Public Health England

Protecting and improving the nation's health

Preventing suicides in public places

A practice resource

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

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Foreword

Louis Appleby, chair of the National Suicide Prevention Advisory Group

Every person lost to suicide is a tragedy that affects families, friends, colleagues and the wider community. Suicide is not inevitable – thankfully, only a minority of people who have suicidal thoughts or impulses go on to take their lives. With the right help people can get through a suicidal crisis and recover. This is why anything that delays or disrupts a suicidal act can be life-saving and why suicide prevention includes tackling the methods that are most often used. Limiting access to the means of suicide can interrupt the suicidal intention, buying time and giving individuals the chance to reconsider. It can also increase the chance that help may reach them.

The national suicide prevention strategy has an objective to reduce access to the main means of suicide, and this includes the frequently used locations that are known about in many parts of the country. Reducing access to these locations as well as their notoriety is what this document is about. It is also important to increase suicide awareness and intervention skills among members of the local community, who will often be the first on the scene. There have been terrible instances of suicidal individuals being goaded in public rather than helped. Local authorities should do all they can to reduce stigma and promote the message that suicide prevention is everyone's business.

Local authorities have an important role as leaders in public health and as local planners. This is intended as a practical toolkit for them, setting out the available evidence, with templates for action and advance planning. This of course is only one element of suicide prevention – it should be read alongside Public Health England's (PHE) 'Guidance for developing a local suicide prevention plan'.

I know that six people shared their personal experience of being suicidal and I would like to thank them for being prepared to do so. Their testimonies support the evidence we have about risk at certain locations and underline the importance of prevention, of providing support when it is needed, of taking every measure we can to protect people in crisis.

Executive summary

This practice resource is for those with responsibility for suicide prevention in local authorities and their partner agencies. It has been developed to help them contribute to the delivery of the national suicide prevention strategy for England, in particular area 3 of the strategy, 'Reduce access to the means of suicide'.[1]

It replaces the 'Guidance on action to be taken at suicide hotspots' published in 2006 by the National Institute for Mental Health in England (NIMHE).[2] It has a broader focus, includes learning from those who have tried to take their own lives in public places, draws on recent research and expert opinion, and provides examples of innovative practice from England and around the world. This document sits alongside PHE's 'Guidance for developing a local suicide prevention action plan': www.gov.uk/government/publications/suicide-prevention-developing-a-local-action-plan

Part 1. Suicides in public places

Around a third of all suicides take place outside the home, in a public location of some kind.

They attract harmful media attention and can have significant psychological consequences for those, including children, who witness them or discover a body. They may also directly involve another person, such as a train driver.

A number of effective steps can be taken to prevent public places being used for suicide and to increase the chances of last-minute intervention. These are among the most practical things that local suicide prevention groups can do.

Part 2. A step-by-step guide to identifying locations and taking action

The process of preventing suicides in public places has four main steps.

Step 1. Identify locations used for suicide and prioritise on the basis of frequency. This requires the systematic collection and analysis of local data.

Step 2. Plan and take action at priority locations. This involves engaging stakeholders, assessing the site and drawing up and implementing an action plan. Figure 3 provides a comprehensive framework for carrying out this exercise.

Step 3. Apply the same thinking to similar locations: 'where else is like this?' This pre-emptive approach should enable local authorities to prevent the emergence of frequently-used locations.

Step 4. Evaluate and reflect. All activity should be evaluated and reported to the health and wellbeing board.

Part 3. Interventions to prevent suicides in public places. Practical examples and evidence of effectiveness

Four broad areas of action can help to eliminate suicides at a frequently-used location. Specific interventions contribute to each.

Area 1. Restrict access to the site and the means of suicide

This can be achieved by:
i) Closing all or part of the site
ii) Installing physical barriers to prevent jumping
iii) Introducing other deterrents, for example, boundary markings or lighting

Area 2. Increase opportunity and capacity for human intervention

This can be achieved by:
i) Improving surveillance using CCTV, thermal imaging and other technologies; increasing staffing or foot patrols
ii) Providing suicide awareness/intervention training for staff working at or near the site; increasing whole-community awareness and preparedness to intervene

Area 3. Increase opportunities for help seeking by the suicidal individual

This can be achieved by:
i) Providing Samaritans signs and/or free emergency telephones
ii) Providing a staffed sanctuary or signposting people to a nearby one

Area 4. Change the public image of the site; dispel its reputation as a ‘suicide site’

This can be achieved by:
i) Ensuring media reporting of suicidal acts is in line with Samaritans guidelines
ii) Discouraging personal memorials and floral tributes at the site
iii) Introducing new amenities or activities; re-naming and re-marketing the location

The plan for a site should incorporate all four areas of action, as they all impact on the goal in different ways.

Introduction

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It replaces the 'Guidance on action to be taken at suicide hotspots' published in 2006 by the National Institute for Mental Health in England (NIMHE).[2] It has a broader focus, includes learning from those who have tried to take their own lives in public places, draws on recent research and expert opinion, and provides examples of innovative practice from England and around the world. This document sits alongside PHE's 'Guidance for developing a local suicide prevention action plan': www.gov.uk/government/publications/suicide-prevention-developing-a-local-action-plan

Part 1 explains what is meant by suicides in public places, why they are important and how this area of practice fits with the national suicide prevention strategy.

Part 2 outlines a step-by-step process for identifying locations at which suicides have occurred or could occur, and for planning and taking steps to prevent further suicidal acts.

Part 3 provides more detail about the types of intervention that can reduce the risk of suicide at particular locations. It summarises the evidence of effectiveness and the pros and cons of each intervention and gives practical examples.

It should be noted that while this document is based on the best available evidence, this is an emerging field. All the recommendations are based on best practice, informed by expert opinion and people with practical experience in this area.

Methodology

This best practice document has been developed at the University of Exeter Medical School by Dr Christabel Owens, Rebecca Hardwick, Nigel Charles and Dr Graham Watkinson. The development of the practice resource involved six stages:

i) Review of scientific evidence
A systematic review of the scientific literature on interventions to reduce suicides at suicide hotspots was published in 2013.[3] We updated this to include studies published up until June 2014, using the same search strategy and broader search terms.

ii) Review of international guidance and grey literature
Google searches and personal contacts were used to locate relevant reports, policy and guidance documents and online resources from the statutory and voluntary sectors, in the UK and elsewhere. These were mined for information on new approaches and additional references.

iii) Letter to directors of public health
In March 2014, a letter was sent via PHE to all directors of public health in England inviting them to tell us what they were doing to tackle locations of concern in their local area. Selected responses were followed up via email or telephone. The new resource includes examples of local action and illustrative case studies.

iv) Consultation with local government teams elsewhere in the world
Searches of the scientific and grey literatures revealed a number of problem locations worldwide where effective local action has been taken. Interviews were conducted via email and Skype with those involved in the development and implementation of site-specific suicide prevention plans.

v) Interviews with survivors
Little is known about why suicidal individuals choose particular places or types of place. In an effort to learn from those who have tried to take their own lives in public places, an invitation was issued via local mental health service user groups and recovery networks for people to share their personal stories. Six people volunteered to take part and the University of Exeter Medical School Research Ethics Committee granted approval to interview them in order to inform this resource.

vi) Piloting the practice resource
The new resource has been rigorously piloted with one English local authority public health team at a frequently used location and revised in the light of this exercise.

The local authority and particular location involved in the pilot remain anonymous to avoid drawing attention to the site. On the advice of Samaritans, we have withheld names of locations throughout the document, unless they have already been identified in the published literature. Anyone seeking further information and contact details regarding any of the case studies should contact publicmentalhealth@phe.gov.uk.

Part 1. Suicides in public places

Research suggests that around a third of all suicides take place outside the home, in a public location.[4] Exact figures are difficult to obtain, because coroners do not always record the place where the suicide occurred. It may be different from the place of death, for instance, if the individual is transferred to hospital and dies there.

The impact of a public suicide extends far beyond the usual circle of family members, friends and acquaintances. Bystanders, including children, may suffer long-lasting trauma from witnessing a suicide in a public place or from discovering a body. Some methods of suicide also directly involve another person, such as a train driver, which can have devastating psychological consequences for those individuals.[5]

Suicides in public places may be more easily preventable than those that occur in the privacy of the home. There are a number of effective steps that can be taken to prevent public places being used for suicidal acts and to increase the chances of last-minute intervention. These are among the most practical things that local suicide prevention groups can do. While many of the big issues in suicide prevention are difficult to tackle at local level, this one can only be addressed at local level.

What is meant by ‘public places’ and are they the same as ‘hotspots’?

Public places may be indoor (for example, a hotel, public building or shopping mall) or outdoor (for example, a park, forest, beach, industrial estate, railway track, car park or lay-by). Public places are not necessarily busy places and the term ‘public’ does not necessarily mean highly visible.

The key distinction is between deaths that occur in the privacy of the home (the deceased’s own home or that of an acquaintance) and those that occur outside the home. This practice resource is concerned with the latter.

Definition. Suicide in a public place

A suicidal act that takes place outside the deceased’s or another’s private home, in a location that offers potential for the act to be witnessed by members of the public, or for the body to be found by someone unknown to the deceased.

Previous guidance and much of the scientific literature has focused on so-called ‘suicide hotspots’.[2,6] A ‘hotspot’ is a public site that is frequently used as a location for suicide, such as a particular bridge from which several suicidal jumps have occurred. Many people dislike the term ‘hotspots’ because it trivialises suicidal acts, gives places a bad name and may encourage further suicides at those sites. In this resource, we refer to them as ‘frequently-used locations’.

Evidence suggests that not all suicides in public places occur at frequently-used locations.[4] Interviews with survivors confirm this. Suicides can occur anywhere, and a broader approach is therefore recommended here. A pre-emptive approach is also better than a purely reactive one.

How does this contribute to the delivery of the national suicide prevention strategy?

Area for action 3 of the national strategy is concerned with reducing access to the means of suicide. This is known to be one of the most effective methods of preventing suicide.[7] It is an important element in an overall strategy because it targets the whole population and provides a way of reaching the many vulnerable individuals who are not in contact with health and social care services.

In the same way that a pack of tablets supplies the means of suicide by poisoning, a place can provide the means of suicide by jumping from a height or jumping/lying in front of a moving object. The use of these two methods, both of which have a high fatality rate,[8] is dependent on the availability of suitable sites and structures.

Local authorities can contribute to area 3 of the national strategy by identifying such places and taking steps to prevent them being used as a means of suicide.

If a location offers means and opportunity for suicide, it also offers means and opportunity for prevention.

Restricting access to the means of suicide does not address an individual's personal difficulties or relieve their mental distress, but it can interrupt the suicidal process. It buys time, thwarting impulsive acts and giving individuals a chance to reconsider. It can also increase the chance of some form of help reaching them.

When suicides occur in public places there is more opportunity for last-minute intervention, but the first response is much more likely to come from a passing stranger than from a family member or professional caregiver. For this reason, it is important to equip people in all walks of life with the skills and confidence to intervene if they see someone in a public place who may be considering suicide.

Local authorities should do all they can to promote the message that suicide prevention is everybody's business.

What types of place do suicidal people choose and why?

We know very little about the factors that influence suicidal individuals to choose a particular location.

Sometimes an obvious relationship exists between location and method. This is always true for jumping from a height and jumping/lying in front of a moving object, where the place provides the means of suicide.

The opportunity for suicide presented by a particular site, such as a bridge or cliff-top location, and the reputation it acquires through media exposure, can be so great that suicidal individuals will travel hundreds of miles to take their lives there.[9] This is why it is important to avoid labelling places as ‘suicide hotspots’.

Interviews with survivors suggest some other factors that may drive a suicidal individual to choose a public location, including:

- a quest for peace and solitude
- a love of nature and the outdoors
- a desire to spare loved-ones the distress of finding them
- the possiblility of rescue

The place does not always provide the means. Any place may present itself to someone in a suicidal frame of mind as a suitable location for suicide. Much depends on the individuals, their circumstances, their mental state and their physical energy level.

Table 1 shows the full range of methods and the type of locations likely to be associated with them.[4]

The likelihood of any of these locations being used for suicide will be increased by proximity to a psychiatric in-patient unit, a hostel or accommodation for people with mental health or substance misuse problems, an A&E department or any other facility used by vulnerable persons.

Part 2 shows you how to identify locations in your own area that may be used for suicide and what you can do about them.

Table 1. Suicide methods and associated locations

Method of suicide	Types of location
Jumping from a high place	Urban: • road and river bridges • viaducts • any high-rise building (4 or more storeys) with access to roof, balconies or ledges • hospitals • multi-storey car parks • internal atria, for example in shopping malls and hotels Rural and coastal: • cliffs
Jumping or lying in front of a moving object	Urban: • mainline railway stations • level crossings; accessible stretches of high-speed rail track • underground stations • motorways and trunk roads Rural: • railway crossings or stretches of accessible high-speed rail track • any fast stretch of trunk road
Drowning	Urban: • rivers and canals Rural and coastal: • beaches • rivers, lakes and reservoirs
Hanging	Urban: • bridges and other structures with railings and access to a drop Rural: • woods and forests[10]
Other, including: poisoning, car exhaust, burning, firearms	Urban: anywhere offering seclusion, such as waste land or vacant industrial sites Rural and coastal: • isolated rural car parks and lay-bys • anywhere offering seclusion, such as forests, country parks, lanes, fields, lanes and cliff tops

Part 2. A step-by-step guide to identifying locations and taking action

Preventing suicides in public places should be part of an overall local suicide prevention action plan, which should be integrated with the joint strategic needs assessment (JSNA).

To draw up and implement the local action plan, each local authority area should have a multi-agency suicide prevention group (MSPG), headed by a senior member of the public health team and overseen by the local health and wellbeing board. MSPGs are most effective when core membership is kept relatively small, with representation from key agencies only and consistent attendance at meetings.[11] Representatives of other agencies can be co-opted to advise on specific issues and projects, such as taking action at a frequently-used location. Further information is given in 'Guidance for developing a local suicide prevention action plan': www.gov.uk/government/uploads/system/uploads/attachment_data/file/359993/Guidance_for_developing_a_local_suicide_prevention_action_plan__2_.pdf

The process of preventing suicides in public places consists of four main steps, shown in **figure 1**.

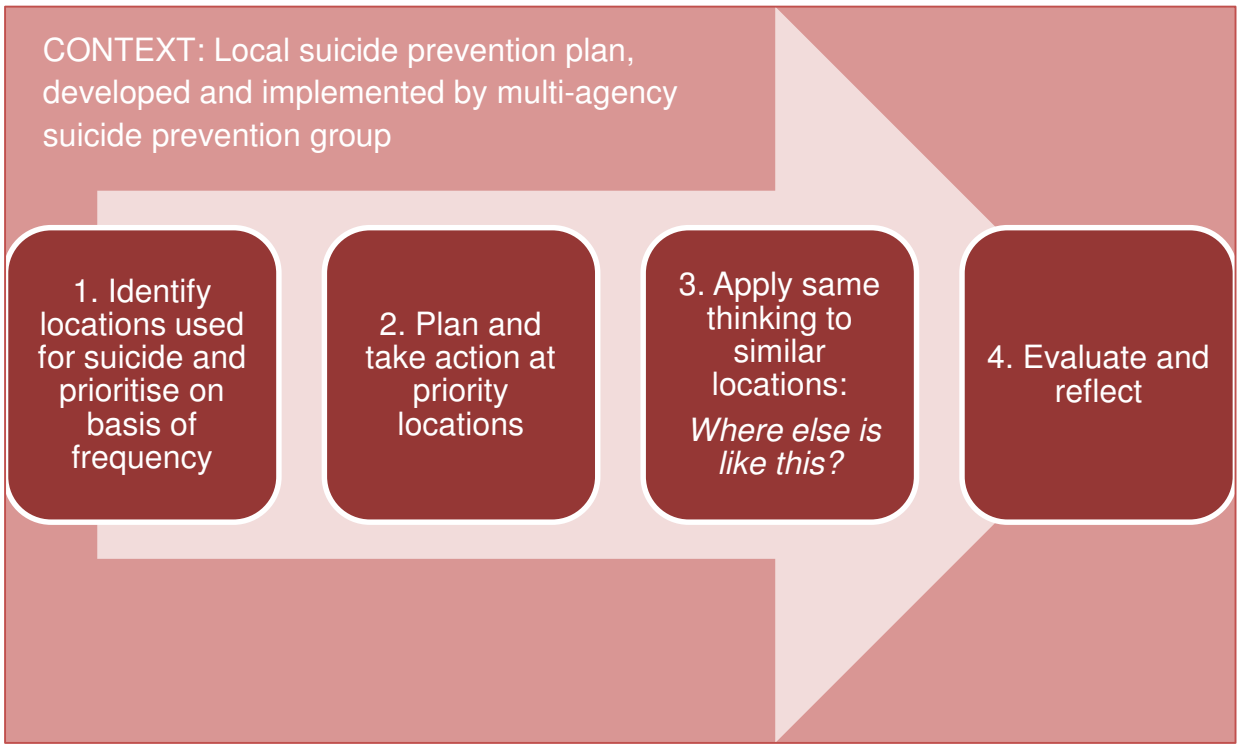


Figure 1. A four-step process for identifying and taking action at specific locations

Step 1. Identify locations used for suicide and prioritise on basis of frequency

The first step is to identify locations at which suicides have taken place in the past.

Frequently-used locations are often brought to the attention of a local authority by the coroner, members of the emergency services, transport providers, voluntary groups or concerned individuals, or through media reports. Such informal knowledge may provide sufficient grounds for taking immediate action, but being able to produce robust data will considerably strengthen the case for intervention at a particular site, especially if it is likely to be costly or controversial. It will also provide a baseline against which to evaluate effectiveness. Systematic collection and analysis of local data are therefore recommended.

If no established suicide audit or real-time surveillance system is in place, arrangements will need to be made to collect data from coroners' files. Coroners are under no obligation to supply data or allow access to their records, and the importance of building a good relationship with the local coroner cannot be overemphasised.[11]

What data to collect

The variables that are needed to identify frequently-used locations and examine patterns of use are listed in appendix 1, together with their definitions and rationale.

Data analysis

Public health information analysts will be familiar with the techniques needed to interrogate the data. Analyses are likely to be relatively simple and descriptive, and should seek to answer the following questions.

For each location:

- how many times has the site been used?
- what methods of suicide have been used at the site? A range of methods may have been used at a single site, for example jumping and hanging.[4]
- how large is the site? If it is an extensive area (for example, a country park or stretch of cliffs), where exactly do the acts take place? Are they concentrated in a particular spot or scattered across the site?
- how far did individuals travel to the site? How did they get there? This may indicate a need for suicide awareness/intervention training for transport providers.
- are there any particular days or times at which suicidal acts occur at the site? It may be possible to increase surveillance and/or staffing at key times.
- do the individuals share addresses or any personal characteristics? For example, they may be residents of a local hostel or users of a nearby service.

By far the most graphic and effective way of displaying locations is through the use of geographical information system (GIS) software. A GIS package enables any data that has a geographical or spatial element to be linked to an Ordnance Survey map and marked precisely on it. This technique lends itself well to the identification of frequently-

used locations. Mapping can also highlight the proximity of suicide sites to other relevant locations such as psychiatric hospitals, prisons and probation hostels, where vulnerable population groups are concentrated.

Many large public service organisations, such as county councils and police forces, regularly use GIS and have skilled analysts who may be able to assist in mapping suicides. University geography departments will also be able to offer advice and practical assistance. If a real-time surveillance system is in place, locations of suicides and suspected suicides should be plotted using GIS as they occur, in order to identify repeat incidents, clusters and other patterns. The results of mapping exercises should not be made public.

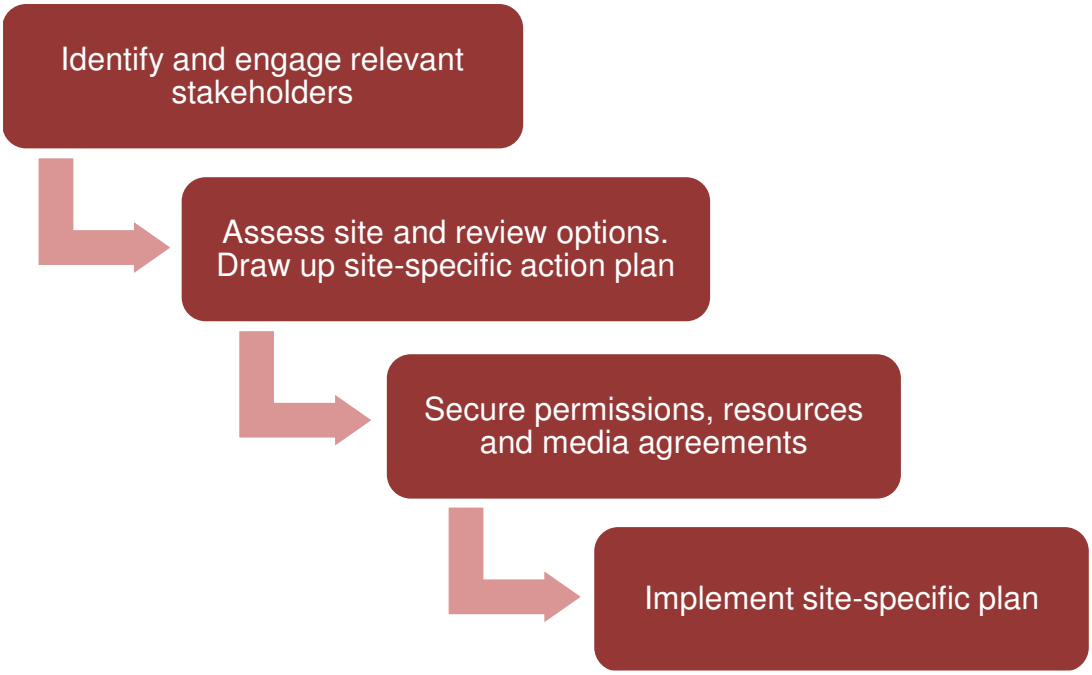
Prioritising locations

Locations should be prioritised for action on the basis of the number of suicidal acts. Any location that has been used more than once (whether the acts proved fatal or not) should be regarded as a priority site.

Step 2: Plan and take action at priority locations

For each site identified as a priority for action the local authority should appoint an individual lead or champion. This should be someone with a track record of effective communication and stakeholder engagement. He or she will need to be able to overcome opposition, draw people together to agree on an action plan, secure resources and drive a complex project forward. Activity then consists of the following steps (figure 2):

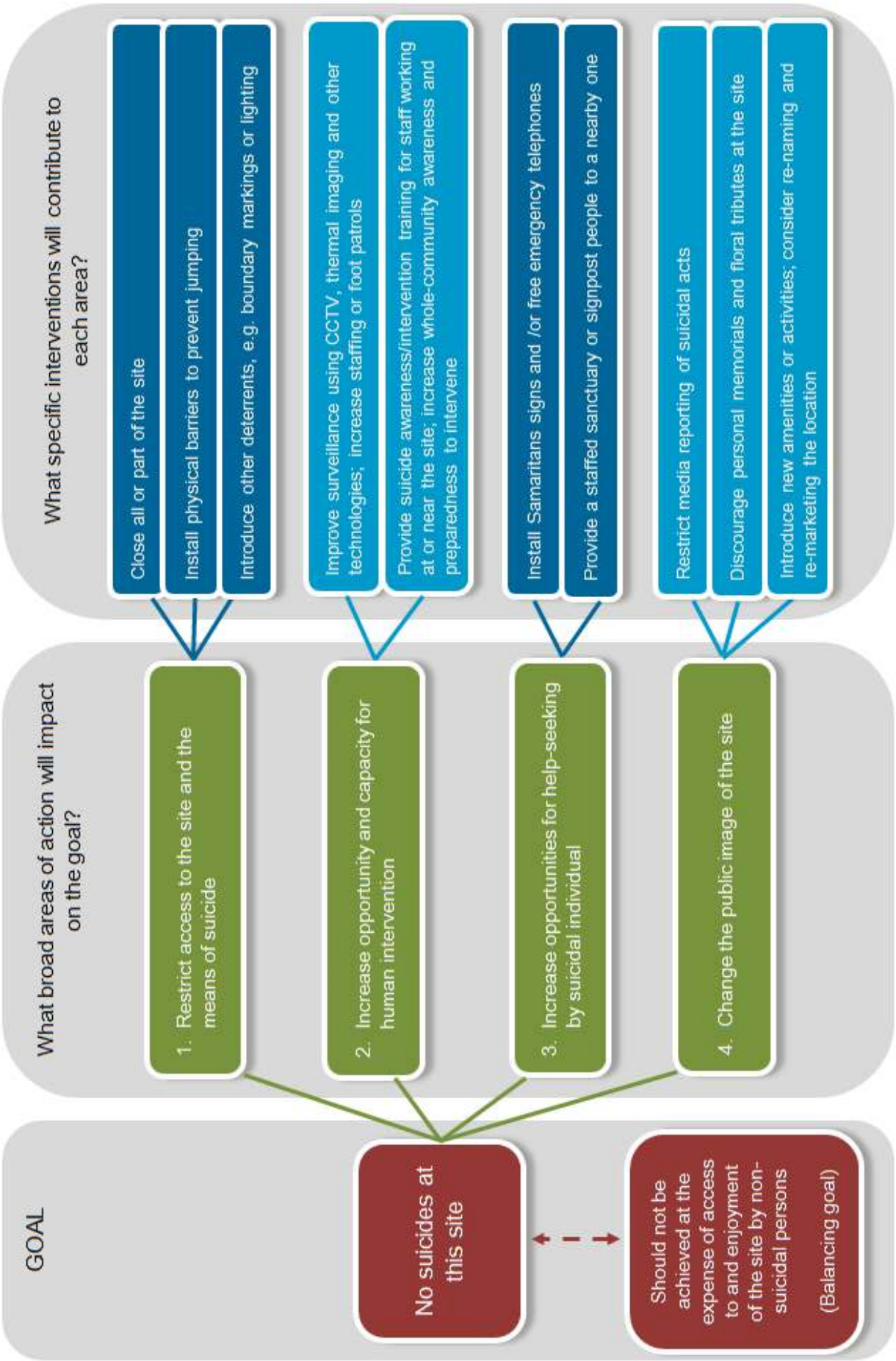
Figure 2: Stages in site-specific planning and action



Identifying and engaging relevant stakeholders

Action to prevent suicides in a public location may arouse controversy and possibly opposition, especially if the site is a tourist attraction, nature reserve, site of special scientific interest (SSSI) or in a national park. This can be avoided by early public consultation and engagement.

