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## Title

Preventing suicide at suicide hotspots: A case study from Australia

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## **Abstract**

The Gap Park Self-Harm Minimisation Masterplan project is a collaborative attempt to address jumping suicides at Sydney's Gap Park through means restriction, encouraging help-seeking, and increasing the likelihood of third-party intervention. We used various data sources to describe the Masterplan project's processes, impacts and outcomes. There have been reductions in reported jumps and confirmed suicides, although the trends are not statistically significant. There has been a significant increase in police call-outs to intervene with suicidal people who have not yet reached the cliff's edge. The collaborative nature of the Masterplan project and its multi-faceted approach appear to be reaping benefits.

## **Keywords**

suicide hotspot; suicide prevention; jumping

Around the world, various cliff-top areas and their surrounds have gained reputations as suicide hotspots or 'specific, usually public, sites that are frequently used as locations for suicide and provide either means or opportunity for suicide'(Beautrais, 2007; Ross & Lester, 1991; Surtees, 1982). In Australia, Gap Park is one such site. It is a coastal escarpment area of approximately 4.7 hectares, located on Sydney Harbour's South Head. It is one of Sydney's most popular tourist destinations, offering spectacular views of both the harbour and the sea. Suicides by jumping have been recorded at Gap Park since the 1800s.

In 2007, Woollahra Municipal Council, the local government authority responsible for Gap Park, began a landscaping initiative known as the Gap Park Masterplan. Early on, it became evident that this created opportunities for suicide prevention activities at the site, so the Gap Park Self-Harm Minimisation Masterplan project (the Masterplan project) emerged. From the outset, the Masterplan project was a collaborative effort which was guided by a shared vision to prevent suicide that was embodied in a strategic plan. A number of partners joined Woollahra Council, including the New South Wales Police, the Black Dog Institute (an educational, research and clinical facility offering specialist expertise in mood disorders), Lifeline (a telephone counselling service), Security Consultants International (a security consultant), King's Security (a private security company), and Thompson Berrill Landscape Design (a landscape architecture firm).

Securing funding for the Masterplan was a lengthy and intensive process. Woollahra Council contributed \$700,000 of its own funds, while applying to a number of other funding sources. Funds received from non-competitive local council grants for infrastructure development and from the New South Wales Planning Department's Metropolitan Greenspace program were allocated to the Masterplan. After a number of unsuccessful attempts over a more than two-year period, the Council was eventually successful in obtaining significant funding from the Australian Government in September 2010. This enabled completion of the physical infrastructure associated with the Masterplan project.

The Masterplan project was multi-faceted. