

Study Title	An evaluation of City of London Bridge Watch suicide prevention initiative
Study Period	01/07/2024 to 31/07/2025
Study Design	Mixed methods
Research Aim	The overall aim of the evaluation is to explore the feasibility, acceptability and effectiveness of the Bridge Watch Programme. It will look at the impact of Bridge Watch on the number of people entering the water (for reasons of harm (e.g., suicide) or non-harm (e.g., accidental)) around intervention sites. It will also explore whether Bridge Watch is perceived as an acceptable and beneficial approach from the perspectives of volunteers delivering the programme, key professional stakeholders involved in the initiative, and service users who have engaged with the intervention.
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Disclaimer: The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

Abstract

This protocol outlines the approach and methods that will be used in the PHIRST Fusion evaluation of the Bridge Watch Programme. The Bridge Watch Programme aims to provide a physical presence in the form of teams of volunteers who 'patrol' the areas on and around the Bridges of London, and who have a brief to engage or intervene with anybody indicating intent to enter the water, primarily, for reasons of harm (e.g., the purpose of suicide), but also of non-harm (e.g., fun or fall).

The evaluation consists of a mixed-methods approach consisting of two major components. One component will use routinely collected data to conduct a descriptive data analysis of service and an Interrupted Time Series analysis to estimate the effects of Bridge Watch on suicide incidents (attempts, contemplations and completions) at the five bridges in City of London. In the other component, primary qualitative data exploring perspectives and experiences of the Bridge Watch Programme will be collected through interviews with programme volunteers, key professional stakeholders and staff, and service users the programme has engaged with. Further, qualitative data will be collected via Bridge Watch volunteers completing a short, structured diary/log reporting on reflections after patrols.

The findings of the evaluation will provide the Bridge Watch Programme team with evidence that will help them understand the feasibility, acceptability and effectiveness of the programme. The findings will help shape current and future service delivery and help influence future commissioning intent, as well as having the potential to inform service establishment and delivery in other areas.

Contents

Abstract	1
Definition of terms	3
1 Background, overview, and contextual information of the initiative to be evaluated	4
2 Review of existing evidence	6
3 Evaluation aim and research questions.....	7
4 Methods	8
5 Practice and public involvement and engagement	13
6 Co-production and knowledge mobilisation	14
7 Outputs	15
8 Data management plan	16
9 Ethics	17
10 Timeline.....	19
References	20
Appendices	21

Definition of terms

- **SUICIDE:** An incident where the individual has caused deliberate harm to themselves, resulting in death. This does not include incidents where individuals have jumped from bridges, but their bodies have not been recovered.
- **ATTEMPTED SUICIDE:** An incident where an individual has taken action to try and kill themselves. This includes climbing bridge barriers or sitting on the bridge barriers if the individual states they want to kill themselves.
- **CONTEMPLATING SUICIDE:** An incident where an individual has not taken action to kill themselves but has expressed low thoughts and mood, suicidal thoughts or comments and threats to kill themselves.

1 Background, overview, and contextual information of the initiative to be evaluated

1.1 Background to the PHIRST scheme

The study is funded by the National Institute for Health and Care Research and will be undertaken by the Public Health Intervention Responsive Studies Team (PHIRST) Fusion team. The PHIRST Fusion team's approach to evaluation follows a 5-step process: brokerage, work allocation, research, reporting and knowledge mobilisation, and continuous improvement, which includes evaluability assessment methodology and embedded research with local government practitioners.

This protocol outlines the approach and methods that will be used in the PHIRST Fusion evaluation of the Bridge Watch Programme. It is informed by an Evaluability Assessment conducted with stakeholders from the City of London and Hackney Public Health Team, Bridge Watch and Partner Organisations (see Section 3.1). The Evaluability Assessment report, led by Dr Nai Chng from the PHIRST Fusion team, is available on request and on the evaluation webpage when ready.

1.2 Overview of the Bridge Watch Programme

Bridge Watch is delivered by Ascension Trust, collaborating closely with partners like the Royal National Lifeboat Institution and emergency services. It is supported by City Bridge Foundation funding. The Bridge Watch Programme seeks to establish teams of volunteers to actively monitor the areas in and around the five bridges of the City of London. Their primary objective is to engage with individuals showing signs of wanting to enter the water, particularly for suicide, and to intervene as necessary. The programme's goal is to equip volunteers with the skills to recognize and assist those in distress through empathetic listening, dialogue, and teamwork, thereby offering crucial support at a time of crisis. There is an ongoing process of recruitment of volunteers. Prospective volunteers start with Zero Suicide Alliance online training and then proceed to 35 hours of formal training, committing to a minimum of four volunteer hours per month upon completion. Emphasizing care and empathy over enforcement, the programme facilitates collaboration with statutory agencies, mental health networks, and charities. By fostering partnerships with various charitable organisations and emergency services, Bridge Watch aims to expand support networks and increase access to assistance (Community Southwark, 2024).

The key aims and objectives of the Bridge Watch Programme are:

- Reductions in the number of suicides incidents (attempts, contemplations and completions) from the Bridges of the City of London.
- Establishment of coverage across identified key 'risk periods and bridges'.
- A significant, recorded number of positive engagements and interventions with individuals presenting as suffering mental health crises or distress.
- Reduction in the percentage of persons who 'come to notice' that go on to enter the water.
- Reduction in the number of 'custodial' interventions that are required and a reduction in use of Section 136.
- Increased awareness of suicide and self-harm in the areas of the City of London.

- Increasing numbers of volunteers who are involved in suicide awareness and suicide prevention.
- Increased number of people signposted in seeking further support.

The first patrols began as a pilot in November 2023 (twice weekly), with an increase in the number of days of patrol occurring in February 2024. The pilot covers the following bridges of the City of London: Tower, London, Southwark, Blackfriars, and Millennium. The plan is to increase the scope of the programme to other areas of the Thames in London, and moving forward in other parts of the country where there is data evidence of death by suicide from bridges.

1.3 Contextual information

Even though London had the lowest rate of suicides registered of any region in England in 2022 (7.0 deaths per 100,000) (Office for National Statistics, 2023), the most common method of dying by suicide in London was drowning in the Thames (32%) followed by falling from a height (26%) (City of London Corporation, 2016). This is inconsistent with national data where hanging is the most common method for both men and women, which is likely to be due to structures such as tall buildings and bridges crossing the River Thames in the City.

The Bridge Watch Programme was developed from an action in the 2016-19 City of London Corporation Multi-Agency Suicide Prevention action plan containing numerous initiatives aimed at reducing the number of suicides in the Square Mile (City of London Corporation, 2016). Bridge Watch can be seen as a response from the City of London to several of eight priority areas for action in the current 5-year cross-sector strategy to suicide prevention in England (Department of Health & Social Care, 2023):

- Improving data and evidence to ensure that effective, evidence-informed and timely interventions continue to be developed and adapted.
- Tailored, targeted support to priority groups, including those at higher risk, to ensure there is bespoke action and that interventions are effective and accessible for everyone.
- Addressing common risk factors linked to suicide at a population level to provide early intervention and tailored support.
- Promoting online safety and responsible media content to reduce harms, improve support and signposting, and provide helpful messages about suicide and self-harm.
- Providing effective crisis support across sectors for those who reach crisis point.
- Reducing access to means and methods of suicide where this is appropriate and necessary as an intervention to prevent suicides.
- Providing effective bereavement support to those affected by suicide.
- Making suicide everybody's business so that we can maximise our collective impact and support to prevent suicides.

The Ascension Trust, that delivers the Bridge Watch programme, is part of key strategic forums across London. Thrive LDN is the regional lead for suicide prevention on behalf of NHS England. Part of this role includes facilitating a multi-agency Suicide Prevention Group of London partners. The group is made up of 39 organisations (56 individual members) and has an ultimate aspiration of making London a zero-suicide city. The group oversees the development of regional strategy for

suicide prevention, delivers citywide projects to prevent suicide and supports those affected by suicide.

In London, a Real Time Surveillance System has been set up as a source for monitoring suspected suicides for the region. Launched in 2019, it is co-hosted by the Metropolitan Police Service and Thrive LDN to provide a platform to securely collect and share real-time data on suspected suicides between multiple agencies. This real-time monitoring of suicide incidence identifies patterns of suicide within London and facilitates real-time referral of those impacted by suicide into NHS-commissioned bereavement services.

2 Review of existing evidence

We undertook a rapid literature review of non-physical barrier-based, trained-volunteer interventions to prevent suicide incidents on bridges (i.e., ‘human interventions’). See [Appendix 1](#) for a description of the search. However, we did not find any results covering human interventions similar to the design of Bridge Watch. The rest of this paragraph thus covers physical barrier-based interventions, which are the most common in the literature. A systematic review by Cox *et al.* (2013) found that the four main approaches to reducing suicides at suicide hotspots were: 1) restricting access to means (through installation of physical barriers); 2) encouraging help-seeking (by placement of signs and telephones); 3) increasing the likelihood of intervention by a third party (through surveillance and staff training); and 4) encouraging responsible media reporting of suicide (through guidelines for journalists). There is relatively strong evidence that reducing access to means can avert suicides at hotspots without substitution effects. Barriers are effective because they ‘buy time’ for impulsive suicidal individuals to reconsider their actions.

A systematic review and meta-analysis by Pirkis *et al.* (2015) suggested that there was some evidence that restricting access to means, encouraging help-seeking, and increasing the likelihood of intervention by a third party can reduce deaths by suicide at suicide hotspots. None of the interventions reviewed involved utilising human interventions, whether involving volunteers or otherwise. Based on anecdotal evidence that passing strangers acting on the spur of the moment can save lives, Owens, Derges and Abraham (2019) conducted in-depth qualitative interviews with people who have either been prevented by a stranger from taking their own life in a public location (n = 12) or intervened to prevent a stranger from taking their own life in a public location (n = 21). They found that interveners performed three main tasks: 1) ‘bursting the bubble’ (reconnecting with self, others and everyday world); 2) moving to a safer location; and 3) summoning help.

Volunteers have played an important and historical role in suicide prevention. Andriessen (2021) claimed that volunteer involvement laid the groundwork for contemporary suicide prevention. His study only focused on suicide prevention organizations staffed by volunteers who are selected, trained, and supervised to provide services for telephone, online, or face-to-face support. While none of these organisations appear to be providing interventions similar to Bridge Watch, Andriessen noted that volunteer suicide prevention organizations were characterised by their availability, accessibility, acceptability, and adaptability. Even though the nature of interventions covered by Andriessen differs from the Bridge Watch Programme in the sense that most of the volunteer organisations covered by Andriessen were helplines, visits, or peer-support type organisations, these characteristics are still potentially relevant to Bridge Watch. Volunteers are

available in the sense that they ‘bridge the gap between receiving professional care or no care whatsoever.’ Volunteers are also able to reach people in need through multiple channels and hence are accessible, not unlike the intended patrols along and around the bridges. Seeking help from volunteers is also more acceptable in countries like the UK, unlike other cultures. Finally, volunteer work also emerges as a response to local needs (as in Bridge Watch) and hence is intrinsically adaptable. This adaptability can be strengthened in positive ways given the appropriate evaluation support which this PHIRST evaluation can potentially provide.

3 Evaluation aim and research questions

3.1 The evaluability assessment process

We have used evaluability assessment methods to co-develop the evaluation objectives and design with the Bridge Watch team. Evaluability assessment is a rapid, systematic, and collaborative way of deciding whether and how a programme can be evaluated, and at what potential cost (Craig & Campbell, 2015). PHIRST Fusion facilitated two workshops in February and March 2024 with key stakeholders involved with the Bridge Watch Programme and members of PHIRST Fusion (total of 14 participants) to explore their understanding of how the programme works, and to map out its process and Theory of Change (see [Appendix 2](#)). Each workshop lasted 1.5 to 2 hours. During the workshops we explored:

- The underpinning aims, assumptions and context of the Bridge Watch Programme.
- Stakeholder thoughts and perspectives around delivery outcomes (primary and secondary).
- Potential evaluation design options.
- Information needed to inform future service development and commissioning.

A feasibility evaluation study was agreed as the aim of the PHIRST Fusion evaluation, with interim feedback being provided at a mid-way point (by February 2025) to enable initial findings to feed into the development of the Bridge Watch Programme.

3.2 Evaluation aim and research questions

The aim and research questions of the evaluation were informed by the evaluability assessment and the rapid literature review. The overall aim of the evaluation is to investigate the feasibility, acceptability and effectiveness of the Bridge Watch Programme. The evaluation will take a mixed-method, formative approach, with a mid-point review being used to feedback emerging findings to help inform development of the initiative. The evaluation will explore the following research questions (RQs):

Quantitative component

- RQ1) What is the impact of Bridge Watch Programme on number of people:
 - entering the water?
 - for the purpose of harm (suicide)
 - non-harm/accidental (fun/fall)

- indicating intent to enter the water?
- signposted in seeking further support?
- RQ2) Is Bridge Watch coverage achieved across key risk periods and bridges?

Qualitative component

- RQ3) Do volunteers find Bridge Watch acceptable and appropriate?
 - Do volunteers feel Bridge Watch is having a positive impact?
 - How does participation affect volunteers' sense of wellbeing and confidence?
 - Is appropriate support in place?
 - Is Bridge Watch volunteer training effective?
 - Do volunteers have the knowledge, skills and abilities to intervene as intended?
 - Do volunteers feel equipped and prepared for their role?
 - What is the turnover/retention of volunteers?
- RQ4) Do professional stakeholders find Bridge Watch useful, acceptable and appropriate?
 - Is Bridge Watch deemed to be having a positive impact (intended/perceived outcomes)?
 - What are the key positive features of the programme?
 - What are key learning points/improvements for the programme?
 - What are the experiences and perspectives regarding recruitment and engagement of volunteers?
- RQ5) Do those with whom Bridge Watch intervene with find it useful, acceptable and appropriate?
 - What are people's understandings/thoughts of the Bridge Watch programme?
 - Is Bridge Watch deemed to be having a positive impact?
 - What are the key positive features of the programme?
 - What are key learning points/improvements for the programme?

4 Methods

This evaluation will use a mixed-methods approach, with a quantitative and a qualitative component. Findings from the quantitative and qualitative analyses will be brought together to help draw out learning points (overarching aim).

4.1 Quantitative component

The impact of Bridge Watch on the number of people entering the water (RQ1) will be estimated using Interrupted Time Series analysis of routinely collected data. We propose to estimate effects of Bridge Watch using monthly counts of suicide-related events before and after the programme was

implemented. For this, we expect that we will need at least ten months' post intervention data to distinguish effects of Bridge Watch from underlying variability in the temporal series. Based on our scoping of existing sources of data ([Appendix 3](#)), our preferred database is the City of London Police real time surveillance data, but we may conduct exploratory analyses of other series to identify possible confounding of the effects of Bridge Watch by wider influences on rates of suicide-related events.

We will fit segmented regression models to identify the effect of Bridge Watch on each type of suicide related event in the City of London Police surveillance data. Exploratory analyses will be carried out to decide model specification. Robustness checks, such as the use of placebo intervention dates, will also be conducted (Lopez Bernal et al., 2018). In addition, descriptive statistics will be produced to assess Bridge Watch coverage achieved across key risk periods and bridges (RQ2).

4.2 Qualitative component

The perceived feasibility, acceptability and effectiveness of the Bridge Watch Programme (RQs 3 to 5) will be examined through: 1) qualitative Interviews with volunteers, professional stakeholders/staff, and service users; and 2) volunteer reflections after patrols in the form of structured diary/log reports.

4.2.1 Volunteer interviews (n = 20)

Up to 25 Bridge Watch volunteers will be purposively recruited to participate in one-to-one interviews exploring their perspectives of the Bridge Watch Programme.

Recruitment will be supported by our Bridge Watch partners who will facilitate dissemination of study information and information sheets to potential participants. The Bridge Watch manager will speak to volunteers and ask them whether they are interested in taking part in an interview with the research team regarding their thoughts and experiences of the Bridge Watch Programme. Those interested will be given an information sheet and consent form. The Bridge Watch manager will also collect volunteer consent to share their contact details with the research team. This will be done via the sharing of an encrypted document. Potential participant contact information will be recorded on a password-protected spreadsheet on the University of Sheffield secure drive. The research team will then contact the potential participants, at least seven days after the sharing of the information sheet, via phone/email to discuss participation (this will provide potential participants time to study the information sheet and contact relevant parties to ask questions about the research/participation). The research team will again discuss the research with the potential participants and will arrange an interview time to suit the participant. The participants will be asked to complete a consent form before participating in an interview.

Participation will be voluntary. Those who have expressed interest in taking part and who have read the information sheet and completed a consent form will be eligible to participate.

Interviews will take place either over the phone or online via a video call, depending on the preference of the participant. The interviews will be conducted by members of the research team. The interviews will last around 60 minutes.

The recruitment materials and topic guides will be developed with our Bridge Watch partners and reviewed through Practice and Public Involvement and Engagement input (see details in Section 5). We anticipate the topic guide will explore:

- Background to, and explanation of becoming a volunteer.
- Perspectives of training (e.g., does training prepare for the actual role?).
- Description of a typical Bridge Watch patrol.
- Discussion of the process for interaction with someone identified as at-risk.
- Perspectives of the effectiveness of the programme.
- Suggestions for improvements (e.g., to intervention, to training).
- Plans for future/continued volunteering in the programme.