Figure 3. A framework for site-specific suicide prevention



Those who are likely to have an interest in the site should be identified at the outset, appraised of the problem and invited to be involved in finding a solution. Their support and specialist knowledge will be needed to avoid damage to the natural environment and local economy, and to maximise the chances of effective intervention.

The stakeholders will vary, depending on the nature of the site and the purposes it serves. The following questions should be used to identify the most relevant stakeholders for each location:

- who owns the site, for example, commercial company, local council, the National Trust?
- who manages it, if different from above?
- who works at the site, for example, railway staff, highway patrols, countryside rangers, tourist information officers, volunteers?
- who uses the site and for what purpose, for example, shoppers, commuters, tourists, ramblers? Is there an official organisation that protects their interests?
- who else cares about the site, for example, local residents whose property overlooks it?
- who is likely to respond to incidents or provide support to suicidal individuals at the site, for example, police, coastguard, private security staff, fire and rescue services, local Samaritans?
- who else may possess relevant knowledge about the site and the behaviour of suicidal individuals at it, for example, those who have attempted suicide there?

Consultation may take the form of meetings, focus groups or interviews with representatives of key agencies. Large public meetings are best avoided, as they may draw unwanted attention to the suicide potential of the site.

Assessing the site, reviewing options and drawing up a site-specific action plan

A full assessment of the site should be carried out, noting:

- all available access routes and methods of transport to the site
- particular features of the site that provide means or opportunity for suicide
- what suicide prevention arrangements are already in place
- what further actions could be taken

Figure 3 provides a framework for carrying out this exercise. It can be used as the basis for drawing up a suicide prevention plan for each priority site.

The framework consists of a:

- primary goal, namely no suicides at this site, together with a balancing goal to protect the interests of non-suicidal persons
- set of four broad areas of action that will impact on the goal
- set of specific interventions that will contribute to each

Each area of action is considered more fully in part 3, together with evidence of effectiveness, practical examples, and pros and cons for each intervention. The plan should incorporate all four areas of action, as they impact on the goal in different ways.

Case study 1. A masterplan for a frequently-used location in Australia

Where is it? This park sits on a dramatic rocky headland at the entrance to Sydney Harbour. It is a premier tourist attraction, known for its spectacular views, towering sandstone cliffs, crashing waves and shipwreck remains. It is also known as a suicide hotspot. The park is approximately 12 acres, much of it rough bushland.

Why was the plan developed? In 2007, the local authority responsible for the park began a regeneration project to upgrade the infrastructure and enhance the natural beauty and reputation of the site as a tourist destination. Originally envisaged purely as a landscaping scheme, it quickly became apparent that the project offered a significant opportunity to address the risks the site poses to suicidal individuals. A self-harm minimisation masterplan was therefore incorporated into the scheme. Balancing the two goals has been central to the overall project.

Who was involved? The project brought together the local council, the police, the Black Dog Institute (a specialist clinical facility), Lifeline (telephone counselling service), a firm of security consultants and a landscape architecture firm.

How was it funded? Funding came from the Australian government, the local council and local infrastructure development grants.

What did they do? The plan incorporated restricting access to means of suicide, encouraging help-seeking, and increasing the likelihood of human intervention. Specific measures included:

- **fencing at key locations**: 130cm high inward curved wire mesh fencing was designed to act as a barrier but not disrupt the beauty of the site. The mesh offers no toe or foot holds, but can be scaled from the outside in case someone wishes to get back to safety
- **crisis telephones and signage:** two crisis telephones link either to emergency services or Lifeline. Calls to Lifeline are put straight through to a specialist operator. Push buttons are illuminated for night use. the Black Dog Institute designed two signs to display the Lifeline number and a message of hope (‘Hold on to HOPE’ and ‘There is always HELP’)
- **CCTV and thermal imaging:** 22 CCTV cameras, including thermal imaging cameras, record the site 24/7. Footage can be analysed in real time if police are searching for someone. The system is operated by a private security firm, and recordings are stored up to 30 days for post-event analysis
- **improved landscaping, seating, lighting and tourist information displays:** these were designed to improve public perception of the park as an attractive social space rather than a ‘suicide hotspot’ and to increase visitor numbers, so increasing likelihood of intervention

What benefits have there been? Reductions in suicide numbers are not statistically significant, but the number of police call-outs to negotiate with suicidal individuals has risen significantly.

Key lessons: “Get the best technology available within the funding parameters.”

Lockley A, Cheung YTD, Cox G, et al. Preventing Suicide at Suicide Hotspots: A Case Study

from Australia. *Suicide and Life-Threatening Behavior* 2014; 44: 392-407

A draft plan for the site should be taken back to the stakeholders and local interest groups for discussion.

Case study 1 provides an example of a comprehensive plan to mitigate risk at a frequently-used location in Australia.

Securing permissions, resources and media agreements, and implementing the site-specific plan

Before plans for the site can be given the go-ahead, formal processes, such as planning permission or an environmental impact assessment, may need to be completed.

Local authorities should consider whether any of the measures serve a dual purpose. For instance, closing a section of footpath or fencing off a stretch of cliff may have environmental benefits, helping to protect a wildlife habitat or protecting the public from the danger of coastal erosion, as well as reducing suicide risk. This may mean that the cost of the works can be shared with other organisations, agencies or local authority departments.

Economic constraints may mean implementation of the plan needs to be phased, in which case individual actions should be ranked in order of priority. The plan should include a timetable for implementation, with key events and milestones, contingency plans and a procedure for submitting progress reports.

Local media should be asked to refrain from reporting on the carrying out of any suicide prevention works, as any publicising of the site's association with suicide may encourage further attempts.

Step 3. Apply the same thinking to similar locations: 'where else is like this?'

Efforts to prevent suicides in public places should not stop once the most frequently-used locations have been identified and addressed. There is a danger that suicidal acts will be displaced to other similar sites and that new sites will replace old ones as frequently-used locations.

For each frequently-used or priority site where action has been taken, local suicide prevention groups should therefore ask themselves: 'where else is like this?' The answer may include locations:

- of the same type, for example other bridges
- that provide means or opportunity for suicide by the same method, for example, jumping from height
- that offer the same degree of seclusion

If a site or structure offers similar means or opportunity for suicide as a priority site, consideration should be given to introducing the same set of prevention measures.

By adopting this pre-emptive approach, local authorities should be able to prevent the emergence of frequently-used locations, rather than waiting for multiple suicides to occur before taking action.

The importance of starting at the design stage

Now that responsibility for suicide prevention lies with local authorities, there is an opportunity for public health teams and local planning departments to work together to incorporate suicide prevention measures in designs for all new public buildings, multi-storey car parks, bridges and other infrastructure projects, and to make this a condition of planning consent. This is much easier and more cost-efficient than trying to bolt them on later, once a problem has developed.

This practice resource should therefore be shared with local authority planning departments and used to inform planning decisions.

Case study 2 illustrates the value of thinking about suicide prevention at the earliest possible stage.

Case study 2. Pre-emptive action by a concerned community member

In one English town, a local volunteer for a bereavement charity became concerned about plans to build a new multi-storey car park on an NHS hospital site, just a few hundred yards from an A&E department and a psychiatric in-patient unit. The plans indicated that three sides of the top storey were to be enclosed by relatively high fencing to ensure privacy for hospital patients, but the side furthest from the hospital (and so least visible) had a lower parapet that could easily be scaled. The community member did not consider this sufficient, in view of the ease of access by vulnerable persons.

Energetic campaigning by this individual resulted in the addition of 2.1m high temporary fencing before the car park opened, which was later replaced with a permanent barrier. Since opening, police have been called to the car park on at least eight occasions when people have been seen trying to climb the barrier, but there have been no deaths.

Step 4. Evaluate and reflect

All site-specific activities, together with the overall local suicide prevention plan, should be evaluated and reported to the health and wellbeing board.

Small-scale local suicide prevention initiatives can be difficult to evaluate formally using quantitative measures. However, if robust data collection processes are in place and data is being analysed regularly, it will require little extra effort for public health information analysts to monitor suicidal activity at the intervention sites. Activity at

similar sites nearby should also be monitored in order to check for displacement effects.

Where several different measures have been introduced at a site, such as a combination of physical barriers, CCTV and Samaritans signs, their individual effects will be difficult to measure and they are best treated as a single intervention.[3]

If the project or overall programme of work is of sufficient size and importance, it may be possible to engage academic partners and to evaluate the measures as part of an externally-funded study, as in the case of the barriers on the Clifton Suspension Bridge in Bristol.[12] However, where action is needed to prevent suicides it should not be delayed while such discussions take place and research funding decisions are awaited.

If resources allow, it may be possible to interview survivors of non-fatal suicide attempts, witnesses and rescuers. This will generate further learning about the location, the reasons why suicidal individuals are attracted to it and what can be done to improve safety.

Part 3. Interventions to prevent suicides in public places. Practical examples and evidence of effectiveness

Here we look in more detail at the four broad areas of action outlined in figure 3 and the interventions that can contribute to each. We briefly summarise the scientific evidence of effectiveness for each intervention and provide practical examples. A full systematic review of the scientific literature is available elsewhere.[3] The pros and cons of each intervention are presented in table 2, towards the end of this part.

