weeks ago.
Apologies if you haven't heard back yet. Please see the updates below:
It has been identified that a significant number of pedestrians and cyclists are crossing Eastern Hutt Road near Stokes Valley Round-about.
Proposal for a pedestrian crossing facility has been added to the minor works prioritization list, which will be subject to prioritization with other requests for pedestrian crossings across the council and funding.
Broken yellow lines (BYLs) are marked on the street to ensure the road is accessible at all times.
The street width is 4-4.5 meters, which is very narrow and will be blocked if cars are parked on both sides.
Residents are instructed to contact the parking enforcement team if any vehicles are found parked on the BYLs.
The dog park does not fall under the transport department; please submit a separate request to the concerned department.
If you have any questions, feel free to contact me.
Best regards,
Arun

Arun Joy
Roading Engineer

Hutt City Council, 30 Laings Road, Hutt Central, Lower Hutt 5010
P: M: W: www.huttcity.govt.nz

From: Shane Sharma <shanes211@outlook.com>
Sent: Saturday, August 3, 2024 7:11 PM
To: Arun Joy <Arun.Joy@huttcity.govt.nz>
Subject: Re: [EXTERNAL] Re: RFS-1039789

Kia ora,
Can I have an update on this case pls as this has been a few months and no comms I have heard on this.

Also reporting a near miss on the same when a lady with a dog was about to get hit by a car so acting fast would save lives.
Cheers,
Shane
Get Outlook for iOS

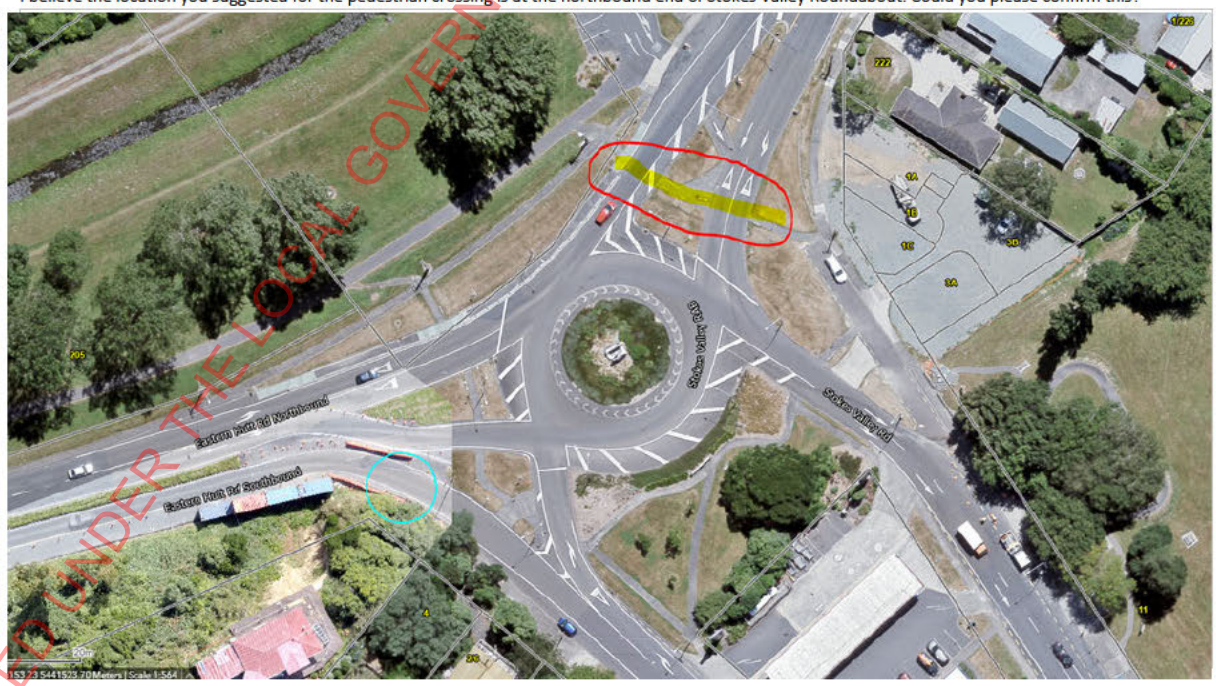
From: Arun Joy <Arun.Joy@huttcity.govt.nz>
Sent: Monday, May 6, 2024 11:26:00 AM
To: Shane Sharma <shanes211@outlook.com>
Subject: RE: [EXTERNAL] Re: RFS-1039789
Thanks Shane,
I will get back to you with updates.
Cheers,
Arun

Arun Joy
Roading Engineer

Hutt City Council, 30 Laings Road, Hutt Central, Lower Hutt 5010
P: M: W: www.huttcity.govt.nz

From: Shane Sharma <shanes211@outlook.com>
Sent: Monday, May 6, 2024 11:24 AM
To: Arun Joy <Arun.Joy@huttcity.govt.nz>
Subject: [EXTERNAL] Re: RFS-1039789
Hi Arun,
That's correct. My contact is 02108586101
Cheers
Shane
Get Outlook for iOS

From: Arun Joy <Arun.Joy@huttcity.govt.nz>
Sent: Monday, May 6, 2024 10:51:32 AM
To: shanes211@outlook.com <shanes211@outlook.com>
Subject: Re: RFS-1039789
Good day Shane,
I am reaching out to you regarding the enquiry you submitted to HCC requesting the installation of a pedestrian crossing on Eastern Hutt Road.
I believe the location you suggested for the pedestrian crossing is at the northbound end of Stokes Valley Roundabout. Could you please confirm this?



Please respond with your mobile number, as I may need to contact you for further questions or clarifications.
Kind Regards
Arun Kattakkayam Joy
Roading Engineer
Hutt City Council, 30 Laings Road, Lower Hutt 5010

P: M: 027 257 4260 **W:** www.huttcity.govt.nz

Arun Joy
Roading Engineer

Hutt City Council, 30 Laings Road, Hutt Central, Lower Hutt 5010
P: M: W: www.huttcity.govt.nz

From: ContactHCC
To: s7(2)(a)
Cc: transport_referrals
Subject: FW: [EXTERNAL] Request for Speed Reduction and Safety Measures on Eastern Hutt Road
Date: Monday, 18 November 2024 10:58:21 am
Attachments: Speed limit on road letter.pdf
20241108_071844.jpg
20241108_080330.jpg
20241108_080509.jpg
image001.png

Kia ora s7(2)(a)

Thank you for your email.

We have forwarded this to our Road and traffic team to arrange a reply.

If you would like more information about Hutt City Council and our services, please ring our Customer Contact Centre on 04 570 6666 or 0800 488 824.