Volunteers who take part in the interviews will be offered a £25 voucher as a thank-you for their time.

4.2.2 Bridge Watch staff and key stakeholders interviews (n = 10)

Up to five Bridge Watch staff (i.e., those involved in the management/organisation of the Bridge Watch Programme) and five key stakeholders who work closely with the intervention will be purposively recruited to participate in one-to-one interviews exploring their understanding of the Bridge Watch Programme.

Recruitment will be supported by our Bridge Watch partners who will facilitate dissemination of study information and information sheets to potential participants. Our Bridge Watch partners will speak to Bridge Watch staff/associated professional stakeholders and ask them whether they are interested in taking part in an interview with the research team regarding their understandings and perspectives of the Bridge Watch Programme. Those interested will be given an information sheet and consent form and will be asked to contact the research team. The research team will then discuss participation and will arrange an interview time to suit the participant. Participants will be provided time to study the information sheet and contact relevant parties to ask questions about the research/participation. The participants will be asked to complete a consent form before participating in an interview.

Participation will be voluntary. Those who have expressed interest in taking part and who have read the information sheet and completed a consent form will be eligible to participate.

Interviews will take place either over the phone or online via a video call, depending on the preference of the participant. The interviews will be conducted by members of the research team. The interviews will last around 60 minutes.

The recruitment materials and topic guides will be developed with our Bridge Watch partners and reviewed through Practice and Public Involvement and Engagement input (see details in Section 5). We anticipate the topic guide will explore:

- Description and explanation of the Bridge Watch Programme.
- Intended aims and objectives, and if it is meeting these.
- Perceived outcomes of the programme.
- Unintended consequences.
- What works well/what could be improved.

- Experiences and perspectives regarding recruitment and engagement of volunteers.

4.2.3 Service user interviews (n = 10)

Up to 10 service users will be recruited. Due to the small-scale nature of the Bridge Watch Programme and the nature of the interventions provided, we do not expect a large sample size and believe recruitment of service users will be challenging. However, we intend to try to recruit service users as their perspectives will provide valuable insight into the experience and delivery of the Bridge Watch Programme. We will work with our project partners to explore whether this is feasible, and if this is not possible, we will explore service user experiences through the interviews with volunteers.

Potential participants will be recruited through our Bridge Watch partners. Bridge Watch volunteers will help to recruit service users to participate in interviews. Our Bridge Watch partners have noted how several people whom the volunteers intervened with have come back at a later date to thank them for their support. Therefore, if appropriate, during such incidents, the volunteers will ask whether they are interested in taking part in an interview with the research team regarding their thoughts and experiences of the Bridge Watch Programme. Bridge Watch volunteers will be provided with information by the research team to verbally describe the research to service users, as well as an information flyer. Those interested will be given an information sheet and consent form by the Bridge Watch volunteers who will also collect service user consent to share their contact details with the research team. This will be done via the sharing of an encrypted document. Potential participant contact information will be recorded on a password-protected spreadsheet on the University of Sheffield secure drive. The research team will then contact the potential participants, at least seven days after the sharing of the information sheet, via phone/email to discuss participation. This will provide potential participants time to study the information sheet and contact relevant parties to ask questions about the research/participation. The research team will again discuss the research with the potential participants and will arrange an interview time to suit the participant. The participants will be asked to complete a consent form before participating in an interview.

This process will continue until we have an adequate number of participants. Participation will be voluntary. All service users who have received the intervention, and who have expressed interest in taking part and who have read the information sheet and completed a consent form, will be eligible to participate.

Interviews will take place either over the phone or online via a video call. The interviews will be organised around what is most suitable and preferred by the participant. A safeguarding protocol developed in collaboration with our Bridge Watch partners will be in place for data collection with service users. Interviews will last around 60 minutes.

The recruitment materials and topic guides will be developed with our Bridge Watch partners and inputs from the Practice and Public Involvement and Engagement group (see details in Section 5). We anticipate the topic guide will explore:

- Understanding of the Bridge Watch Programme.
- Description and reflection of volunteer interaction.
- Perspectives of the initiative (effectiveness).

- What works well/what could be improved.

We appreciate that topics around suicide intervention may be sensitive, due to the personal nature of acute crisis and the perceived stigma around requiring service support. We will work with our project partners, who are experienced practitioners in this field, and Public Involvement and Engagement input to help guide our approaches, recruitment materials, information sheets, and our topic guide to help approach such topics in the most appropriate way possible. Ethical protections around informed consent, confidentiality, participation rights and withdrawal from the research will be highlighted to all participants.

Service users who take part in the interviews will be offered a £25 voucher as a thank-you for their time.

4.2.4 Volunteer diary/log reflections (n = 20)

Up to 20 Bridge Watch volunteers will be recruited to provide diaries/logs reporting on reflections after patrols. This will involve volunteers completing a short, structured diary/log after patrols, covering questions/sections designed to elicit reflections on the acceptability and effectiveness of the Bridge Watch Programme, and around how the provided training has equipped them for the experiences of the role.

Recruitment will be supported by our Bridge Watch partners who will facilitate recruitment and dissemination of information sheets to potential participants. The Bridge Watch manager will speak to volunteers and ask them whether they are interested in participating in diary/log reflections covering their patrols. Those interested will be given an information and consent form. The Bridge Watch manager will also collect volunteer consent to share their contact details with the research team. This will be done via the sharing of an encrypted document. Potential participant contact information will be recorded on a password-protected spreadsheet on the University of Sheffield secure drive. The research team will then contact the potential participants at least seven days after the sharing of the information sheet, via phone/email to discuss participation. This will provide potential participants time to study the information sheet and contact relevant parties to ask questions about the research/participation. The research team will provide a Word document with a structured diary/log template for volunteers to complete after their patrols and will explain how to complete this and how to return to the research team.

