

**OFFICE OF THE POLICE AND CRIME COMMISSIONER
FOR HUMBERSIDE
DECISION RECORD**

Decision Record Number: **39/2024**

Title: **VivaCity Road Safety Study**

Executive Summary (This will be published):

Hull City Council have submitted a bid for £7,371.54 in relation to the use of artificial intelligence monitoring to study Lowgate in Hull to ascertain the relationship between road users and pedestrians. This is to highlight areas where conflict can be mitigated, and all are safer.

The results of the survey will be shared across the partners to inform future road safety initiatives.

Decision of the PCC

Approved

Background Report: Open

Police and Crime Commissioner for Humberside

I confirm I have considered whether I have any personal or prejudicial interest in this matter and take the proposed decision in compliance with my code of conduct.

Any such interests are recorded below.

The above decision has my approval.

Signature



Date 12/11/2024

**POLICE AND CRIME COMMISSIONER
FOR HUMBERSIDE**

SUBMISSION FOR: DECISION

OPEN

Title: VivaCity Road Safety Study

Date: 21 June 2024

1. Executive Summary

Hull City Council have submitted a bid for £7371.54 in relation to the use of artificial intelligence monitoring to study Lowgate in Hull to ascertain the relationship between road users and pedestrians. This is to highlight areas where conflict can be mitigated, with a view to casualty reduction.

The results of the survey will be shared across the partners to inform future road safety initiatives.

2. Recommendation

It is recommended that the bid is appropriate for road safety and casualty reduction, and it is recommended by the Safer Roads Humber Board that the Safer Roads Humber, PCC fund can be used.

3. Background

Lowgate in Hull City Centre is a busy street especially throughout the summer and its night time economy with pubs, clubs and restaurant destinations flanking either side of the street. As a result, there are a high number of pedestrians crossing Lowgate at night particularly under the influence of alcohol. An existing taxi rank is also in operation on the southbound side of Lowgate that faces the wrong way for many residents resulting in a high number of U-turns.

A previous fatality on Lowgate back in August 2021 was recorded where a young woman was fatally wounded whilst trying to cross Lowgate. This resulted in recommendations from HM Coroner to prevent future deaths on Lowgate.

The project is the first part of the trying to better understand the patterns of behaviour both pedestrian and vehicular over a 3-month period along Lowgate by using AI software developed by a company called VivaCity.

This baseline evidence will allow engineers to better understand the varying patterns of behaviour at different times of the day and week. That intelligence will then feed into engineering designs that will reduce the risk to all road users on Lowgate.

The funding will allow Hull City Council to commission VivaCity through their Framework Consultant (HCC procurement process) to start a 3-month assessment of how and where pedestrians cross Lowgate together with better understanding how the taxi rank operates especially later at night and into the early hours.

VivaCity will erect AI-powered computer vision sensors on Lowgate at specific locations to monitor the following:

- Speed: Enables analysis on the average speed and distribution data for different classes of road users.
- Near Miss: Identify incident hotspots and hazardous areas before they become KSI's (killed or seriously injured).
- Turning Counts: Enables analysis on the volume, movement, and behaviour of different classes of road user.
- Tracks: View the paths objects make across the road.

VivaCity have managed servers based in Belgium, hosted on Google cloud platform.

The procurement process has been managed through the HCC procurement team and signed off by their legal team.

Data Retention – Video Data: A 10-minute video from each sensor is retained for the lifetime of the sensor deployment to test software updates. A subset of Video Data is retained by VivaCity for testing and developing the sensors. There is no facial recognition, nor does it have the ability to identify any particular vehicle.

If agreed, the funds will pay for the data collection part of the project, all other costs such as procurement, design, project management and delivery will be met by HCC.

4. Options

- 1) Approve the use of the funds.

- 2) Do not approve the use of the funds and refer to the partnership to seek alternative funding.

5. Financial Implications

The PCC Fund is proposed to be used as the source of funding for this project. The PCC Fund has a requirement for all funds to be spent on projects that relate to road safety. The cost is reasonable for a project of this size.

6. Legal Implications

There will be legal implications for running a project of this nature. The responsible authority for seeking legal advice to ensure the project runs within legislation guidance will sit with Hull City Council as the procuring authority.

7. Driver for Change/Contribution to Delivery of the Police and Crime Plan

Road safety and casualty reduction are within the Police and Crime Plan under Aim 2 of the plan, Safer Communities This project directly contributes to the objective around safer roads for all users.

8. Equalities Implications

None known for this project. Any subsequent engineering solution as the result of the survey will be dealt with separately.

9. Consultation

There has been consultation with the partnership board, where the four local councils, fire service and National Highways agreed to recommend the project.

The view is the results can be used to inform other projects across the force area, using this new technology.