Area 1. Restrict access to the site and the means of suicide

i) Close all or part of the site

The most radical solution is to close the site or the part of it where the suicides occur. Case study 3 describes how one local council took the bold decision to close the top floors of two of its multi-storey car parks in an effort to prevent suicide by jumping. Although possibly resulting in some loss of revenue, this may be the simplest and most cost-effective way to restrict access to a means of suicide. If considering this action, local authorities should pay close attention to the 'balancing goal' in figure 3, and protect the rights and enjoyment of non-suicidal persons as far as possible.

Two published studies have suggested that vehicular access may greatly increase the likelihood of a site being used for acts of suicide and that restricting such access is an effective strategy. Both were brief naturally occurring experiments in outdoor locations. In one case, the road leading to a rocky headland was closed because of construction work, although access on foot was still possible. Preventing vehicular access resulted in a statistically significant reduction in suicides, from 13 in the ten years prior to closure to none in the two years following closure.[13] The same 'reduction to zero' outcome was produced at a similar UK location, when road access was blocked due to the 2001 foot and mouth crisis. Deaths at the site ceased, but started to occur again as soon as the road was re-opened.[14]

Case study 3: Containment of suicides by closing part of the site

Where? A multi-storey car park in a town centre in England

Why? Regular auditing of suicides by one local authority confirmed that the majority of their suicides took place in private homes. However, the local suicide audit group (SAG) was concerned that the small number occurring in public places were having a disproportionate amount of impact, through media exposure and the floral tributes and messages left at the sites. They established that the most common locations for public suicides were multi-storey car parks, and were concerned that some of them were becoming known as 'hotspots'. The local police reported anecdotally that their officers were regularly being called to one or other of the town car parks to talk people down.

Samaritans posters were put up, but when two further deaths occurred in a short space of time from the same car park, the SAG decided that more radical action was needed.

What did they do? The top floor of the car park was closed, and the car ramp and the stairs sealed off to prevent further access. Agreement was also reached to close the top floor of a second, adjacent car park except during the busy Christmas period, to prevent it being used for suicide.

The council is also considering closing in the exposed sides of lower floors using netting, and improving surveillance using centrally-monitored CCTV. The netting would serve the dual purpose of preventing suicides and keeping pigeons out of the car park.

A senior member of the public health team said of the top-floor closures: "The safety of residents is paramount and this is a huge step in the right direction. It's very pleasing to see suicide prevention being taken seriously by the council. With competing demands on a limited budget, this is a forward-thinking and measured approach to suicide prevention."

All the car parks in the town had been under review as part of a full-scale town centre regeneration scheme and some of the older ones had been scheduled for demolition. Suicide prevention had been very much on the agenda throughout this process, and this provided a favourable context in which to take decisive action.

A new, recently-opened multi-storey car park has been designed and built with suicide prevention firmly in mind from the outset, and has incorporated anti-climb barriers around the top floor, sides that do not allow people to climb out, CCTV surveillance on all floors, bright lighting, and help points with intercoms that are connected to a control centre 24 hours a day.

ii) Install physical barriers to prevent jumping

Jumping from a height: at sites that are used for jumping from a height (cliffs, bridges, multi-storey car parks, internal atria, open stairwells, balconies and rooftop terraces), the most effective form of prevention may be a physical barrier, which restricts access to the drop. This can take the form of fencing or netting, and is supported by strong research evidence from around the world.

Installing an 11-foot high fencing on either side of a bridge in Maine in the US, and a five-metre high wire mesh barrier on a viaduct in Toronto, Canada, both had the effect of reducing suicides to zero.[15,16] A similar effect was achieved at a bridge in Auckland, New Zealand. Here, safety barriers that had been in place for 60 years were dismantled, following complaints that they were unsightly. This resulted in a five-fold increase in the number of suicides from the bridge, but when the council reinstated barriers with an improved, curved glass design, there were no further suicides.[17,18]

In the UK, specially-designed, two-metre high, inward-curved fencing installed in 1998 on a bridge in Bristol resulted in a halving of the number of suicides from eight to four per year.[12] Bridge staff reported that the barriers bought time and increased their chances of being able to reach a person before they jumped. This was also facilitated by CCTV.[19]

A small but persuasive study involved interviews with individuals who survived suicidal jumps in San Francisco. All the survivors called for the construction of suicide barriers.[20]

The main design recommendations for fencing on bridges and high buildings are:

- at least 2.5 metres high
- no toe or foot holds
- an inwardly curving top is recommended as it is difficult to climb from the inside
- the barrier should be easier to scale from the outside, in case an individual wishes to climb back to safety

There are many options regarding the design and materials that can be used, and choice will be determined by the nature of the existing structure and its surroundings. Some examples are shown in appendix 2.

Horizontal safety nets can be less obtrusive than upright barriers and serve a similar purpose. A Swiss study showed that suicides at a well-known jumping site in the city of Bern ceased completely following the installation of a safety net. There was no change at other nearby jumping sites, suggesting that suicidal individuals did not simply go elsewhere.[21] Following years of campaigning for a suicide prevention barrier at the Golden Gate Bridge, plans and funding have finally been approved for a net system extending horizontally 20 feet below the walkway. It is estimated that the intervention will be cost-effective.[22]

On a section of chalk cliffs in the south of England, horizontal catch nets were installed to protect pedestrians on a walkway below from falling rock fragments. The netting is

reported to have saved the life of a motorist who drove off the edge of the cliff.[23] Rescue from a net may be difficult and should be considered at the design stage.

Two successive meta-analyses, pooling the results of studies of interventions to reduce suicides at frequently-used locations, have shown that restricting access to the means of suicide by installing some kind of structural barrier or road block is an effective strategy.[24,25] Even allowing for displacement to other nearby sites, there was still a net benefit in terms of a reduction in suicides by jumping from a height.[24] An economic analysis in 2011 identified erecting barriers to prevent jumping from bridges as one of only 15 interventions in the entire area of mental health for which there was strong evidence of cost-effectiveness.[26]

Jumping/lying in front of a moving vehicle: physical barriers to prevent suicides at stations are also supported by good evidence of effectiveness. The most studied intervention is the introduction of sliding platform doors that open when the train has stopped at the station. In Singapore, these have been in place on the underground mass rapid transport system since it opened in 1987, and a 1992 study reported that there had never been a suicide.[27] Installation of similar doors at some underground stations in Hong Kong resulted in a 60% reduction in suicides, with no displacement to other stations.[28] It is suggested that making the station look and feel safer can deter people from jumping. In the UK, platform screen doors have been installed on the Jubilee Line extension of the London Underground and at Heathrow and Gatwick, but no outcomes data is available.

A major suicide prevention programme to reduce the number of suicides on the British railway network, launched in 2010 and led by Network Rail, has included installing fencing and other anti-trespass measures on station platforms, on exposed stretches of line and at other key locations to prevent suicidal individuals from gaining access to the tracks.

iii) Introduce other deterrents, for example, boundary markings or lighting

Where physical barriers are not appropriate or access cannot be denied, other measures may help to deter suicidal individuals from entering a danger zone.

Painted lines and cross-hatching are already routinely used on the road and rail networks to mark areas that are unsafe to enter. At locations where there is a risk of jumping or falling, painted lines or cross-hatching can be used to mark a boundary beyond which it is not safe to go. Anyone crossing such a boundary will be conspicuous, and this may be enough to deter suicidal individuals. Network Rail is now making use of painted ‘box junction’ cross-hatching in its suicide prevention programme to keep people away from platform ends, which are one of the most vulnerable areas in a station.

The most dangerous sites are those where vulnerable individuals are able to enter unobserved and linger for as long as they need before going through with a suicidal act. Installing either constant or motion-activated lighting to illuminate dark areas may act as a deterrent, as well as improving the chances of someone spotting them and intervening.

Some controversy surrounds the use of blue light-emitting diode (LED) lighting. This was installed at some railway stations in Japan in the belief that it has a calming effect on agitated individuals and could therefore reduce suicides. It is being tried on some parts of the British rail network, but scientific opinion is still divided about its effectiveness.[29,30,31]

Area 2. Increase opportunity and capacity for human intervention

i) Improve surveillance using CCTV, thermal imaging and other technologies; increase staffing or foot patrols

CCTV surveillance systems are in use at several frequently-used locations. There has been no study of CCTV in isolation from other measures, such as physical barriers, so its effectiveness is not demonstrated,[3] but it is reported to be useful in helping staff to identify vulnerable individuals.[19]

At Gap Park in Sydney, Australia, CCTV includes fixed, pan-tilt and thermal cameras and is combined with a system of video analytics or computerised processing of live video footage. This provides a constant monitoring service, detecting and analysing behaviour that may indicate the presence of a distressed person and sending alerts to the police and rescue services with the exact location of the person. This is reported to be drastically reducing response times (see case study 1).

CCTV by itself is not a solution and is not a substitute for staffing. It can only help in suicide prevention if: a) it is permanently monitored by trained staff or video-analytic technology, and b) a staff member can reach a suicidal individual quickly and has the skills and confidence to intercede.