The participants will be asked to complete a consent form before participating in any diary/log reflection activities. Participation will be voluntary. Those who have expressed interest in taking part and who have read the information sheet and completed a consent form will be eligible to participate.

Participants would be expected to provide up to four reflections to the research team, over a two-month period. Volunteer diary/log reflections will be completed shortly after patrols and will be completed electronically (on a structured template) and sent to the research team via a password-protected Word document (password shared separately). The template will be designed to take no longer than 10 minutes to complete.

The structured diary/log questions/sections will be developed with our Bridge Watch partners and reviewed through Practice and Public Involvement and Engagement input (see details in Section 5). We anticipate the questions/sections will explore:

- Reflections on the patrol session – what things came up (who was engaged with).
- How did you respond to encountered topics/issues.
- Did you have the skills/knowledge to provide support (what would be good for you/other volunteers to know).
- Did you gain any skills/new knowledge.
- How are you feeling after the patrol.

Volunteers who take part in the diary/log reflections will be offered a £25 voucher as a thank-you for their time. This is separate from the reimbursement for interview participation.

The volunteer interviews and diary/log reflections will be separate data collection methods. They will have separate information sheets and consent forms. This will enable people who want to participate in only one element to effectively do this.

4.2.5 Analysis

The interviews, with the participants' consent, will be audio recorded, transcribed verbatim and stored as Word documents. Volunteers' diary/logs after patrols will be completed on Word documents. An inductive thematic analysis will be conducted on collected qualitative data, informed by Braun and Clarke's (2006) six stage thematic analysis approach: step 1 - become familiar with the data; step 2 - generate initial codes; step 3 - search for themes; step 4 - reviewing themes; step 5 - defining themes; and step 6 - write-up. The qualitative research team will read a small selection of transcripts, and meet to review and discuss initial codes, from this we will produce a conceptual coding framework of key themes and sub-themes. The transcripts will be coded using NVivo software. The research team will meet regularly to discuss coding and to amend the coding framework as appropriate.

5 Practice and public involvement and engagement

We will work with our Bridge Watch Programme partners to set up a small Practice and Public Involvement and Engagement group (n = 4) of relevant professional stakeholders (e.g., from linked services such as City of London Police, Met Maritime Police, etc.) and some volunteers not involved in the interviews/data collection. Their involvement will be important for understanding how to best approach and engage individuals around potentially sensitive topics. Participants of the Practice and Public Involvement and Engagement group will be offered a £25 voucher as a thank-you for their time.

Recruitment to the group will be undertaken by our Bridge Watch Programme partners. We envisage the group to support and advise on the readability, accessibility and suitability of the evaluation documents, such as information sheets, consent forms, and topic guides. Depending on availability, we will work with the group to critically discuss emerging findings, advise on lay summaries and implications of findings and on dissemination, ensuring our plans and approaches are appropriate.

We will discuss with the Hackney Public Health Team and partners the possibility and means of involving those with lived experience or previous suicide attempts in the PPIE activities. For instance, one option in consideration is to invite representatives from the Samaritans to be part of the PPIE. We may also use existing university-run Practice and Public Involvement and Engagement groups (e.g., the University of Sheffield PPIE Methodology Research Group) to seek feedback from public contributors.

6 Co-production and knowledge mobilisation

Building on the evaluability assessment process, our work and joint decision-making with the Bridge Watch partners has informed and will continue to shape our protocol, research design and knowledge mobilisation. Our collaborative approach relates to NIHR School for Public Health Research knowledge-sharing principles (School for Public Health Research, 2018).

6.1 Principle 1: clarify purpose and knowledge-sharing goals

Starting with the evaluability assessment process, we will continually clarify the evaluation purpose and identify knowledge sharing goals. Early goals have been identified as shaping service delivery and commissioning, as well as informing service delivery in other locations and understanding wider impacts of the programme.

6.2 Principle 2: identify knowledge users

During the evaluation, we will aim to share knowledge by working co-productively to provide evidence and insight for a range of stakeholders. These stakeholders will be identified in collaboration with the Bridge Watch team.

Early discussions have identified the Bridge Watch team, related services, Thrive London, and commissioners as the primary knowledge users. Wider knowledge users will include the local community in City and Hackney, other areas nationally who could be interested in delivering similar initiatives and the academic community.

6.3 Principle 3: design the research to incorporate the expertise of knowledge users

The evaluability assessment process, and ongoing discussions with members of the Bridge Watch team, have influenced the research design. Our approach has been agreed with local stakeholders responsible for the Bridge Watch Programme, based on what information, and in what formats, they would find helpful. Our approach aims to upskill team members, enabling them to conduct and repeat aspects of the evaluation once the evaluation has ended, due to close involvement in the research design.

The Bridge Watch team will be invited to research team meetings on a regular basis to include them in the process. The formative evaluation design also incorporates a formal mid-point check-in by the research team with key knowledge users. The format and scope of this interim reporting will be agreed with the Bridge Watch team during the first part of the evaluation.

6.4 Principle 4: agree expectations

In ongoing discussions with the Bridge Watch team we will discuss options for increasing the usefulness and accessibility of knowledge from the evaluation, and to support the implementation of findings in the design and delivery of services.

The outcome of these discussions will be reflected in a knowledge mobilisation and dissemination plan, initial elements of which are outlined in the 'Outputs' section below.

6.5 Principle 5: monitor, reflect, be responsive

We will work with Bridge Watch team in an agile way, responsive to evaluation and knowledge needs. We will regularly discuss knowledge and dissemination needs in collaborative meetings.