10. Media information

Any media would be managed by the Hull City Council media team in partnership with the Office of the Police and Crime Commissioner.

11. Background documents

Regulation 28 report to prevent future deaths.

Project background report to Safer Roads Humber.

12. Publication

Open

13. DPIA considered

Not required.

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NOT PROTECTIVELY MARKED
**SAFER ROADS HUMBER
BID APPLICATION FORM**

FOR CASUALTY REDUCTION PROJECTS/INITIATIVES

Please complete the attached form and email to: ian.robertson@humberside.police.uk

1. **Name of Project – Lowgate Casualty Reduction Scheme.**

2. **Project location (Countywide or specific area?) Specific Area - Lowgate, Hull.**

3. **Value of Bid in total and profiled by year. £7,371.54**

Financial year	Amount
24/25	£7,371.54

4. **Please write a short statement on how your project supports the identified aims of Safer Roads Humber.**

Lowgate in Hull City Centre is a busy street especially throughout the summer and its night time economy with pubs, clubs and restaurant destinations flanking either side of the street. As a result, there are a high number of pedestrians crossing Lowgate at night particularly under the influence of alcohol. An existing taxi rank is also in operation on the southbound side of Lowgate that faces the wrong way for many residents resulting in a high number of U-turns.

A previous fatality on Lowgate back in August 2021 was recorded where a young woman was fatally wounded whilst trying to cross Lowgate.

The project is the first part of the trying to better understand the patterns of behaviour both pedestrian and vehicular over a 3-month period along Lowgate by using AI software developed by a company called Vivacity.

This baseline evidence will allow engineers to better understand the varying patterns of behaviour at different times of the day and week. That intelligence will then feed into engineering designs that will reduce the risk to all road users on Lowgate.

5. **Please provide an overview of your project, what you aim to do (outputs/objectives/timescales), how you will know if your project has been successful.**

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The funding will allow Hull City Council to commission Vivacity through our Framework Consultant (Pell Frischmann) to start a 3-month assessment of how and where pedestrians cross Lowgate together with better understanding how the taxi rank operates especially later on at night and into the early hours.

Vivacity will erect AI-powered computer vision sensors on Lowgate at specific locations to monitor the following:

Speed: Enables analysis on the average speed and distribution data for different classes of road users

Near Miss: Identify incident hotspots and hazardous areas before they become KSIs

Turning Counts: Enables analysis on the volume, movement, and behaviour of different classes of road user

Tracks: View the paths objects make across the road

Click on the link to see more details

<https://vivacitylabs.com/products/smart-road-safety/>

6. Broadly itemise how any award funds will be utilised.

Item to be purchased (E.g. equipment, training, merchandise, marketing, staff costs etc.)	Amount
Upfront Components Sensor hardware, core project management, installation including 2 VL staff and MEWP. Traffic Management (if required) and Permits provided by Buyer £936.00 3 Sensors	£2,808.00
Recurring Components Sensor maintenance, dashboard and API access, and provision of core data feeds including data backhaul and computer vision software £522.00 3 sensors* Price per Month for 3 months	£4,698.00
Data discount	-£60.00
VivaCity Champion Discount (10% discount time subject to PO being issued before 17/07/24)	-£744.80
Sub Total	£6,701.40
Pell Frischmann commissioning / handling fee @10%	£671.14
Grand Total	£7,371.54

7. Are there plans to continue the project once the grant fund is spent?

Yes, the fund will influence the design layouts of varying different options that reduce the risk to all road users. It may also influence the location of the existing taxi rank situated on Lowgate. The capital expenditure will be funded via Hull City Council Budgets in the near future.

8. Reference material available on request

Click on the link to see more details

<https://vivacitylabs.com/products/smart-road-safety/>



Report to Prevent
Future Death - Rebec

Coroner's Report

9. Submitting officer

Tim Robinson
Hull City Council

10. Treasury (impact on financial plan)

11. Partnership manager (identify any risks and recommendations)

I have seen the VivaCity company present at meetings / conferences and I believe they are able to provide valuable data that can inform the engineers decision making to reduce casualties. It will also inform partners on other ways to reduce casualties.

This is in direct response to a coroner's report as well as the result of casualties and collisions along that stretch of road.

It is likely the partnership and the individual partners will use this type of data company in the future, and this project will provide us with a valuable insight as to the capabilities of such companies that we have not seen before.

This type of data will complement the existing data and help us work towards vision Zero.

I cannot foresee any risks to the partnership in this project and would recommend the board accept the bid, which will be subject to evaluation once the results are known.

I have viewed the official quote from the company to confirm the figures quoted above.

The funds can be sought from the partnership reserves.

12. Board comments

13. Approved / not approved.

14. Minute number