

TYP-ACE Flexible Fund Application Form

*Please consult the guidance before completing this form

Which funding are you applying for?

Co-Produced research award

1. Applicant details:

Lead Applicant Name/Job Title: *Jose Pina-Sánchez, Professor of Quantitative Criminology*

Lead applicant career stage: *Senior Researcher*

Is your employment contract subject to fixed funding? *No – permanent contract*

Faculty/School: *Law*

Institution: *University of Leeds*

Email address: *j.pinasanchez@leeds.ac.uk*

Name(s) of co-applicants: *Charles Lanfear, Associate Professor in Criminology, University of Cambridge*

External Project Partner(s)

The Police Foundation

Action Vision Zero

Partner representative name and contact details

Ruth Halkon, Research Manager at the Police Foundation, ruth.halkon@police-foundation.org.uk

*Amy Aeron-Thomas, Coordinator of Action Vision Zero's Roads Policing Campaign
amy@actionvisionzero.org*

2. Project details

Project title: *Testing the effect of motor traffic on fear of crime*

Brief project description suitable for publicising on our website (200 words):

Recent studies provide growing evidence of a causal relationship between motor traffic and street crime. An outstanding question is whether pedestrians perceive this connection and if this differs for parked versus moving vehicles. We posit that pedestrians may perceive parked vehicles as limiting their ability to scan their surroundings and passing drivers as unlikely to intervene to stop a crime. These perceptions may impact willingness to use public space, with consequences for guardianship and crime reporting. Accordingly, our study examines whether pedestrians interpret the presence of automobiles as a risk signal.

This project uses state-of-the-art virtual reality (VR) facilities at the University of Leeds ([HIKER](#)) to conduct the first randomised controlled trial on this topic. We employ a two-treatment factorial design to examine how pedestrians' perceptions of safety are affected by parked cars on both sides of the street and moving traffic. We hypothesise that both reduce perceived safety. By combining VR and photo-based vignette experiments, the study assesses whether findings are robust across experimental modalities. The results will inform the effectiveness of traffic calming measures, such

as low-traffic neighbourhoods, as strategies to reduce crime and fear of crime, and may contribute to future updates of Secured by Design guidance.

Proposed start date or date of activity: *1st September 2026.*

Proposed duration of funding: *Three months.*

Total funds requested: *£19,765*

Have you previously applied for or received funding (internal or external) for this project? *No*

Project description

Provide description of the project, project plan and expected outcomes. (max 1500 words)

- Research question/aim

How does the presence of cars in residential streets impact pedestrians' their perceived likelihood of victimisation and feelings of safety?

- Project plan and timeline

Assuming our proposal is successful and that the outcome is reported on the 1st of August, we will have submitted our ethics application to the University of Leeds ethics committee within the first week of August, and pre-registered the study's analytical strategy by mid-August. The recruitment of participants will ensue and be completed within one month. This will be based on the pool of participants from [Virtuocity](#) and will apply quotas for age and gender according to the population of Leeds as reflected in the 2021 Census. Fieldwork in the VR simulator will take place during the second half of September, subject to ethics approval. The data analysis process will be completed within a week and a preprint version of the article will be available by the end of October at SocArxiv. Lessons from this study, together with others derived from the Cars & Crime literature, will be compiled in a policy brief to be published by mid-October. The project will officially conclude with a symposium on the effect of motor traffic on street crime by the end of November.