Reports suggest that suicides have increased on some road bridges after tolls were automated, indicating that human beings will always play the most important role in suicide prevention.

Specialist suicide patrols are unlikely to be warranted except at the most high-risk locations, but other staff working at or near a site can play a vital role in identifying individuals in distress, alerting emergency services and interceding directly. To do so effectively, they need to be equipped with appropriate knowledge, skills and confidence.

ii) Provide suicide awareness/intervention training for staff working at or near the site; increase whole community awareness and preparedness to intervene

Human contact is the best defence against isolation and hopelessness. Car park and toll bridge attendants, railway staff, highway maintenance patrols and countryside rangers are just a few examples of workers who may be in a position to keep a suicidal individual safe until emergency services arrive.

Those who are not trained in mental healthcare, but whose work, whether paid or unpaid, is likely to bring them into contact with vulnerable individuals are often referred to as 'gatekeepers'. Gatekeeper training aims to equip them to recognise warning signs, connect with the individual and direct him/her to an appropriate service provider. Evidence of effectiveness for gatekeeper training in improving attitudes, knowledge and skills has been demonstrated in staff working in schools and colleges, and within military establishments.[7,32,33]

Two of the best-known training programmes are the Applied Suicide Intervention Skills Training (ASIST), developed in Canada, and Mental Health First Aid (MHFA), first developed in Australia. ASIST is implemented widely throughout England and consists of a two-day highly interactive workshop focused solely on suicide prevention. A condensed, three-hour version, known as safeTALK, is also available. Further information is available at: www.livingworks.net MHFA deals with mental health in general, with only a small component on suicide prevention. Further information is available at: mhfaengland.org.

Samaritans offer a range of workplace training programmes that can be tailored to the needs of different organisations (www.samaritans.org/your-community/workplace-training). Staff training has formed a major part of the rail industry's suicide prevention programme. Bespoke courses sponsored by Network Rail and delivered by Samaritans equip railway staff with the skills to identify people who may be contemplating suicide and the confidence to approach them and offer immediate support.

Case study 4 describes an example of a proactive initiative by workers, who recognised a need to improve their ability to intercede with vulnerable individuals at a frequently-used location.

Case study 4. Taxi Watch, a proactive approach to suicide prevention by taxi drivers

Where and what is Taxi Watch? A suicide prevention initiative set up by taxi drivers in Northern Ireland.

Why was it set up? The city has a long-standing tradition of community-based initiatives, including creches and schools. The city's taxi drivers wanted to do something to help the many distressed and suicidal individuals their work brought them into contact with. Three types of scenario were causing the drivers concern:

- having a distressed passenger in the cab and listening to them pour out their troubles, but not knowing how to respond
- driving across the local river and spotting an individual on one of the bridges who was clearly contemplating jumping, and feeling ill-equipped to intervene
- seeing an individual in the water and being unable to effect a rescue

What did they do? Set up Taxi Watch, initially with a small amount of private funding. The scheme provides:

- ASIST and safeTALK training to taxi drivers to equip them with the skills and confidence to engage with someone who may be suicidal and to keep them safe
- rescue kits that can be kept in the cab. These include basic first-aid equipment and a throw-line that can be used to pull someone out of the water. The throw-lines are particularly important in preventing an individual being swept away, as the river is notoriously fast-flowing and it may be too late by the time the emergency services arrive
- training in the use of the equipment and in basic first aid, provided by the RNLI

Funding from the BIG Lottery has meant that the drivers have since been able to extend their role as first responders, and now also carry defibrillators. Further information is at:
www.rathmor.com/?page_id=472
www.theguardian.com/society/2007/feb/28/socialcare.guardiansocietysupplement

Taking gatekeeper training one step further, Grassroots Suicide Prevention is a community-based organisation that is delivering ASIST and safeTALK training to people in all walks of life, from hairdressers to the heads of large corporations, in an effort to widen the safety net as far as possible (case study 5).

This approach recognises that suicide prevention is everybody's business and that we are all gatekeepers.[34] Preventing suicide is not restricted to health professionals or those in special positions. Every member of the local community may come into contact with someone who is thinking about suicide and they need to have the confidence to reach out and offer help. This may include giving emergency 'life support' to a suicidal individual in a public place.

Compelling anecdotal evidence suggests that lives can be saved by complete strangers acting on the spur of the moment. In 2015, a Channel 4 documentary called 'The Stranger on The Bridge'. It told the story of Jonny Benjamin, who went to Waterloo Bridge to take his own life, but was prevented from jumping by the kindness of a passer-by.[35,36] Jonny eventually tracked down his 'good Samaritan', who was given a Pride of Britain award, and together they are working with the charity Rethink Mental Illness to change public attitudes. There are similar stories from around the world.[37]

Research shows that the biggest obstacle to human intervention is fear. Even when they recognise that someone may be suicidal, people are often paralysed by fear, which renders them unable to say or do anything that might prevent a tragedy.[38]

Addressing public fears about suicide and increasing public confidence is therefore a priority.

Many local authorities are following Brighton and Hove's example (case study 5) and striving to become 'suicide-safer' communities by breaking the silence, encouraging everybody to make suicide prevention their business and equipping them with the resources they need. For example, see: www.suicidesaferlondon.org.uk

Case study 5. Grassroots Suicide Prevention, a community-based initiative

Where and what is Grassroots Suicide Prevention? Set up in 2006 in Brighton, East Sussex, it spearheads a bottom-up approach to suicide prevention. Grassroots brings people together to make their local community safer from suicide. It started as a social enterprise but is now a registered charity. The goal is to make Brighton and Hove the UK's first 'Suicide Safer City' and to support other towns and cities to do the same.

What is a suicide safer community? It means that wherever there is a person thinking of suicide, there will be someone with the skills and confidence to support them. 'Suicide Safer' is a designation awarded by LivingWorks in Canada, the developers of ASIST and safeTALK training programmes.

What does Grassroots do?

- works in partnership with the local health and wellbeing board, director of public health and multi-agency suicide prevention group. Grassroots' activity is woven into the local suicide prevention action plan
- campaigns across the city to raise awareness and reduce stigma surrounding suicide and mental health issues. Has worked with local film-makers and local business sponsors to produce a series of anti-stigma films
- teaches suicide alertness and intervention skills to community members and professionals. Since 2009 Grassroots has been commissioned to deliver ASIST and safeTALK training to GPs, mental health professionals, social workers, police, fire service, clergy, drug and alcohol workers, those working with homeless and unemployed people…
- … not just those in traditional 'helping' roles, but also to hairdressers, bar-tenders, taxi and bus drivers, funeral directors… anyone who comes into contact with people
- works with local businesses, schools, universities and colleges, and supports them to become suicide-safer organisations
- encourages members of the local community to take the 'Tell Me' pledge, a pledge to talk directly and honestly about suicide with anyone they are concerned about, and to ask for help if they are thinking about suicide
- has launched the Stay Alive app, a suicide prevention pocket resource for the UK. Stay Alive offers help and support to people who have thoughts of suicide and those who are concerned about someone else. It includes a section on what to do if you see someone in a public place who looks as though he or she may be contemplating suicide. The app can be personalised and will in time include a GPS-enabled function to point the user to local support services
- uses its Twitter and Facebook following to build a sense of community among people who care about suicide prevention

How is it funded? Over the years, funding has come from: the Social Enterprise Investment Fund (SEIF), Department of Health, Brighton and Hove PCT, City Council, Big Lottery Fund, plus local grants and charitable giving. For more, see: prevent-suicide.org.uk

Area 3. Increase opportunities for help seeking by the suicidal individual

i) Provide Samaritans signs and/or free emergency telephones

Signs that encourage suicidal individuals to seek help and that display a contact number for Samaritans are a simple option, with the advantage that they target any suicidal individual, regardless of the method they plan to use.

Evidence of their effectiveness is fairly limited. In one study, Samaritans signs were positioned in car parks in Hampshire, after it was discovered that these locations were associated with high numbers of car exhaust suicides. The average number of car park suicides reduced from ten per year to three per year, and the total number of suicides in the district also decreased.[39] However, this occurred at a time when cars were increasingly being fitted with catalytic converters, making their exhaust non-toxic and resulting in a reduction in car exhaust suicides nationally.[40]

The installation of Samaritans signs on a bridge is reported to have led to a reduction in the number of police call-outs and the number of times the bridge had to be closed, thereby reducing traffic disruption and making savings to the public purse.[41]

Samaritans and other mental health charities are able to advise on the design of signs and the most appropriate messages to display. Inappropriate wording or imagery may be counterproductive. Call charges, if applicable, should be clearly displayed. Samaritans' new 116 123 number is now free to call, and this should be stated.

Network Rail is currently pioneering the use of motion-activated messaging devices at known danger spots on the rail network. When individuals enter the area, their presence triggers a recorded voice message, which seeks to deter them from going any further and encourages them to call Samaritans.

A disadvantage of signage is that it may advertise the lethal potential of a site to vulnerable individuals. It also relies on the suicidal individual to make the call.