6.6 Principle 6: Leave a legacy

We will explore the legacy of the evaluation and associated knowledge mobilisation activities for the Bridge Watch Programme, to understand what worked well, what we could do differently next time, and the impact of the work.

7 Outputs

Outputs will be informed by discussion and consultation with our Bridge Watch partners. Proposed outputs include:

- An interim report for the Bridge Watch team where we feedback on emerging findings and initial learning to help shape the continued development of the programme and future commissioning intentions. We will also use this time to work with our Practice and Public Involvement and Engagement group to explore ways to present lay summaries of findings.
- A final research project report with a brief executive summary/short policy/research briefing paper for our project partners and for NIHR.
- Public-friendly summary of research and findings (potentially in the form of an infographic or animation).
- A reconvening of stakeholders from the evaluability assessment process to discuss findings and implications.

We also intend to produce two academic papers that will explore:

- Qualitative perspectives and experiences of volunteers, key stakeholders and service users regarding the Bridge Watch Programme, and the key learning recommendations.
- The impact of Bridge Watch on the number of people entering the water, estimated using Interrupted Time Series analysis.

8 Data management plan

8.1 Quantitative data

Only secondary data routinely collected will be used (see [Appendix 3](#)). Data sharing agreements will be arranged for the transferring of data between the data providers and University of Glasgow. It is expected that the data will be fully anonymised by the provider when released. All datasets will be requested through appropriate request mechanisms and the terms of provision will be adhered to. All data will be transferred over secure, encrypted connections. We will accept data files in the format received from the data providers (e.g., CSV, TAB, relational databases), subject to the requirements specified in each data release requirements.

All secondary data will be stored in the University of Glasgow secure networks, whose standard operating procedures cover arrangements for backup, storage and security, and will be adhered to, with strict compliance of the General Data Protection Regulation.

Access to data will be limited to the project team, including those who may become part of the team in the future. All data analysis will take place on password protected computers/laptops of the research team. No data will be stored on computers/laptops but will be stored and accessed via the University secure server, with access restricted to members of the research team only.

8.2 Qualitative data

The University of Sheffield will act as the data controllers for the qualitative data.

The project will generate qualitative data (Word documents) in the form of interview transcripts and volunteer diary/log reports.

All interviews (phone, online) will be audio recorded only using an encrypted digital dictaphone. Audio files from interviews will be uploaded to a secure, access-restricted folder on the University of Sheffield server, as soon as is reasonably possible. Once uploaded, they will be deleted from recorders. Transcription of interviews will be undertaken by the University of Sheffield School of Health and Related Research transcription group. Transcripts will be stored on a secure, access-restricted folder on the University of Sheffield server.

Volunteer diary/log reports will be sent from participants to the research team as Word documents. Word documents will be uploaded to a secure, access-restricted folder on the University of Sheffield server, as soon as is reasonably possible. Once uploaded, emails will be deleted.

The project team, including those who may become part of the team in the future, will also have access to the study's data and will be able to comment on data at the analysis stage. Access to data will be restricted to these individuals. To enable anonymity, transcripts will have a unique identifier embedded in the filename.

Personal information will be collected as part of the qualitative research via consent forms, and when arranging interviews and setting up diary/log reports.

For consent forms, participants' names will be recorded on consent forms. Consent forms will be scanned onto and stored securely in a restricted folder on the University of Sheffield's secure drive. Consent forms will be securely stored for 10 years and then deleted.

When arranging interviews, the names of participants, contact details and times/dates of the data collection sessions will be recorded in a password-protected spreadsheet on the University of Sheffield's secure drive. This information will be recorded for organising the data collection. This information will not be used in analysis or dissemination and will only be used for project management purposes. Participant names and contact information will be deleted as soon as possible from this spreadsheet following the participation of each participant.

To manage and monitor volunteer diary/log reports, the names of participants, contact details and number of reflection reports received will be recorded in a password-protected spreadsheet on the University of Sheffield's secure drive. This information will be recorded for organising and monitoring the data collection. Names and contact details will not be used in analysis or dissemination and will only be used for project management purposes. Participant names and contact information will be deleted as soon as possible from this spreadsheet following the participation of each participant.

General project documents will be stored in a secure folder on the University of Sheffield secure drive. Any personal information will be stored in password-protected folders/documents on the secure drive. This includes contact information for participants, consent forms, audio recordings and transcripts.

In accordance with Research Councils UK guidance, all consent forms will be stored securely in electronic form for a period of 10 years. After 10 years, electronic documentation, and data will be destroyed via deletion from devices/servers.

Anonymised data will not be destroyed following completion of the study but kept available for future research in ORDA, the University of Sheffield's Research Data Repository.

9 Ethics

Ethical approval for the qualitative data collection and analysis has been sought and granted from the University of Sheffield School of Health and Related Research (application reference number 062661). The quantitative component of this evaluation involves secondary analysis of anonymized quantitative datasets, with no personal data being transferred by the data controllers to us. The data controllers of these datasets are the City of London Police and the Thrive LDN. Data sharing agreements are being agreed with both organizations. Because the data we will receive is anonymized and does not contain personal data, ethical review and approval is not required and, hence, not requested.

The research team will ensure that, where appropriate, issues of consent, confidentiality, safeguarding and data management are appropriately addressed across all aspects of the research process including recruitment, data collection, analysis and dissemination. The below covers key points.

9.1 Informed consent

All participants will be provided with a verbal description of the research, as well as an information sheet detailing the project. All participants will be provided time to read information sheets and

consider participation, as well as time and researcher contact details to ask any questions they may have about the study/participation. All participants will be required to sign a consent form before participating. All participants will be informed of their rights to withdraw from participation.

9.2 Confidentiality

Participants' confidentiality will be maintained throughout the project (with the limits of confidentiality being explained to all participants, e.g., the need to break confidentiality if a safeguarding issue arises). Participants will be anonymised in all outputs. Participants will not be linked to any direct quotes. If a volunteer participated in both an interview and in the diary/log reports, data will not be linked.