Thank you,
Bayleigh
CUSTOMER SERVICES
Hutt City Council, 30 Laings Road, Hutt Central, Lower Hutt, Lower Hutt 5010
P: 04 570 6666 **M:** **W:** [www.huttcity.govt.nz]www.huttcity.govt.nz

From: s7(2)(a)
Sent: Saturday, November 16, 2024 11:21 AM
To: ContactHCC
Cc: s7(2)(a)
Subject: [EXTERNAL] Request for Speed Reduction and Safety Measures on Eastern Hutt Road

Dear Hutt City Council Team,

Please find attached our formal letter regarding the request for speed reduction and safety measures on Eastern Hutt Road in Stokes Valley, Lower Hutt. As outlined in the letter, the current speed limit and related issues are significantly impacting the safety and quality of life of residents in our area.

In addition to the letter, we have also attached the following supporting documents for your review:

1. **Photos documenting damage to the property at 234 Eastern Hutt Road** caused by traffic construction trucks.
2. **Photos illustrating the traffic and safety concerns** near our homes, including challenges with reversing, pulling over, and pedestrian crossings.

We kindly request that you review these materials and prioritize implementing the requested changes, particularly the speed limit reduction to 50 km/h, the installation of a

flush median, and other safety improvements outlined in our letter.

Should you require any additional information or documentation, please do not hesitate to contact us. We appreciate your attention to this urgent matter and look forward to your response.

Yours sincerely,
Residents of s7(2)(a) Eastern Hutt Road
Stokes Valley, Lower Hutt
Wellington

damage again gardan

Hutt City Council
30 Laings Road
Lower Hutt 5010
New Zealand

Subject: Request for Speed Reduction and Safety Measures on Eastern Hutt Road Due to Noise, Safety, and Traffic Concerns

Dear Hutt City Council Team,

We, the residents of s7(2)(a) Eastern Hutt Road in Stokes Valley, Lower Hutt, are writing to formally request a reduction in the speed limit on our section of Eastern Hutt Road. The current speed limit of 80 km/h has led to significant noise disturbance, traffic safety concerns, and damage to property, all of which are impacting our quality of life.

Our homes are situated beyond the nearby roundabout, where vehicles often accelerate rapidly, resulting in constant, high noise levels and increased risks for residents. Unlike properties closer to the roundabout where traffic naturally slows, our section experiences consistently high speeds, which poses additional safety issues. This issue has affected us for many years, and the situation is worsening daily.

To address these issues, we respectfully request that the speed limit be reduced to 50 km/h from the roundabout up to the area near the bridge past [redacted] Eastern Hutt Road, toward Silverstream. In addition to this change, we request the following measures:

1. **Difficulty Stopping or Pulling Over**: The high speed limit makes it challenging to pull over safely near our homes. Vehicles approaching from behind at 80 km/h frequently tailgate or blow their horns, pressuring us to move forward even when attempting to stop.

2. **Issues with Reversing Vehicles**: When reversing out of our driveways or parking near our homes, it's difficult to safely join traffic due to the high speeds of oncoming cars. This has led to frequent instances of tailgating and horn honking from other drivers.

3. **Traffic Flow and Acceleration from Roundabout**: Vehicles often accelerate from the nearby roundabout, causing additional noise and complicating turns for us as residents. To address this, we request the installation of a flush median near our homes to assist with turning safely, as well as a reduced speed limit of 50 km/h in this area.

4. **Pedestrian Crossing Challenges**: Due to the high speeds, crossing the road safely has become increasingly difficult, particularly on weekends when traffic increases. Although we are aware there is a road pass near the roundabout, it is not a designated pedestrian crossing. We request the installation of a proper pedestrian crossing at this existing road pass near the roundabout to improve safety for residents and visitors.

5. **Installation of Safety and Speed Cameras**: We believe that implementing speed and safety cameras in our area would help deter speeding and reduce the risk of potential accidents, creating a safer environment for everyone. We have observed that during construction periods, vehicles often disregard the temporary 50 km/h limit, demonstrating a lack of adherence to New Zealand's speeding rules and regulations. Cameras could help enforce these limits and encourage safer driving behaviours.

Additionally, s7(2)(a) **, a resident at** [redacted] **Eastern Hutt Road,** has repeatedly faced issues with traffic construction trucks damaging his front lawn. Due to the high speeds on this road, these trucks are forced to make sharp U-turns on his property to avoid reversing and blocking traffic, which would increase the risk of accidents. Despite s7(2)(a) reporting these incidents to the Hutt City Council multiple times, the problem persists. Photos documenting this damage are attached for your reference.

For your consideration, we are also attaching photos illustrating these issues in our area. We believe these changes—especially the reduction of the speed limit to 50 km/h—are crucial for improving noise levels, enhancing safety, and preventing future accidents in our community. Please let us know if there are any further steps required on our part to facilitate these adjustments.

Thank you for your attention to this long-standing issue, which has become more serious over time. We look forward to your response and hope for prompt action to address these concerns.

Yours sincerely,

s7(2)(a) [redacted]

- **Resident at** [redacted] **Eastern Hutt Road**
- **Resident at** [redacted] **Eastern Hutt Road**
- **Resident at** [redacted] **Eastern Hutt Road**
- **Resident at** [redacted] **Eastern Hutt Road**

(Residents' Signatures)

s7(2)(a) [redacted] Eastern Hutt Road
Stokes Valley, Lower Hutt
Wellington

Document 5
Email Attachment (2)

15/12/2025

Enquiry Trace Form

Enquiry: 1065332 **Logged by:** Report A Problem **on** 13/02/2025 11:09

Service: Road and Traffic **Classification:** Request For Service

Subject: General Traffic Enquiries

Desc.: Hi there,

Subject: Requesting Hutt City Council to install a divider with traffic bollards at the point of existing Stokes Valley (Near Roundabout) towards Lower Hutt City

The request was coming from a concern that I have been noticing that many cars/drivers at the point of exiting Stokes Valley towards LH City (near roundabout) failed to notice that there is another lane/traffic coming from Silver Stream side resulting directly getting into another lane instead of sticking to their lane, I have also witnessed some near misses around this place and people suddenly realising that there is another lane and stopping all of a sudden causing chaos for the cars behind, It appears these are all because of there is no proper signage and divider with bollards between the two lanes at least on the yellow line between these two lanes, it is literally very hard to see the two lanes for new people around the valley unless you have been living here, the road is pretty hard left turn into Eastern Hutt Road, having the signs and bollards will definitely help.

To avoid these, requesting Hutt City Council to install the proper signage (if not there already) and DIVIDER with Bollards at the highlighted area (in red) on the yellow line between the lanes in the attached photo.

If I'm not wrong, there used to be a divider with bollards, during the hill works project it has been taken off and never got installed back, also it is surprising to see that it never occurred to the council in these 11 months to install something like this for the safety of people. I know the hill works project is costly project, but it is very sad to see that the council hadn't noticed as it is a safety matter and take precautions.

Appreciate your consideration and support :)

Please let us know if you have any questions.