In isolated locations, mobile phone signals may not be reliable. Distressed individuals, especially those with mental health problems or leading chaotic lives, may also find themselves without enough battery power or credit to make a call. Therefore, at the most frequently used locations, local authorities should consider installing free emergency telephones that connect the caller directly with Samaritans' 24-hour national helpline. These are included in the Gap Park masterplan (case study 1), and are supported by some evidence of their effectiveness.[42]

ii) Provide a staffed sanctuary or signpost people to a nearby one

This is an as-yet untested idea that is currently being developed and piloted in a number of places, and may have some potential at or near frequently-used locations. The idea is for a sanctuary or place of calm, staffed by peers and volunteers, where individuals in crisis can find immediate safety and support, prior to more formal assessments and referrals. Further details are available from The James Wentworth-Stanley Memorial Fund (www.jwsmf.org).

Area 4. Change the public image of the site

Places easily acquire reputations, and reputations drive further suicidal acts. Once it becomes known that a location provides a means of suicide and has been used already, the site will start to exert a magnetic pull on other suicidal individuals. Interviews with survivors suggest that people who are intent on suicide are looking for methods that 'work'. The fact that others have ended their lives at a particular site may suggest that it is an effective means of suicide and this may make it attractive.

At local level, particular multi-storey car parks, bridges or railway crossings often become known anecdotally as 'good' (that is effective) places to end one's life. In one English city, 'going to the bridge' has become a popular euphemism among sections of the local community for ending one's life.

Once a place becomes known as a suicide hotspot, it will continue to be used for suicide.

i) Restrict media reporting of suicidal acts

Media reporting is one of the main ways in which hotspot reputations are built. Research consistently shows that news reports of suicides are associated with a subsequent increase in suicidal activity, and that the more intense and detailed the media coverage, the greater the effect.[43-46] Conversely, the implementation of guidelines on responsible reporting has been shown to be associated with sustained reduction in numbers of suicides.[43,47]

Suicides in public places, especially those involving dramatic acts, such as jumping from landmark structures or sites, are much more likely to attract media attention than those that occur in private homes.[48-50]

The more frequently a particular site is used, the more likely it is to arouse media interest and to fuel insensitive and provocative headlines. This may have the effect of glamourising the location in the minds of vulnerable individuals and suggesting that it is an effective instrument of death.

Local authorities should strive to develop good relationships with local media and to work with them to keep any reporting of suicidal acts to an absolute minimum.

Media reports should never refer to a location as a 'suicide hotspot', as this can only ever have a harmful effect.

Reports of daredevil behaviour that advertise the lethal potential of a site should also be discouraged.

Further guidance is available from:
Press Complaints Commission code of practice, Clause 5.ii
www.pcc.org.uk/cop/practice.html
Samaritans, media guidelines for reporting suicide
www.samaritans.org/media-centre/media-guidelines-reporting-suicide
World Health Organisation, Preventing suicide: a resource for media professionals
www.who.int/mental_health/prevention/suicide/resource_media.pdf

ii) Discourage personal memorials and floral tributes at the site

There is widespread concern about the growing practice of leaving floral tributes and erecting personal memorials at the site of a suicide. There is no evidence that they encourage further suicides at the site, but it is highly possible they may do so, in the same way that media reporting does, by advertising the site as an effective means of suicide to other vulnerable individuals and establishing its reputation as a 'suicide spot'.

While the bereaved clearly derive comfort from leaving tributes at the site, they would no doubt be upset to know that they might be encouraging further suicides.

Local authorities are therefore encouraged to remove floral tributes as quickly and sensitively as possible to prevent them building up, within two to three days at the most. This is already established practice at some sites. They should also work with coroners' officers and local bereavement support services to discourage the practice among the bereaved and suggest alternative forms of remembrance. 'Help is at hand', the new resource for those who have lost someone they knew or loved through suicide, reinforces this advice.[51]

iii) Introduce new amenities or activities; consider re-naming and re-marketing the location

There may be other steps that can be taken to dispel the public perception of a site as a 'suicide hotspot' and promote it in a more positive light.

Case study 1 shows how this was considered an important part of a masterplan to prevent suicides at Gap Park in Sydney, Australia (formerly known as The Gap). Following improvements to the landscaping and visitor amenities, the park was re-named and re-marketed, in an attempt to change the public perception of the place and

its remove association with suicide. Example 5 in appendix 2 shows how this approach is being tried in Northern Ireland.

Making a site more attractive and introducing new amenities and recreational opportunities may have additional benefits in terms of improving the health and wellbeing of the whole local community.

Summary of part 3

A combination of actions should be considered in all cases. Local authorities are advised to work through the broad areas and specific interventions outlined in figure 3, assessing each one in relation to the particular site and aiming to cover all bases.

Hard engineering (physical barriers) and surveillance solutions can be highly effective in helping to prevent public places being used for suicide, but should not be implemented by themselves. They should always go hand-in-hand with 'soft' measures that build capacity for human intervention, increase opportunities for help seeking by the suicidal individual and dispel the site's reputation as a 'suicide site'.

Site-specific activity should always be embedded within a whole-community approach that recognises that 'suicide prevention is everybody's business' and equips them to play a part.

Postvention: support for those who witness a public suicide

Separate from both prevention and last-minute intervention, but no less important, is postvention. In taking a whole-community approach, local authorities should consider the needs of those who witness a public suicide or discover a body. A community-based programme in the USA has developed a simple wallet-sized card, which emergency services can hand out to bystanders, containing information about the after-effects of witnessing a suicide and details of where to find support.

For more information: www.theconnectprogram.org/people-who-have-witnessed-suicide-death

Table 2. Pros and cons of different types of intervention

Broad strategy	Specific intervention	Pros	Cons
Area 1. Restrict access to the site and the means of suicide	i) Close all or part of the site	• evidence of effectiveness • restricts access to a drop or path of moving object	• may limit rights and enjoyment of non-suicidal persons
	ii) Install physical barriers to prevent jumping	• evidence of effectiveness • restricts access to a drop or path of moving object • increases chances of human intervention by delaying the jump • recommended by survivors of suicidal jumps • may prevent other acts of vandalism that endanger the public, for example throwing things from bridges or onto rail tracks	• method specific, that is only prevents suicide by jumping • high cost • permanent • may pose engineering challenges, especially if being added to an existing structure
	iii) Introduce other deterrents, for example boundary markers or lighting	• eliminates hiding places; makes suicidal individuals conspicuous • increases chances of human intervention • not method-specific • may improve public safety generally	• not tested
Area 2. Increase opportunity and capacity for human intervention	i) Improve surveillance using CCTV, thermal imaging and other technologies; increase staffing or foot patrols	• risk of being seen may deter suicidal individual from entering site • increases chances of human intervention and reduces response time	• no evidence of effectiveness for surveillance alone • CCTV no use without permanent monitoring by sufficiently skilled and confident staff

		• not method-specific	
	ii) Provide suicide awareness/intervention training for staff working at or near the site	• human contact is the best defence against isolation and hopelessness • evidence of effectiveness for 'gatekeeper' training in specific settings • suicide prevention 'is everybody's business' • not method-specific	• none identified
	ii) Address public fears; increase whole-community awareness and preparedness to intervene	• human contact is the best defence against isolation and hopelessness • compelling anecdotal evidence of effectiveness • suicide prevention 'is everybody's business' • not method-specific	• none identified
Area 3. Increase opportunities for help seeking by the suicidal individual	i) Install Samaritans signs and/or free emergency telephones	• limited evidence of effectiveness for signs alone • evidence of effectiveness for telephones • not method-specific	• may advertise potential lethality of a site • signs and telephones rely on suicidal individual to make the call • signs without telephones require adequate mobile phone signal
	ii) Provide a staffed sanctuary, or signpost people to a nearby one	• human contact is the best defence against isolation and hopelessness • not method-specific	• not yet tested
Area 4. Change the public image of the site	i) Restrict media reporting of suicidal acts	• evidence of effectiveness • prevents 'effectiveness' of location or method	• none identified

		being advertised to other vulnerable individuals • suicide prevention 'is everybody's business' • not method-specific	
	ii) Discourage floral tributes and personal memorials at the site	• not method-specific • may prevent 'effectiveness' of site being advertised to other vulnerable individuals	• not tested • risk of adverse publicity and causing distress to the bereaved • needs to be handled sensitively
	iii) Introduce new amenities or activities; consider re-naming and re-marketing the location	• may help to dispel image of site as a 'suicide spot' • may increase footfall and chances of intervention • may improve health and emotional wellbeing of whole community	• not tested

Appendix 1. List of variables to include in data collection

The variables needed to identify frequently-used locations and examine patterns of use are listed below. They are arranged in four broad groups.

Who?
- name of deceased
- date of birth
- date of death
- age group
- sex
- home postcode
- resident in county: yes; no
- known to mental health services

These variables are needed in order to check that all suicides and open verdicts have been included and none duplicated, and to establish whether the suicide took place at an individual's home address. They may also help to establish a profile of users of particular locations.

How?
Method of suicide, coded as follows:
- jumping from a high place
- jumping/lying in front of a moving object
- drowning
- hanging
- CO poisoning
- other poisoning
- cutting or stabbing
- firearms
- burning
- other

NB. The above categories do not correspond to the standard ONS classification, but are more useful in understanding associations between location and method (see table 1).

Where?
- specific location of act (free text field)
- postcode of general location and/or grid reference

- status of location: private; public (see below for inclusion criteria)

If public:

- distance from home
- method of transport used, if known

If public, type of location, coded as follows:

- bridge or viaduct
- multi-storey car park
- other high-rise building
- internal atrium
- cliff
- mainline railway station
- level crossing or open high-speed rail track
- underground station
- road or motorway
- river or canal
- lake or reservoir
- sea or beach
- wood or forest
- country park
- rural car park or lay-by
- field or open countryside
- urban waste land or industrial site
- other

Establishing the location of the suicidal act will involve reading handwritten statements contained in coroners' files. Even then, it may not be immediately apparent. Coroners are only required to record the place of death, which may not necessarily be where the suicide occurred.

Suicides should be classified according to the status of the location in which they took place: private or public. The recommended inclusion criteria are given below.*

If the suicide occurred in a public place, as much information as possible should be captured about the location. This should be entered as narrative in a free text field, using place names and as much detail as is available: for example, "Found in vehicle parked in gateway to field on unclassified road between Foxbridge and Hareswell, just on brow of Crows Hill."

Postcodes are needed for mapping of locations using geographical information systems (GIS) software. If an Ordnance Survey grid reference has been recorded, this should also be collected, since it enables the location to be identified with the greatest precision.

When?
- date of act
- time of act

It may not always be possible to ascertain the date the suicidal act occurred. Police reports and witness statements will give details of when the body was found, and this will have to serve as a proxy measure. It is unlikely that a suicide that occurred in a public location will have gone undiscovered for a long time.

Inclusion criteria for private and public location

Private locations should include:
- any private residential address, including garage and outbuildings
- land or water owned by the deceased (for example, a farmer's own fields or lake)
- business premises owned by the deceased, including warehouse, farm buildings or store
- any residential institution (for example, psychiatric in-patient unit, prison, hostel or care home) where the individual was living or being cared for at time of death

Psychiatric in-patient units, prisons and probation hostels are best classified as private locations. These residential settings are known to house highly vulnerable individuals and should have measures already in place to manage suicide risk. A series of suicides in a residential setting would be more usefully classified as a cluster, and the separate guidance on identifying and responding to suicide clusters and contagion should be followed. www.gov.uk/government/publications/suicide-prevention

Public locations should include:
- land or water not owned by the deceased
- any part of the transport or inland waterways network
- any building that is open to or designed for use by the public
- any hotel or guest house

If an individual jumped from a private residence into the street or public area, the location should be classified as public. If in doubt, a judgement should be based on the potential for the death to be witnessed by a member of the public or for the body to be found by someone unknown to the deceased.

Appendix 2. Examples of designs for barriers on bridges and high buildings

Example 1

Location:
This major road bridge, spanning a deep gorge in south west England, is a Grade I listed structure designed by Brunel and opened in 1864.

Suicide prevention barriers were added in December 1998 on the main span of the bridge only. The stone buttresses at either side remain unprotected.

Specifications:
The new barrier is two-metres high in total. This consists of 1.5m high metal grid fencing with an inward curve, placed inside the original ironwork. Above this is a further 0.5m, consisting of five parallel taut steel wires with a further inward curve.

Additional measures:
Samaritans signs, CCTV and patrols by trained bridge staff.

Impact:
Installation of the barriers is reported to have reduced the number of suicides from the bridge by half, from 41 in the five years prior to installation, to 20 in the five years following. Numbers have declined further in subsequent years.[12,19]

Example 2

Location:
A viaduct in north east England. This former railway bridge, built in 1857, is a Grade II listed structure and is now used as a public foot and cycle path. It is part of a local railway path network and a long distance cycle route, and is enjoyed by around 300,000 walkers and cyclists every year.

The original 1.1m cast iron balustrades proved inadequate to prevent suicides and in 2013 a suicide prevention barrier was installed along both sides.

Specifications:
The 2.5m high fencing consists of a series of horizontal parallel strained wire ropes, strung between inward-curved steel posts that are bolted into the concrete deck, inside the original parapet. The posts and wires are galvanised for longevity and low maintenance. The design was selected following extensive negotiation with English Heritage, public consultation and testing of a trial panel for aesthetic impact and practical effectiveness. The cost was around £300k, of which 75% came from the county council's capital budget and 25% from the former PCT.

Additional measures:
Signs with Samaritans and NHS Direct numbers, placed at intervals along the viaduct.

Impact:
There have been no suicides from the viaduct since the barriers were installed. The barrier also protects against damage to the original balustrade, as well as preventing daredevil attempts to walk along it, unauthorised abseiling and bridge jumping.

Example 3

Location:
This major Scottish road bridge, opened in 1971, crosses a principal river and a canal. It is an essential transport link, carrying water and gas services, as well as a dual carriageway with foot and cycle paths in each direction.

In 2012, the original 1.2m high steel balustrade was removed and replaced with a specially designed suicide prevention barrier.

Specifications:
The new barrier is 2.4m high and consists of vertical bars of galvanised steel, curving inwards and offering no toe or foot holds. The design was selected following rigorous testing of a range of alternatives for climbability, aerodynamics, aesthetics, sustainability and other factors.

Additional measures:
Public telephones at all four corners of the bridge with Samaritans posters inside, SOS telephones at intervals on each side of the bridge, signage at regular intervals, and an agreement with national and local media not to report suicides from the bridge.

Impact:
Comparison of suicide numbers in the two years pre- and two years post-installation shows a reduction from 16 to three.

Example 4

Location:
Two multi-storey car parks owned and managed by an English city council had been identified as problem sites, and police confirmed that they were regularly being called to one or the other to negotiate with distressed individuals.

The photograph right shows partially completed work to add barriers to the top (fifth) floor of one of the car parks, and the ease with which a person could sit atop the original railings.

Specifications:
The new barriers consist of straight galvanised metal wire panels 1.8m high, placed on top of the concrete wall (0.6m high) and inside the original railings (a further 0.6m high). The total height of the perimeter fencing has therefore been raised from 1.2 m to 2.4m.

Impact:
There have been no further incidents at this car park since the barriers were installed.

Some displacement to the second car park was observed and similar barriers were installed there, after which the number of incidents has declined substantially. A police spokesperson commented:

“The barriers make a huge difference. The fencing is very basic, but even these simple low-cost panels are a sufficient physical deterrent in most cases.”

Example 5. A no-barriers approach

Location:
A main road bridge spanning a major river in a city in Northern Ireland, which regularly attracts vulnerable individuals.

The installation of physical barriers is not possible, because the long-span, steel box girder bridge cannot take any additional weight. In addition, there is a strong desire locally to find a more creative solution that will positively enhance the location and inspire bridge users.

Proposal:
The plan is to use digital technology, lighting, sculpture and other art forms to dispel the grim image and reputation of the bridge, and to transform it into a vibrant social and cultural space. It is hoped that the creation of walking trails, gaming and play zones, learning resources and works of art will bring about an increase in footfall, encourage social interaction among locals and tourists alike, and reduce the desolate nature of the place.

New investment in CCTV will include personal identity software that can process information about missing people and those known to be at risk, to enable them to be identified and supported.

Funding:
Funding is expected to come from a variety of government departments and sources. The local university has already adopted the idea as part of a competitive course module for second and final year technology students.

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Checklist of actions

This is a summary of part 2 and can be used to check that you are taking all the necessary steps to prevent suicides in public places in your local area.

Context

- do you have a multi-agency suicide prevention group to develop and drive forward local suicide prevention plans?

Step 1. Identify locations used for suicide and prioritise on basis of frequency

- do you have an established suicide audit process or real-time surveillance system?
- if not, do you have the resources to collect data on locations as a standalone exercise?
- are you collecting all the relevant data (see appendix 1)?
- have you interrogated the data fully and considered using GIS software to map locations?
- have you prioritised locations on the basis of frequency of use? What are your priority locations?

Step 2. Plan and take action at priority locations

For each priority site, have you:

- appointed an individual lead or champion?
- identified all relevant stakeholders and invited them to be involved? How will you engage them?
- assessed the site and noted what is already in place?
- used figure 3 to draw up a comprehensive plan for the site, covering all four areas of action?
- all necessary permissions, and have you secured the budget?
- an agreement from local media to refrain from reporting on the implementation of proposed measures?
- a clear timetable for implementation, with milestones and contingency plans?

Step 3. Apply the same thinking to similar locations: ‘where else is like this?’

- have you identified other similar sites that might be used for suicide?
- are there any similar sites that are going through the planning process?
- have you shared this guidance with your local planning officers?

Step 4. Evaluate and reflect

- have you considered how you will evaluate your site-specific activity and overall local suicide prevention plan?
- who will report back to the health and wellbeing board, and how often?