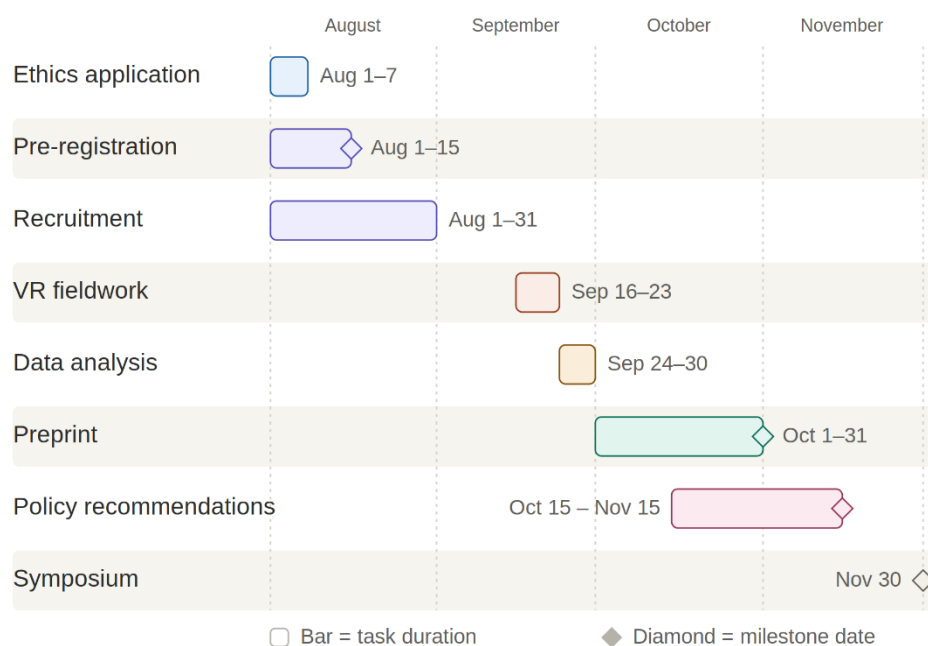


Figure 1. Project timeline

- Proposed methods

We deploy a two-treatment factorial design in both a virtual reality scenario and a photo vignette scenario to examine how the presence of cars affects perceptions of safety in urban spaces. VR enables precise manipulation of environmental features while holding all other conditions constant, something not feasible in real-world observational settings. Specifically, in the virtual reality scenario, participants are permitted to walk through a street segment of a virtual residential neighbourhood. In the photo vignette scenario, participants view a street segment of a real residential neighbourhood. In both scenarios, participants are randomly and independently assigned two treatments. The first treatment manipulates the presence of parked cars on the side of the street (i.e., parking). The second treatment manipulates the presence of cars driving on the street (i.e., traffic). After each scenario participants complete a survey with a series of questions assessing perceived risk of victimisation and feelings of safety in the setting. The factorial design we propose - where participants may receive neither, one, or both treatments - allows us to separate the effects of the presence of cars on safety perceptions into the separate effects from parking and traffic. The use of both VR and photo vignette designs makes the study more robust as it permits assessing whether observed effects of cars are the artefact of a particular design, or whether results are consistent across designs.

To measure perceived risk of victimisation (i.e., cognitive judgments of victimisation likelihood), participants are asked "How likely or unlikely do you think it is that you would be a victim of each of the following crimes in this setting?" and presented a 10-point scale to rate risk for a) harassment, b) robbery, c) assault, d) burglary, and e) auto theft. Responses are ordinal values ranging from 1 (very unlikely) to 10 (very likely). To measure feelings of safety (i.e., emotional fear of victimisation), respondents are asked "How safe would you feel walking in this setting alone at night?" These measures are based on McClanahan et al. (2024) and Keele et al. (2025).

Our sample is composed of 240 participants recruited from the pool of participants registered with Virtuocity. This will ensure that, assuming a standard deviation of 2 in our 10-point safety scale (Pina-Sánchez et al., 2016) and standard $1 - \beta = 0.8$, and $\alpha = 0.05$, we have the necessary statistical power to detect an average difference between groups as small as 0.3. The fieldwork will be carried out in eight consecutive working days. Each participant will experience the VR setting for just three minutes, however we allocate ten minutes for each participant to be able to explain the purpose of the study, and show the prompts (VR glasses) that will be used. Considering breaks, this allows to process 30 participants per day.

Our analytical strategy including our hypotheses, and interpretations that will be made depending on whether they are corroborated or not, will be pre-registered and made public in the project's folder within the Open Science Foundation. We expect a negative effect on perceptions of safety from both parked cars and traffic. The former because parked cars impede the effective scanning of surroundings. The latter as the combination of: i) the transience and anonymity of drivers, which reduces their guardianship potential; ii) traffic noise, making a call for help less effective; and iii) the difficulty of assessing whether drivers represent a criminal threat.

In a second stage of our analysis, we will also explore the presence of potential moderation effects. To do so, we will use our questionnaire to retrieve information about the participants' gender, driving frequency, and prior victimisations. Lastly, a final open-ended question will be included to probe the presence of other potential mechanisms qualitatively.

- Staff involved in delivery of the project

Jose Pina-Sánchez will be the project's PI and as such he will be responsible for coordinating the research team and external partners. He will participate in every stage of the project plan and will lead on: i) writing the ethics application; ii) designing the sampling process; iii) conducting the VR fieldwork; iv) writing the policy briefing; and v) organising the end-of-project symposium.

Charles Lanfear (University of Cambridge) will act as project Co-I, overseeing with Jose every step of the project and leading on writing the pre-registration of the study's analytical design; ii) analysing the data; iii) writing the preprint; and iv) preparing the preprint to be submitted to the Journal of Experimental Criminology.

- Planned events/activities

The project will culminate with a symposium exploring the effect of motor traffic on street crime. In the first part of the event, we will present the findings from our experiment and invite all other researchers who have worked on this topic. Our external partners and other stakeholders will also be invited to participate in the symposium. Specifically, the second part of the symposium will involve a roundtable of stakeholders discussing how our policy brief could be used to influence current and future crime prevention strategies.

- Planned/expected outputs and impact/engagement

The main findings from our study will be published ahead of peer review as a preprint in SocArxiv. The peer-reviewed version of the article will be submitted to the Journal of Experimental Criminology, alongside: i) a shorter dissemination piece to be published at The Conversation; ii) a newsletter to be circulated to national broadsheets like The Guardian and podcasts on crime prevention and urban planning such as Reducing Crime and The Urbanist; and iii) a joint blog to be co-written with our external partners and uploaded on The Police Foundation and the Global Law Enforcement & Public Health Association websites.

Findings from our study that could be used to inform national crime prevention programmes such as Secured by Design, Safer Streets, and the College of Policing crime reduction toolkit, will be summarised in a policy briefing. This document will also include other relevant findings derived from the growing literature on [Cars & Crime](#) (Loader et al., 2025; Pina-Sánchez & Davies, 2026). For example, the crime reduction toolkit considers interventions such as 'alleygating' but has not yet acknowledged broader evidence highlighting the crime prevention effect of low traffic neighbourhoods and similar traffic calming and road closures interventions (Goodman et al., 2021). Similarly, a key recommendation of Secured by Design is for new developments to make parking space available at the front of residences, as it helps prevent vehicle theft. However, ever-larger cars increasingly encroach on pavements are hypothesised to increase all other forms of street crime by providing hiding spaces to motivated offenders and blocking residents and passersby views of the area.

Lastly, this project will be used as springboard for two additional grants, a small grant to be submitted to the ESRC Impact Acceleration Account, and a larger grant to be submitted to the ESRC Responsive Mode scheme or Safer Streets Mission Accelerator Challenges programme. If successful, the smaller grant will be used to organise an exhibition at Leeds City Museum showcasing the latest evidence on the effect of reduced traffic on the social fabric of neighbourhoods. The larger project will include a more in-depth policy analysis highlighting interventions where active travel and crime prevention goals overlap, together with a systematic review and meta-analysis of literature. Findings from such project - referring to the whole evidence base - will be key to solidify many of the recommendations raised in our policy brief. The contacts made with policy-makers, practitioners, and think tanks, in the context of this TYP-ACE project will help us amplify them.

- Ethical considerations

By using a virtual setting, as opposed to conducting the experiment in the field, ethical risks are low and carefully managed. We will adhere to the ethical guidelines designed by Virtuocity, including, for example, reminders to participants of the possibility of abandoning the study at any time. A full ethics application will be submitted to the Faculty of Environment and Social Sciences Research Ethics Committee at the University of Leeds.

3. Project alignment

Please select which of our priority Policing Areas of Research Interest (ARIs) your application is aligned (select as many as are applicable):

Crime Prevention & Climate Crisis

Provide a summary of the project alignment with selected priority ARIs (max 500 words)

This project directly addresses the intersection between crime prevention and the climate crisis by examining how transport systems, specifically motor traffic, shape perceptions of safety in residential environments. While decarbonisation agendas increasingly prioritise reductions in private car use (e.g. through low-traffic neighbourhoods, modal shift, and active travel), there is a growing body of evidence pointing at how such changes also help reduce crime (Goodman et al., 2021; Pina-Sánchez & Davies, 2026).

The project contributes to the Crime Prevention priority by generating rigorous causal evidence on how environmental features influence perceived risk of victimisation and feelings of safety, key determinants of willingness to use public space and resulting informal guardianship against crime. Understanding these mechanisms is essential for designing effective situational crime prevention strategies and for informing established frameworks such as Secured by Design and the College of Policing Crime Reduction Toolkit.

At the same time, the project speaks directly to the Climate Crisis priority by examining the unintended social consequences of transport systems and interventions. Current transport policies aimed at reducing emissions, such as traffic calming, street closures, and reduced parking provision, are often implemented without considering their implications for safety and crime. This project helps address that gap by testing whether the presence of motor traffic undermines perceptions of safety, and whether reducing traffic may therefore yield co-benefits for both sustainability and crime prevention.

By identifying potential synergies between active travel policies and crime reduction objectives, the project supports more integrated policy design. It provides evidence that can help ensure that climate mitigation strategies also enhance, rather than compromise, public safety. In doing so, it contributes to a growing evidence base on how urban environments can be designed to promote both low-carbon mobility and safer communities.

Does your proposal align with any other known Policing priorities – e.g the [NPCC Policing Problem Book](#) or the [Safer Street Mission Challenges](#)? If so, please give a brief summary (please note, this is not a requirement for funding) (max 500 words):

This project aligns with several broader policing priorities, particularly those relating to place-based crime prevention, public perceptions of safety, and evidence-based policymaking.

First, the project contributes to priorities reflected in the Safer Streets Mission, which emphasises the importance of designing out crime and improving public confidence in the safety of local environments. By focusing on perceptions of safety in residential streets, the study addresses a core determinant of community wellbeing and public trust. Its findings will provide actionable insights into how urban design and transport configurations can reduce fear of crime, an explicit objective of Safer Streets interventions.

Second, the project aligns with challenges highlighted in the NPCC Policing Problem Book, particularly those relating to the prevention of neighbourhood crime and the management of public space. The study examines how everyday environmental features, such as parked and moving vehicles, affect informal guardianship, visibility, and perceived risk. These are key mechanisms

underpinning situational crime prevention approaches and are directly relevant to policing strategies focused on reducing opportunities for crime.

Third, the project supports the wider policing agenda around evidence-based practice. By employing a randomised controlled design and pre-registration, the study responds to ongoing calls within UK policing for more robust, causal evidence to inform policy and operational decisions. The findings will be translated into practical guidance through a policy brief co-produced with the College of Policing, ensuring direct relevance to practitioner needs.

Finally, the project contributes to the emerging priority of cross-sector collaboration between policing, urban planning, and transport policy. By engaging stakeholders from across these domains, the research supports more coordinated approaches to tackling complex challenges at the intersection of crime prevention, public space design, and environmental sustainability.

4. Partner/external engagement

Provide details of what support you have from external partners or what engagement you have planned for this work. (max 500 words)

Please include details of the following (where appropriate):

- Project partners
- Level of external support
- Details of cash or in-kind contributions
- Plan for engagement and/or dissemination
- Plans for assessing and tracking impact beyond the end of the project
- Please include a letter of support or confirmation of involvement from the partner

The project's partners are the College of Policing and Action Vision Zero. The College of Policing is represented by Ruth Halkon (Research Manager, Ruth also leads the Road Policing and Road Safety working group of the Global Law Enforcement & Public Health Association), and Action Vision Zero by Amy Aeron-Thomas. Letters of support confirming their involvement are included.

Both partners have contributed to the co-design of the research question and the experimental interventions, ensuring that the project is aligned with current policy and practice needs. The College of Policing will play a key role in interpreting the findings in relation to existing crime prevention frameworks (e.g. the Crime Reduction Toolkit), while Action Vision Zero will provide expertise on transport policy and links to advocacy and practitioner networks.

During the project, the external partners will collaborate with the research team in co-authoring the policy brief, ensuring that findings from this study and the wider Cars & Crime literature are translated into actionable recommendations. They will also support dissemination by mobilising their networks to reach crime prevention practitioners, urban planners, policymakers, charities, and think tanks, and by helping recruit stakeholders for the end-of-project symposium.

The dissemination strategy includes publication of a policy brief, a short article in The Conversation, and targeted outreach to national broadsheets. The research team has a strong track record of media engagement, with prior coverage in outlets such as The Guardian, The Independent, and The New York Times. We will also engage wider audiences via social media and by liaising with producers and presenters of relevant podcasts (e.g. Reducing Crime, The Urbanist).