Thanks,
s7(2)(a)

Site: Eastern Hutt Road (R00186), Taita, Lower Hutt

Site Address: Eastern Hutt Road **Area:** Taita

Location: Stokes Valley Exit towards Lower Hutt City (near SV roundabout), between the two lanes of Silver Stream traffic and Stokes Valley Traffic through yellow line. **Ward:** Northern

Contact: s7(2)(a)
Telephone:
Email:

Customer: 651511 **Time:** 13/02/2025 11:09 **Method:** RAP

Name: s7(2)(a) **Telephone:** s7(2)(a)

Address: **Email:**

Current Status:

No.	Effective	Status	Officer	Follow up Date
7	23/07/2025 03:05:44	Call Closed	Arun Joy	

Notes: Upon investigation, it has been identified that there is no significant safety risk at the mentioned intersection for vehicle manoeuvres. Adequate signage is also in place. The divider was installed during the hill work, as one lane was closed to traffic, and the divider/bollards were part of the traffic management plan related to that work.

Status history:

No.	Effective	Status	Officer	Notes
6	06/03/2025 10:38	Call Closed	Arun Joy	transferred to traffic to decide on solution here not maintenance issue. thanks AJ: Traffic islands, giveway signs and roadmarkings are present on at the roundabout as per standards.

15/12/2025

Enquiry Trace Form

Status history:

No.	Effective	Status	Officer	Notes
5	18/02/2025 10:29	Call Logged	Arun Joy	transferred to traffic to decide on solution here not maintenance issue. thanks AJ: Traffic islands, giveway signs and roadmarkings are present on at the roundabout as per standards.
4	18/02/2025 10:29	Call Logged	Arun Joy	Subject amended - Old : Bollards Install / Repair (ARBL) New : General Traffic Enquiries (RTGE). transferred to traffic to decide on solution here not maintenance issue. thanks
3	13/02/2025 11:09	Call Logged	Ieshea McDonald	Subject amended - Old : Request Information (ARRI) New : Bollards Install / Repair (ARBL)
2	13/02/2025 11:09	Call Logged	Hayley Craig	Subject amended - Old : Road-General Traffic Enquiries (OEGT) New : Request Information (ARRI)
1	13/02/2025 11:09	Call Logged	Online RFS	

Revised Status:

Name : ..... Signed : ..... Date : ..... Time : .....

Report generated by : Arun Joy 11:53:58

From: s7(2)(a)
To: Arun Joy
Cc: ContactHCC; TeEnquiries
Subject: Re: [EXTERNAL] Fwd: Problem reported successfully - RFS 1065332
Date: Sunday, 27 July 2025 7:34:57 pm
Attachments: noname
image001.png
noname

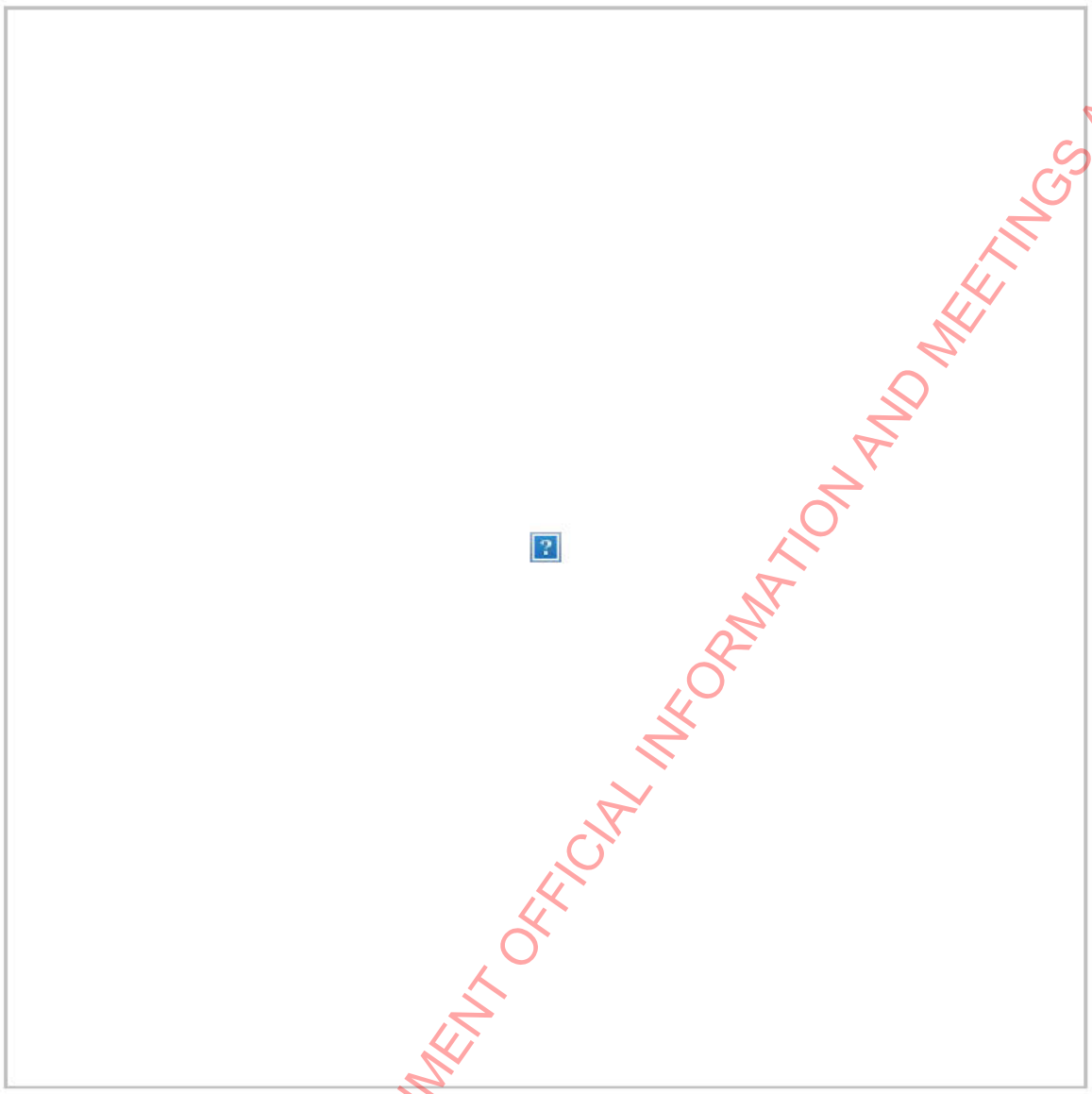
Thanks Arun!!

It doesn't seem like it is safe though, I thing installing the bollards on the yellow line would help further.

Thanks,
s7(2)(a)

On Wed, 23 Jul 2025 at 3:06 PM s7(2)(a) wrote:

> Hi s7(2)(a)
>
> Upon investigation, it has been identified that there is no significant safety risk at the mentioned intersection for vehicle manoeuvres. Adequate signage is also in place. The divider was installed during the hill work, as one lane was closed to traffic, and the divider/bollards were part of the traffic management plan related to that work.
>
> However, I'm happy to meet you on-site to review your concerns and get a clearer picture. Please let me know a time that suits you if you'd like to schedule a site meeting.
>
> Kind regards,
>
> **Arun Joy**
> Roading Engineer
>
> Hutt City Council, 30 Laings Road, Hutt Central, Lower Hutt 5010
> **P: M:** s7(2)(a) **W:** www.huttcity.govt.nz



From: ContactHCC <contact@huttcity.govt.nz>
Sent: Wednesday, 23 July 2025 2:51 pm
To: Arun Jov <Arun.Jov@huttcity.govt.nz>
Cc: s7(2)(a) [redacted]
Subject: FW: [EXTERNAL] Fwd: Problem reported successfully - RFS 1065332

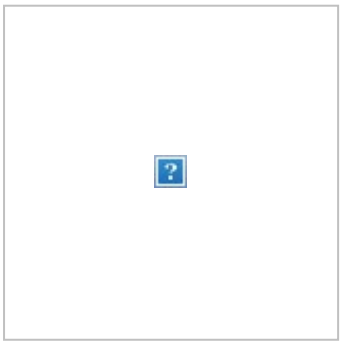
Kia Ora Arun,

Could you please supply an update for s7(2)(a) [redacted]

Kia pai tō rā

Louise
Customer Services Representative

Hutt City Council, 30 Laings Road, Hutt Central, Lower Hutt 5010
P: 04 570 6666 **M:** **W:** [www.huttcity.govt.nz]www.huttcity.govt.nz



From: s7(2)(a)
Sent: Tuesday, 22 July 2025 4:34 pm
To: ContactHCC <contact@huttcity.govt.nz>
Subject: Re: [EXTERNAL] Fwd: Problem reported successfully

> You don't often get email from anilreddynalla5@gmail.com. Learn why this is important

Hi there,

Still waiting for the response from road engineer.

Thanks,
s7(2)(a)

On Wed, 30 Apr 2025 at 2:15 PM s7(2)(a) wrote:

> Thank you for the update.
>
> On Wed, 30 Apr 2025 at 2:13 PM ContactHCC <contact@huttcity.govt.nz> wrote:
>
> > Kia Ora s7(2)(a)
> >
> > I have asked our Roading engineer to come back to you directly with an update.
> >
> > Many thanks,
> >
> > Bayleigh
> >
> > ---
> >
> > **From:** s7(2)(a)
> > **Sent:** Wednesday, 30 April 2025 11:06 am
> > **To:** ContactHCC <contact@huttcity.govt.nz>
> > **Subject:** [EXTERNAL] Fwd: Problem reported successfully
> >
> > > You don't often get email from anilreddynalla5@gmail.com. Learn why this is important
> >
> > Hi there,
> >
> > Do we have any update on this?

Thanks,
s7(2)(a) [redacted]

---------- Forwarded message ---------
From: <rfs@huttcity.govt.nz>
Date: Thu, 13 Feb 2025 at 11:10 AM
Subject: Problem reported successfully
To: s7(2)(a) [redacted]

Thank you for bringing this issue/problem to our attention. We will take the appropriate action to remedy this situation. For further reference please use this unique Request for Service identification number. 1065332

Location description	Waka Kotahi Safety	Activity description	Programme or other project reference	Primary benefit	Funding source (phase)	Intervention type
Waiwhetu Fairfeild - Rumgay SNP	1346	Raised Pedestrian Crossing	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Ped X on High St(between Bunny and Daly)	314030	Raised Pedestrian Crossing	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
pedestrian crossing installed at Stokes Valley entrance.	508944	Raised Pedestrian Crossing	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
across Wainui Road, towards Riverside Drive South	146403	Raised Pedestrian Crossing	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Junction of Park Road and Grounsell Crescent Belmont	508543	Raised Pedestrian Crossing	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Avalon Intermediate	402419	Raised Pedestrian Crossing	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
George street, Stokes valley	508944	Raised Pedestrian Crossing	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Waiwhetu & Whites Lines East IS SNP	362594	Raised Safety Platforms	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Ludlam Crescent/ Manuka Avenue Intersection	54028	Roundabout Upgrade from a T-Intersection	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Coast Road	4493	Road Safety Improvements along Coast Road inlcuding crash barriers and other accident reduction measures.	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Delineation Improvements
Moohan Street/Main Road Intersection	-	Intersection Safety Improvements	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Geometric improvements
Naenae Road/Waiwhetu Road Intersection	44794	Roundabout Upgrade from T - Intersection Safety Improvements	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Cuba Street/Adelaide St Intersection	-	Intersection Safety Improvements	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Throughout Lower Hutt	355972	Speed Review - City	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Traffic calming
Throughout Lower Hutt	506165	Speed Review - Schools	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Traffic calming
Hutt Rd & Udy St Intersection	20676	Roundabout Upgrade from T - Intersection Safety Improvements	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Wainuiomata Hill Road	-	Road Safety Improvements inlcuding crash barriers and other accident reduction measures.	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Geometric improvements
Muritai Road/Marine Parade Intersection	66607	Roundabout Upgrade from T - Intersection Safety Improvements	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Bell Road / Parkside Road Intersection	54340	Bell Road / Parkside Road Roundabout Upgrade	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Waione St & Seaview Rd Intersection	57044	Interesction Upgrade	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
The Esplanade & Hutt Rd Intersection	-	Intersection Safety Improvements	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Throughout Lower Hutt	-	Accessibility/Walkoff Improvements	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Other, as agreed with Waka Kotahi
York and Mahina Bay, Richmond Street/Jackson Street Intersection	21319	RtZ-York and Mahina Bay Pedestrain Crossings Package Y2, RtZ-Richmond Street/Jackson Street Ped Crossing Improvements Y2	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Other, as agreed with Waka Kotahi
Normandale Road	4377	Road Safety Improvements	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Geometric improvements
High Street		Pedestrian Safety Improvements	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Other, as agreed with Waka Kotahi
Throughout Lower Hutt	352955	Speed Calming/Speed Management	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Traffic calming
Ludlam Crescent & Penrose Street Intersection	50603	Signalised Intersection Upgrade	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Laings Road/ Knights Road Intersection	973	Intersection upgrade - kerb buildouts, traffic islands	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Geometric improvements