9.3 Safeguarding protocol

We appreciate the potentially sensitive nature of the topic. A safeguarding protocol has been developed in collaboration with our Bridge Watch project partners. This will be regularly reviewed during data collection. This includes a named safeguarding contact available during all data collection times so any issues can be escalated to them, as well as support options/contact information for participants to use.

Participation will remain confidential, but if there is a suggestion of safeguarding issues (i.e., someone is at harm), confidentiality will be broken, and the University of Sheffield safeguarding policies will be adhered to.

The interview topic guides have been co-designed with our Bridge Watch partners with input around approaching research topics appropriately and sensitively.

9.4 Data protection

All data will be securely stored and processed in line with data protection requirements. All project data will be stored on the University of Sheffield and University of Glasgow secure drive, and only accessible to those within the research team members who require this. Any personal data will be stored in password-protected folders in the secure drives (e.g., contact information for arranging interviews/diary reports, audio recordings, transcripts).

10 Timeline

Tasks	2024							2025						
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Ethics application	x	x												
Practice and public involvement and engagement	x	x					x							
Qualitative component – fieldwork			x	x	x	x	x							
Qualitative component – analysis				x	x	x	x	x	x					
Quantitative component – data retrieval		x	x	x	x	x	x	x	x	x				
Quant component – analysis					x	x	x	x	x	x	x	x		
Interim report							x							
Final report													x	x
Dissemination							x						x	x

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Appendices

Appendix 1 – Details of the searches

Medline

1	(public place* or loch* or lake* or sea* or high places or cliff* or railway* or building* or bridge* or jump or jumping or jumps or jumpers or leap* or drown* or water or river*).ab,kw,ti.	2420223
2	Suicide Prevention/	11537
3	(suicid* adj (intervent* or prevention or attempt* or intent*)).ab,kw,ti.	25649
4	(third party or lay or volunteer* or unpaid or patrol*).ab,kw,ti.	277860
5	2 or 3	32914
6	1 and 4 and 5	32

<https://ovidsp.ovid.com/ovidweb.cgi?T=JS&NEWS=N&PAGE=main&SHAREDSEARCHID=64S9904Cwg5xG2wmqcCsMiHb65dk3KGY9wnJZCC7qeCFnpRSPfKVWjS2L7IUggoc>

Of those results, these might relevant:

- Owens C, Derges J, Abraham C. Intervening to prevent a suicide in a public place: a qualitative study of effective interventions by lay people. *BMJ Open*. 2019;9(11):e032319.
- Pirkis J, Too LS, Spittal MJ, Krysinaka K, Robinson J, Cheung YT. Interventions to reduce suicides at suicide hotspots: a systematic review and meta-analysis. *Lancet Psychiatry*. 2015;2(11):994-1001.
- Cox GR, Owens C, Robinson J, et al. Interventions to reduce suicides at suicide hotspots: a systematic review. *BMC Public Health*. 2013;13:214.

We did a citation search on Owens (2019) but found no other relevant studies. There were studies that talked about staff, commuters, and bystanders but *not* volunteers.

SCOPUS

(TITLE-ABS-KEY (third AND party OR lay OR volunteer* OR unpaid OR patrol*)) AND (TITLE-ABS-KEY ((suicid* W/1 (intervent* OR prevention OR attempt* OR intent*)))) AND (TITLE-ABS-KEY ((public AND place* OR loch* OR lake* OR sea* OR high AND places OR cliff* OR railway* OR building* OR bridge* OR jump* OR drown* OR water OR river*)))

The SCOPUS search returned 5 hits, nothing relevant.

PsycINFO

#	Query	Results
S1	T1 (public place* or loch* or lake* or sea* or high places or cliff* or railway* or building* or bridge* or jump* or leap* or drown* or water or river*) OR AB (public place* or loch* or lake* or sea* or high places or cliff* or railway* or building* or bridge* or jump* or leap* or drown* or water or river*)	328,860
S2	DE "Suicide Prevention"	6,671

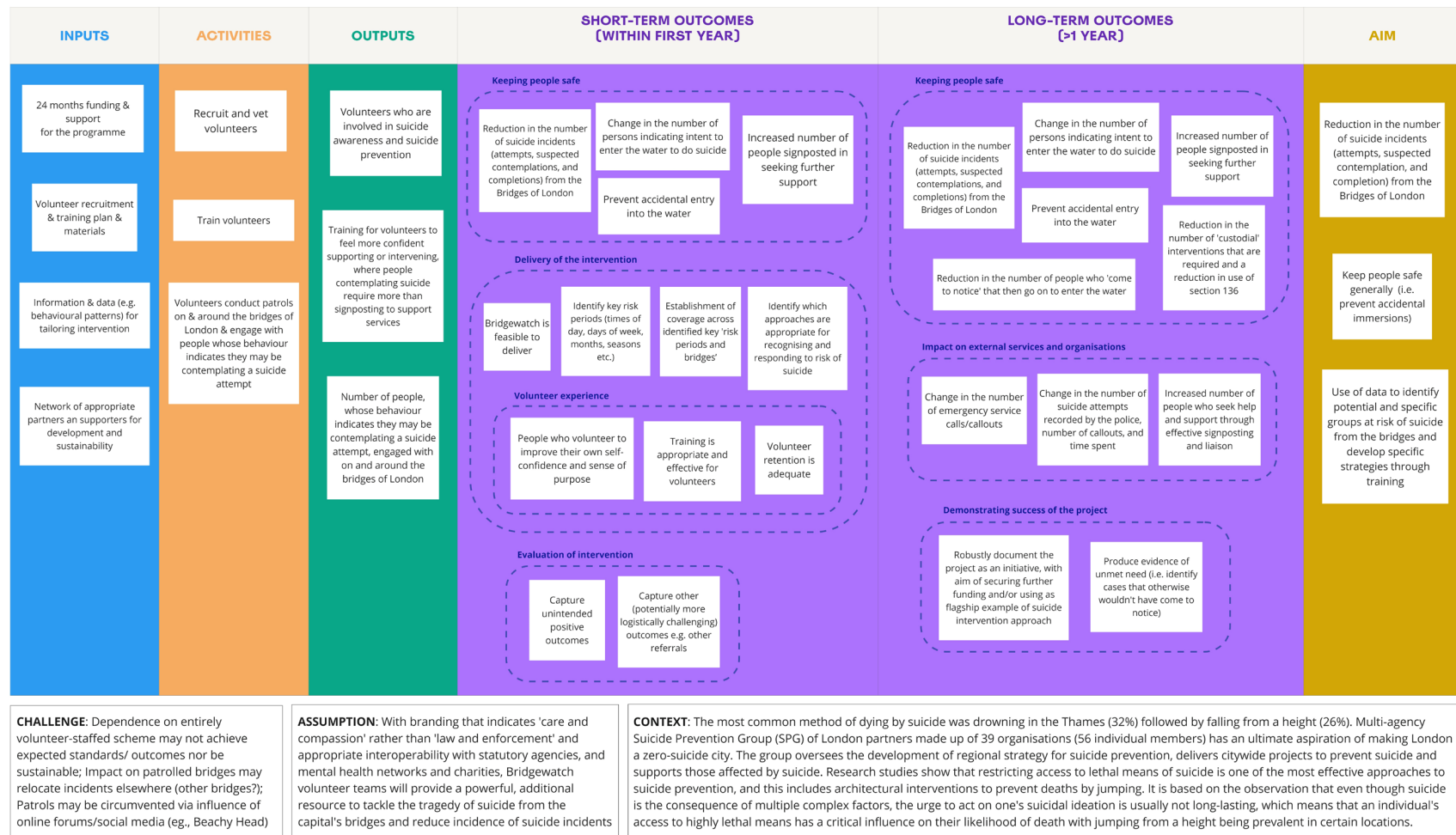
#	Query	Results
S3	TI (suicid* N1(intervent* or prevention or attempt* or intent)) OR AB (suicid* N1(intervent* or prevention or attempt* or intent))	27,046
S4	TI (third party or lay or volunteer* or unpaid or patrol*) OR AB (third party or lay or volunteer* or unpaid or patrol*)	75,931
S5	S2 OR S3	28,860
S6	S1 AND S4 AND S5	27

Of those results, this might be relevant:

- Lockley A, Cheung YT, Cox G, Robinson J, Williamson M, Harris M, Machlin A, Moffat C, Pirkis J. Preventing suicide at suicide hotspots: a case study from Australia. *Suicide Life Threat Behav.* 2014;44(4):392-407.

Appendix 2 - Bridge Watch Theory of Change

This Theory of Change has been co-developed with stakeholders to a stage where it is sufficient to develop evaluation design options. It is not meant to represent a definitive description of the Bridge Watch Programme.



Appendix 3 - Sources of data on suicide incidents

#	Database Name	Host(s)	Types of suicide incident data	Information on other data fields	Notes
1	London Real Time Surveillance System (RTSS)	Thrive LDN & Metropolitan Police Service (MPS)	'Suspected suicides' (prior to coroner report); suicide completion in London and by London residents	Residence; location, Ethnicity, gender, LA, residency, age	Cases are submitted onto the system by the MPS and British Transport Police (BTP). Doesn't record attempts. Currently pulling in attempts data from NHS services, but this is only people who present to NHS services (input by BTP and MPS). Completions are described as 'suspected' because there is no coroner's report linked to the data.
2	City of London Police real time surveillance data	City of London Police	Contemplations, attempts, completions in the geographical area of the square mile	Date, month, time of the incident, offence, location, age, ethnicity, borough of residence, Section 136, Mental Health Street Triage intervention, repeat victim	Records from 2017
3	Mental Health Street Triage database	Mental Health Street Triage	To be confirmed	Potential Section 136, Section 136 avoided, CAD, practitioner, date, time, borough of residence, known to mental health services, visitor or worker in the city, presenting complaint, suicidal, substance use, intervention offered, outcome of intervention	
4	WAID water incident database	National Water Safety Forum	To be confirmed		Martin Barwood (Leeds Trinity University) works on drowning cluster analysis
5	National Real Time Surveillance database	Office for Health Improvement and Disparities	Completions		

#	Database Name	Host(s)	Types of suicide incident data	Information on other data fields	Notes
6	Office for National Statistics	Office for National Statistics	City residents' completions	Deaths, standardized rates by 100 000 population	
7	Primary care mortality dashboard		Death by suicide in primary care	Year, age range, sex, ward	
8	Coroners' data	Coroner	Completions	Ref number, date of birth, date of death, age at death, sex, home postcode, ethnicity, religion, place of death, place of death type, cause of death, significant conditions, inquest formal conclusion if applicable, inquest concluded circumstances if applicable, sexual orientation, date of incident, known to mental health services	Availability is at the coroner's discretion
9	City of London Police mental health callout data	City of London Police	Mental health callouts in the square mile	Incident date, incident number author, activity (Mental Health), from to, duration, notes, easting from associated pronto task, northing from associated pronto task, longitude, latitude, department, sub department, task number, task title	
10	Metropolitan Maritime Police database	Metropolitan Maritime Police	People entering the Thames all over London	Date of incident, time of incident, location of incident, age at presentation, summary of police log, client postcode, sex, consultation date, consultation time, frequency, initial outcome of incident at scene, custody outcome, summary of action by the police liaison team, initial risk rating, armed service veterans (incl. reserve forces), race, ethnicity, homeless, final risk rating, final outcome, date closed,	