To assess and track impact beyond the life of the project, we will: i) monitor downloads and circulation of the policy brief; ii) track references to the research in policy documents and practitioner guidance; and iii) conduct follow-up engagement with key stakeholders (including the College of Policing) to document how findings inform future updates to crime prevention strategies.

The project aims to inform crime prevention strategies by improving understanding of how motor traffic shapes perceptions of safety. While the findings will have broader relevance, engagement efforts will focus on the UK context, where current approaches may unintentionally contribute to car dependency and thereby limit the effectiveness of broader crime prevention objectives.

Is the partner happy to be named in association with your award? Yes.

5. Justification of Resources

Provide details of the resources requested to deliver this project and justification for the expenditure planned (please also include the budget spreadsheet which can be downloaded [here](#))

We request a total of £19,765 to deliver the project. The largest component of the budget is the cost of accessing the VR facilities at Virtuocity, specifically the Highly Immersive Kinematic Experimental Research (HIKER) pedestrian laboratory. The use of HIKER is essential to the research design, as it allows precise experimental manipulation of environmental features (parked cars and moving traffic) while holding all other factors constant, something that would not be feasible in real-world settings. This ensures high internal validity and enables a rigorous test of the causal mechanisms of interest.

Based on our power calculations, we require a sample of 240 participants. Given throughput constraints, this necessitates eight days of access to the facility. The cost of renting HIKER is £1,995.61 per day, amounting to £15,965 in total. While this represents the largest single cost item, it is a cost-effective approach relative to conducting equivalent large-scale field experiments, and it underpins the core contribution of the project.

We request a further £3,800 to organise the end-of-project symposium. The event will be held at Cloth Hall Court (University of Leeds), a centrally located venue close to Leeds train station, facilitating access for participants travelling from across the UK. We anticipate approximately 40 attendees, including academics, policymakers, and practitioners. The venue cost is £45 per delegate (£1,800 total).

The remaining £2,000 will be used to support travel for participants and invited stakeholders from outside West Yorkshire. This support is important to ensure diverse and geographically broad participation, particularly from national-level organisations, thereby maximising the reach and policy impact of the project.

Overall, the requested resources are tightly aligned with the project's methodological requirements and impact objectives, and represent good value for money in delivering robust, policy-relevant evidence within a short timeframe.

6. Submission and Approvals

Activity Lead

Name: *Jose Pina-Sánchez*

Date: *1st July 2026*

Signature: 

Head of School/Service

Name: Louise Ellison

Date: *1st July 2026*

Signature: 

Please provide contact details of any additional contacts to be notified in event of award:

Charles Lanfear, cl948@cam.ac.uk

Ruth Halkon, Ruth.Halkon@police-foundation.org.uk

Amy Aeron-Thomas, amy@actionvisionzero.org

To apply, please email a signed electronic copy of the completed application form, along with the budget spreadsheet and supporting letters to policing@leeds.ac.uk

References

Goodman, A., Laverty, A. A., & Aldred, R. (2021). *Short-term association between the introduction of 2020 low traffic neighbourhoods and street crime, in London, UK. Findings.*

Keel, C., Wickes, R., Lee, M., & Jackson, J. (2025). *Vulnerability and place: A test of the psychology of perceived vulnerability for women and men. Current Issues in Criminal Justice, 1-19.*

Loader, I., Bradford, B., Girling, E., Sparks, R., & Bahceci, S. (2025). *Inescapable objects? Automobility and everyday disorder in an English town. American journal of cultural sociology, 1-25.*

McClanahan, W. P., Sergiou, C. S., Siezenga, A. M., Gerstner, D., Elffers, H., van der Schalk, J., & van Gelder, J. L. (2024). *Neighborhood crime reduction interventions and perceived livability: A virtual reality study on fear of crime. Cities, 147, 104823.*

Pina-Sánchez, J. and Davies, T. (2026). *Exploring the effect of motor traffic on street crime. Kriminologie.*

Pina-Sánchez, J., Trinidad, A., & Loader, I. (2026). *Road Violence and Perceptions of Safety among Pedestrians and Cyclists. SocArxiv*