On the likes of Knights Road outside Framers Entrance	-	Accessibility/Walkoff Improvements	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Other, as agreed with Waka Kotahi
Dowse Drive	-	Road Safety Improvements along Dowse Drive, including tightening the intersections and accesibility improvements etc.	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Geometric improvements
Everest Avenue and Treadwell St (near Naenae Pool), , Holland Street near Fernlea School. Pito-One Road	352955	*RtZ-Naenae Pedestrian Crossings Package (For Naenae Pool) Y1, RtZ-Speed Calming on Holland St near Fernlea School Y1, RtZ-Ptio-One Crossing Y1	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Other, as agreed with Waka Kotahi
Milne Crescent, Biddle Crescent and Johnston Grove	-	Parking Safety Improvements	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Traffic management systems
On Eastern Hutt Road outside Pomare Station	-	New Signalised Pedestrian Crossing following coroner feedback after fatality	Endorsed business case	1.1 Impact on social cost and incidents of crashes	Local road improvements	Other, as agreed with Waka Kotahi
Throughout Lower Hutt	305757	Speed Calming	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Traffic calming
Throughout Lower Hutt	28016	Raised Pedestrian Crossings	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Other, as agreed with Waka Kotahi
Queens Dr / Kings Cres, High Street/ Macky Street, Puriri/Pohutukawa Intersections	-	*Queens Dr / Kings Cres, High Street/ Macky Street, Puriri/Pohutukawa Intersection Safety Improvements	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Kings Cr & Pretoria Intersection	20722	Urban Priority Intersection Upgrade	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Waione & Kirkcaldy Intersection	20758	Urban Priority Intersection Upgrade	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Intersection improvements
Eastern Hutt Road, Stokes Valley		New Signalised Pedestrian Crossing		1.1 Impact on social cost and incidents of crashes	Local road improvements	Intersection improvements
Parkside Road/Bell Road Intersection		Upgrade T-intersection to roundabout		1.1 Impact on social cost and incidents of crashes	Local road improvements	Intersection improvements
Ludlam Crescent/Pohutakawa Street Intersection, Woburn		Upgrade T-intersection to roundabout		1.1 Impact on social cost and incidents of crashes	Local road improvements	Intersection improvements
90 Knights Road, Waterloo		Signalsied pedestrian crossing (not rasied).		1.2 Impact on a safe system	Local road improvements	Intersection improvements
Marine Drive, Lowry Bay at bus stop 8839		Pedestrian crossing (not rasied) to bus stop		1.2 Impact on a safe system	Local road improvements	Intersection improvements
Wagon Road / Thomas Street intersection, Stokes Valley		Intersection upgrade - including crossing and kerb build-outs		1.1 Impact on social cost and incidents of crashes	Local road improvements	Intersection improvements
161 Moores Valley Road & 199 Coast Road		Landslide remediations		1.2 Impact on a safe system	Local road improvements	Resilience improvements
60 Korokoro Rd & 61 London Road, Korokoro		Landslide remediations		1.2 Impact on a safe system	Local road improvements	Resilience improvements
15 Sweetacres Drive, 148 Hill Road, Natush Road, Belmont		Landslide remediations		1.2 Impact on a safe system	Local road improvements	Resilience improvements
15 Maungaraki Road & 18 Jasmine Gr, Maungaraki		Landslide remediations		1.2 Impact on a safe system	Local road improvements	Resilience improvements
123 George St, Stokes Valley		Pedestrian crossing (not rasied) to school		1.1 Impact on social cost and incidents of crashes	Local road improvements	Intersection improvements
Wai-iti Crescent, Woburn		Intersecytion upgrade - improvements to kerb buildout alignments		1.2 Impact on a safe system	Local road improvements	Intersection improvements

HUTT CITY TE AWA KAIRANGI **Traffic Subcommittee**

15 August 2023

Report no: TSC2023/4/258

Project Prioritisation Process

Purpose of Report

1. To agree on how projects requiring Traffic Subcommittee approval will be prioritised.

Recommendations

That the Subcommittee:

(1) notes and receives the report; and

(2) endorses the project prioritisation process set out in this report.

Background

2. Council has a greater number of work requests than it has to resource for and needs to prioritise the works it will undertake. This prioritisation needs to balance safety and technical compliance factors as well as reputational or community interest against funding and resourcing constraints.

3. The draft list of projects currently exceeds 130 lines and it is likely that only a third of these could be funded over the National Land Transport Programme (NLTP) period of three years.

4. Requests and circumstances change over time and prioritisation needs to be responsive and dynamic but also transparent and underpinned by the appropriate technical analysis. The prioritisation process also needs to demarcate the roles and decisions of operational management, technical compliance review and governance.

5. A clear prioritisation process would enable each delivery and review element to focus more efficiently on their area of responsibility and knowledge.

6. No one group has sight of all the factors to be considered. Officers can undertake, transparently, the technical prioritisation and can overlay funding and resourcing constraints. Reputational and community interest factors will need a specific input mechanism that includes elected members' feedback from the community but is transparent in how it is factored into the process.

7. Currently the prioritisation of work programmes is discussed in detail with the Traffic Subcommittee. If the recommended process is agreed upon, officers would use the agreed process to present the resulting list to the Traffic Subcommittee and would seek assurance of compliance with the process and due consideration of factors (including how subjective judgements were applied) but not make operational decisions on the final priority.

8. Officers would continuously update the list of candidate projects and use the agreed process and principles to continuously update the prioritised list. The Traffic Subcommittee's role would be to concentrate on ensuring governance level process compliance and that agreed factors have been appropriately considered.

Discussion

9. The recommended prioritised process has five steps;

   a. **Master long list is updated** (either additions or deductions) continuously by officers, the public or elected members' feedback.

   b. **Technical prioritisation** by officers, using a calculation spreadsheet, an example of the approach is attached as Appendix 1 to the report.

   c. **Subjective prioritisation based on reputation/ community interest overlayed** by officers; feedback directly to officers or from elected members or serious impact (such as coroner report) may escalate prioritisation (this is a more subjective judgement, but provide)

   d. **Funding and resourcing constraint and delivery optimisation overlay** by officers; if projects exceed $2m (and Low cost, low-risk (LCLR) funding is not available) or LCLR funding has been exhausted, either the project is scheduled for the next NLTP or Council 100% funding approval can be sought. Delivery optimisation may also require a subjective judgement to undertake projects with a different priority.

   e. **Prioritised list presented at Traffic Subcommittee meetings** for any confirmations or clarifications sought by the committee.

10. A subjective overlay (step 3) is included to provide flexibility in the process which the technical prioritisation cannot cover fully or at least at this stage. It is envisaged that this is used to shift prioritisation by a small margin (such as escalating 10 rankings) rather than ranking 100 to the top 10.

11. The technical calculation spreadsheet is not finalised and will require the inclusion of some other factors (such as housing strategy impact or climate change impact) and calibration testing. As this is a new process, some refinement, over time, is expected.

12. Attached, as Appendix 1, is "Project prioritisation matrix for Traffic engineering team – technical memo" which sets out a more detailed review of the operation of the technical prioritisation.

13. This approach would inform the NLTP 24-27 list of Low cost, Low risk projects (for local road improvements and Road to zero which are individually below $2m), where Council has more discretion to reprioritise projects within the agreed funding envelope. Council will provide an unprioritised long list of projects, which will exceed the funding approved, but will update the list and continuously reprioritise the list for 2024-2027. This aligns with Waka Kotahi's advice for LCLR projects.

14. The NLTP 2024-27 projects that will be business cases (eg more complex and above $2m) do not permit Council such reprioritisation discretion and officers will provide a report of candidate projects to the Infrastructure and Regulatory Committee meeting to be held on 14 September 2023.

15. An unsubsidised budget allocation will be sought in the Long Term Plan to provide flexibility for priority projects that exceed the Waka Kotahi funding.

Options

16. This report does not offer alternative options or seek a decision by the committee.

Climate Change Impact and Considerations

17. This process does not have Climate Change impact implications, but the technical prioritisation step will consider this.

Consultation

18. This decision is the clarification of an internal Council process and therefore external consultation is not required.

Legal Considerations

19. Legal compliance considerations for prioritisation are contained within the technical review step.

Financial Considerations

20. Financial considerations for prioritisation are contained within the funding and resourcing constraint review step.

Appendices

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1⇩	Prioritisation Report	122

Author: Declan Millin
Principle Advisor – Micromobility Programme

Approved By: Jon Kingsbury
Head of Trasport

Project Prioritisation Matrix for Traffi Engineering team - technical memo

09 July 2023

Hutt City Council

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1.0 Introduction

Project prioritisation is a fundamental activity for Road Controlling Authorities (RCAs), including Hutt City Council. This pivotal process plays a significant role in operational and strategic planning, deciding which projects to implement, postpone, or discard based on a range of factors such as available resources, urgency, potential benefits, and risk management, among others.

Historically, RCAs, including our own Hutt City Council, have grappled with challenges in prioritising road and infrastructure projects effectively. These issues often stem from constrained resources, competing project demands, lack of structured and consistent methodologies, and evolving community needs and technological developments. Consequently, the task of ranking projects and deciding on the most effective resource allocation has remained an ongoing challenge.

It's important to note that these challenges are not unique to Hutt City but are common across RCAs nationally. Although each authority operates in unique contexts and caters to specific local needs, the fundamental issue of effectively and transparently prioritising projects is a shared concern.

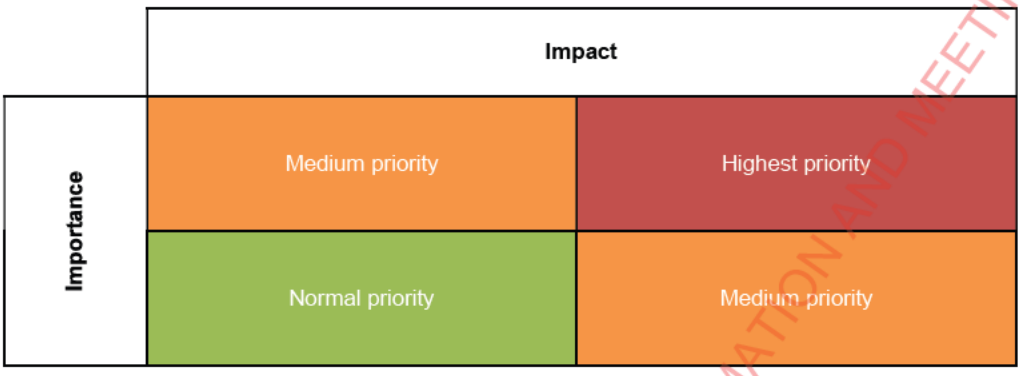
There is a growing consensus that the traditional project prioritization methods, often relying on ad-hoc judgments or simplistic criteria, are insufficient in today's complex and dynamic environment. Furthermore, the lack of an objective, transparent, and comprehensive prioritisation process can lead to inconsistencies, biases, and sub-optimal decisions, which may affect community satisfaction, road safety, and efficient resource allocation.

It is crucial, then, that a more sophisticated, systematic, and data-driven approach to project prioritization is established. Not only will this offer a clearer path for managing infrastructure projects, but it will also offer the Council and elected members a more transparent understanding of what projects are being implemented annually, helping to 'draw a line in the sand' in terms of commitments.

The proposed "Project Prioritization Matrix" aims to offer this solution. By integrating a range of factors into a single, practical, and rigorous matrix, we can provide the structure and clarity necessary to enhance the prioritization process. The Matrix will aid in making better-informed decisions, increase transparency, and ultimately improve stakeholder satisfaction. The prioritization process, informed by the Matrix, will provide our Council and Councilors with a reliable tool to manage annual project commitments effectively, ensuring a balanced, sensible approach to fulfilling our community's needs.

2.0 Prioritisation matrix

A prioritisation matrix is a means to identify projects of highest urgency. Ultimately, a goal can be to map an array of projects to a matrix similar to that shown below.



The mapping, however, should encompass both a mathematical and experience-based approach. Therefore, the methodology applied here reflects this as a literature review is first conducted, where application is informed by findings from the review. Experience-based learnings advises the fine tuning of the model.

The prioritisation matrix developed here focuses on general traffic engineering issues on the road network, other prioritisation frameworks may need to be developed as part of the Waka Kotahi funding streams to pin-point particular concerns (such as Walking Improvements, transport choices, cycling & walking etc)

2.1 Literature review

In 1999, Transfund New Zealand (now Waka Kotahi NZ Transport Agency) released a report guiding approaches for risk assessment methods[1]. The report provides insights into the evaluation of road networks. While the report does not directly address modelling prioritisation of road projects, it provides valuable information on risk assessment methods that can be used to inform prioritisation decisions such as the application of sensitivity analysis.

Regarding prioritisation however, several studies that have been conducted in this area. One study[2] suggests that the algorithm used to guide future surface and pavement works needs to be updated to reflect current knowledge and recent experience. Another study[3] investigates the key productivity constraints faced by New Zealand road pavement maintenance and rehabilitation. A third study[4] discusses prioritisation methods for strategic planning and road work programming in a new highway development and management tool.

[1] https://www.nzta.govt.nz/assets/resources/research/reports/148/148-Risk-assessment-methods-in-road-network-evaluation.pdf
[2] https://www.researchgate.net/publication/309764774_Review_of_the_NZ_Transport_Agency_treatment_selection_algorithm
[3] https://www.researchgate.net/publication/331415418_Improving_efficiency_in_roading_projects_a_New_Zealand_study
[4] https://journals.sagepub.com/doi/10.3141/1655-08

The Road Maintenance Task Force[5] reviewed current business models used to deliver road maintenance and noted that there is room for increased efficiency by having road maintenance delivered in a more integrated way. A fifth study[6] proposes a series of linked analysis tools which can unify economic data, energy data, system assumptions and facilitate improved research prioritisation. Finally, a sixth study[7] proposes a conceptual model to effectively prioritise recovery of roads damaged by natural/man-made disasters. Overall, these studies suggest that there is a need for updated algorithms, improved productivity, and integrated delivery of road maintenance to increase efficiency and prioritise road projects in New Zealand.

2.1.1 Sensitivity analysis

Sensitivity analysis is a technique used to analyse how changes in independent variables affect a dependent variable under certain conditions. It is used to assess risk and pinpoint important components. The following are some of the key techniques and formulas used in sensitivity analysis:

- Calculation: sensitivity is calculated by dividing the percentage change in output by the percentage change in input. The process of testing sensitivity for another input while keeping the rest of inputs constant is repeated until the sensitivity figure for each of the inputs is obtained. The higher the sensitivity figure, the more sensitive the output is to any change in that input and vice versa.
- Common methods: examining the correlation between factors and output provides general guidance on variable sensitivity. Regression analysis additionally illustrates the responses for models with many variables.

Overall, sensitivity analysis is an important tool for predicting the outcome of a decision if a situation turns out to be different compared to the key assumptions. It is used to understand the effect of a set of independent variables on some dependent variable under certain specific conditions. Here, both correlation and regression methods are applied to inform decision-making when fine tuning parameters in the model.

3.0 Recommendations

Based on the literature and experimenting with real data, the following formula is deemed most suitable to numerically estimate the priority P of a project i:

$$P_i = w_1 A + w_2 V + w_3 S + w_4 C.$$

Where,

$$\sum_{j=1}^{5} w_j = 1.$$

$$i = job\ number$$

[5] https://www.nzta.govt.nz/assets/resources/rmtf-report/docs/report.pdf
[6] https://niwa.co.nz/sites/default/files/imported/__data/assets/pdf_file/0006/95748/Research-Prioritisation-Tool-Development_D.pdf
[7] https://etheses.bham.ac.uk/3699/1/AlRubaee12PhD.pdf

The coefficients w_j for each variable are the weightings placed – essentially, how significant an influencing factor is, relative to other factors. Definitions for A, V, S, C, and are outlined in section 3.1 below as the prioritisation factors.

3.1 Prioritisation factors

The literature coupled with experience reveals five significant factors most relevant to influencing prioritisation of a project, in this context:

1. **Reporting on past accidents (A) and the types**
   Accident history is a critical factor. The types of accidents which will be considered as follows:
   1.1. Non-injury,
   1.2. Minor injury,
   1.3. Serious injury, and
   1.4. Fatal injury.

   This data provides invaluable insight into the safety performance of our roading network, aiding in identifying areas requiring immediate attention.

2. **Vehicle and pedestrian volumes (V)**
   This refers to the traffic that a particular route accommodates, considering both vehicles and pedestrians. High volumes of vehicles and pedestrians in a particular location can indicate a heightened safety risk. Therefore, areas with high traffic volume, in terms of both vehicles and pedestrian demand, may necessitate prioritised attention to mitigate the potential risk of collisions.

3. **Operating speed relative to speed limits (S)**
   Higher operating speeds are associated with higher risk of accidents and severity of such accidents. Hence the priorisation matrix will take this factor into account when providing a priority scoring on a project.

4. **Road compliance to standards and best practices (C)**
   Evaluating adherence to national standards, as well as industry best practices, is critical when prioritising projects. This is because there is often correlation between non-compliant traffic devices and safety risk

3.2 Quantifying the prioritisation factors

The process of quantifying the prioritisation factors required detailed analysis and careful consideration. The selection of suitable values for each factor, as well as the assignment of respective weightings, involved comprehensive examination of each factor's relevance to project prioritisation and the potential impact on road safety and operations.

A standard scoring range of 1-10 was adopted for assessing each factor, ensuring consistency and simplicity across all project evaluations. This scale provides clear differentiation between varying levels of concern or importance for each factor.

3.3 Weightings

The weighting of each factor was determines their relative significance in the context of road infrastructure projects. Greater weight was given to factors with a significant direct impact on road safety and public sentiment, such as Reporting on Past Accidents. Conversely, lesser weight was assigned to factors deemed less critical in the immediate scope, but still pertinent to overall project assessment.

These assigned weights and the scoring methodology represent the current approach and are subject to continuous review and refinement, as further data and insights become available. The subsequent section provide a detailed breakdown of how each factor was quantified and the reasoning behind the assigned weightings:

Factor	Description	Weighting
Volumes – Vehicles & Pedestrians (w1)	While the volume of traffic is a relevant factor in infrastructure planning, in this context it's considered of less immediate concern compared to the other factors	0.10
Accident History (w2)	Sites with high accident rates are viewed as urgent to mitigate future incidents	0.45
Operating speed relative to speed limits (w3)	Increased speeds have increased risk of accidents and death or serious injuries	0.25
Road compliance to standards and best practices (w4)	Adherence to road design standards and best practices is crucial to ensure safety and efficiency, thus projects enhancing compliance are given priority	0.2

3.4 Assignment of values to each factor

3.4.1 Accidents *(A)* Factor

The value for crash types has been calculated based on social costs of road crashes (2019)[8].

Crash Type	Social Cost	Corresponding Values
Non-Injury	$ 3,500.00	0.1
Minor Injury	$ 104,000.00	0.5
Serious Injury	$ 923,000.00	2
Fatal	$4,916,000.00	10

3.4.2 Volumes *(V)* factor

The Volumes factor includes pedestrians and vehicles. Vehicle volumes can usually be extracted from mobileroad[9]. Pedestrian volumes however are more difficult to estimate, these are better determined by the location of the site. Locations such as around schools or the city centre for example are expected to have heavy volumes of pedestrians where as a residential location with no Points of Interest will have light volumes of pedestrians. The ranges selected for volumes are as follows:

Description	Volume Range	Value assigned
Light	Vehicles - 0-500 vehicles per day	1
	Pedestrians - Residential area	1
Moderate	Vehicles - 500-1000 vehicles per day	2.5
	Pedestrians – Suburban centre	2.5
Heavy	Vehicles - >1000 vehicles per day	5
	Pedestrians – City centre, Schools, church, hospital etc	5

3.4.3 Speed *(S)* factor

The speed factor looks at the operating speed in comparison to the legal speed limit. Hutt City Council has historical data for speed however in some cases the operational speed can be estimated based on the road environment. For every 1 km/hr increase in the operating speed a value of 0.8 is added to this factor.

[8] https://www.transport.govt.nz/assets/Uploads/Report/SocialCostof-RoadCrashesandInjuries2019.pdf
[9] https://mobileroad.org/

3.4.4 Compliance with Standards and Best Practice *(C)* factor

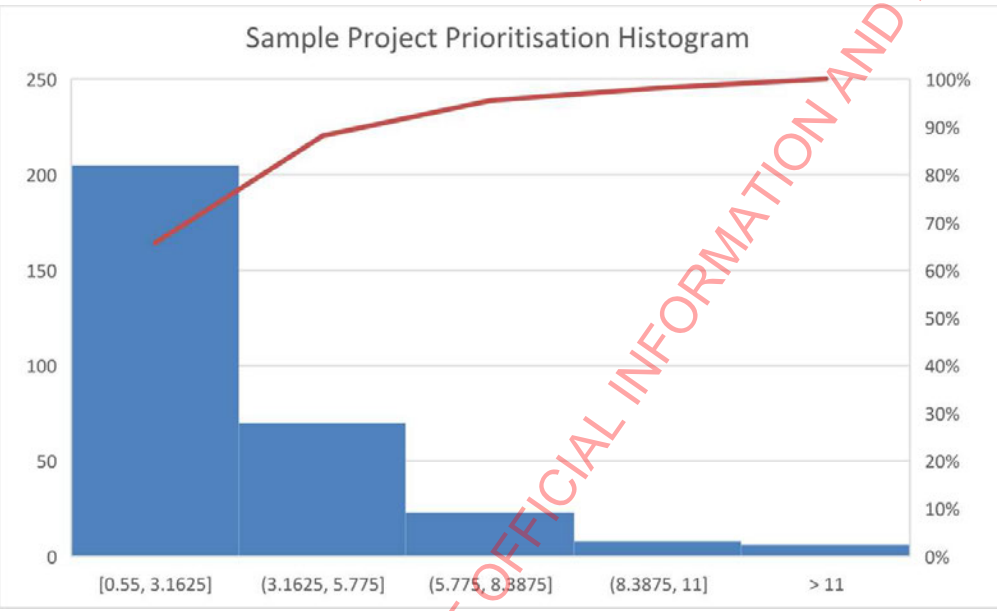
Compliance to engineering standards and guidelines is important and can often lead to crashes if a site is grossly non-compliant. The values assigned for the Compliance factor are as follows:

Description	Value assigned
Non compliant	10
Needs Improvement	5
Compliant	0

4.0 Demonstration of the Model applied to Sample dataset

This model was applied to a sample dataset to illustrate how the model works, provide guidance on potential outcomes. Firstly, 316 sample projects from a neighbouring road controlling authority were selected. Then the formula above was applied to the dataset to calculate P_i.

The Priority, P_i was then be grouped and visualised with a histogram. An example is illustrated below (using mostly synthetic data).



Here, the projects are grouped into 5 buckets based on user-defined ranges. Within each bucket, the projects can be viewed in a ranked format from highest priority to lowest. From here, sensitivity tests can be implemented to further understand ranking and which factors most are influencing the sample distribution.

4.1 Sensitivity analysis – applied

Here, the two statistical methods used for sensitivity testing are outlined along with some sample output. The "Correlation" and "Regression" tools in Excel were implemented – their significance and relevance are highlighted.

4.1.1 Correlation

	V = P+V	A	C	S	R	final score = w1*A+w2*V+w3*S+w4*C + w5*RR
V = P+V	1					
A	0.33437944	1				
C	-0.1172523	-0.0059248	1			
S	0.11811248	0.09064444	0.00856392	1		
R	-0.0297833	-0.0256352	0.009783	0.19844617	1	
final score = w1*A+w2*V+w3*S+w4*C + w5*RR	0.35723215	0.9810167	0.12396783	0.14157736	0.10962451	1

The correlation analysis tool in Excel provides insights into the relationship between the variables in a dataset. It calculates the correlation coefficient, which indicates the **strength** and direction of the

linear relationship between the variables. A positive correlation coefficient (ranging from 0 to 1) suggests a direct relationship, where an increase in one variable corresponds to an increase in the other. Conversely, a negative correlation coefficient (ranging from 0 to -1) indicates an inverse relationship, where an increase in one variable corresponds to a decrease in the other. A correlation coefficient close to zero suggests no significant linear relationship between the variables. The correlation analysis tool helps to identify patterns and dependencies, aiding in the understanding of data and decision-making processes.

4.1.2 Regression

SUMMARY OUTPUT

Regression Statistics	
Multiple R	1
R Square	1
Adjusted R Squ	1
Standard Error	2.13334E-14
Observations	306

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	1982.538083	396.5076166	8.71227E+29	0
Residual	300	1.36534E-25	4.55114E-28		
Total	305	1982.538083			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-6.88338E-15	4.60698E-15	-1.494119553	0.136195409	-1.59495E-14	2.18271E-15	-1.59495E-14	2.18271E-15
V = P+V	0.05	5.01495E-16	9.97019E+13	0	0.05	0.05	0.05	0.05
A	0.35	1.84641E-16	1.89557E+15	0	0.35	0.35	0.35	0.35
C	0.15	5.39485E-16	2.78043E+14	0	0.15	0.15	0.15	0.15
S	0.1	2.36226E-15	4.23323E+13	0	0.1	0.1	0.1	0.1
R	0.35	1.31401E-15	2.66361E+14	0	0.35	0.35	0.35	0.35

The regression analysis tool in Excel provides valuable insights into the relationships between variables. It generates an equation that represents the best-fit line or curve for the data, enabling predictions and estimating the impact of independent variables on the dependent variable. The coefficients obtained from the analysis indicate the magnitude of the influence each variable has on the outcome of interest. The R-squared value indicates how well the equation fits the data, providing an assessment of the model's explanatory power. Generally, the tool facilitates a comprehensive understanding of variable relationships, prediction capabilities, and model reliability.

4.2 Final model

The sensitivity analysis insights and industry experience were then used to fine tune the model, specifically the weightings w_j of each factor. This resulted in the final formula implemented:

$$P_i = w_1 A + w_2 V + w_3 S + w_4 C.$$

Where,

$$w_1 = 0.10$$

$$w_2 = 0.45$$

$w_3 = 0.25$

$w_4 = 0.20$

6.0 Future work

As noted in the literature review section, maturity for assessing road projects of highest priority in New Zealand is low – this opens an opportunity for Hutt City Council to be ahead of the market and enhance efficiency through "quick wins". That is, implementing low effort algorithms to inform decision-making with a mathematical and statistical basis. This, in large, takes the heavy (and mostly manual) lifting off decision-makers and leaves valuable capacity for more significant work.

TLD proposes the following solutions:

- Optimisation methods: used to allocate resources and budget to road projects in a way that maximises the benefits and minimises the costs. Das[10] proposed a prioritisation model for bridge maintenance needs that used optimisation techniques to allocate resources based on the condition of the bridges. Kiyota et al.[10] proposed a multistage optimisation model for the reconstruction sequence of highways that considered the traffic volume, construction cost, and user cost. Optimisation methods can help to ensure that the most critical road projects are prioritised and that resources are used efficiently.
- Machine learning models: provide a sophisticated comprehensive approach to prioritising projects and relaxing assumptions. Machine learning algorithms can be used to predict the outcomes of different road projects based on historical data. This can help decision-makers to identify the most effective road projects and prioritise them accordingly. For example, Frohwein et al.[10] proposed a multicriteria framework to aid the comparison of roadway improvement projects that used machine learning algorithms to predict the impact of different projects on traffic flow, safety, and environmental factors. Machine learning algorithms can help to ensure that road projects are prioritised based on their potential impact.
- Uncertainty quantification: further sensitivity analysis and promote better informed decision making. Uncertainty analysis can be used to assess the risks associated with different road projects and to identify the most robust projects. Uncertainty analysis can help decision-makers to identify the most critical road projects and prioritise them accordingly. Liu and Frangopol[10] proposed an optimal bridge maintenance planning model that used uncertainty analysis to assess the risks associated with different maintenance strategies. Uncertainty analysis can help to ensure that road projects are prioritised based on their robustness and resilience.

Overall, optimisation methods, machine learning algorithms, and uncertainty analysis can be used to improve the efficiency and effectiveness of prioritising road projects in New Zealand. These methods can help decision-makers to allocate resources and budget to the most critical road projects and to ensure that road projects are prioritised based on their potential impact, robustness, and resilience.

[10] https://www.mdpi.com/2076-3417/9/7/1380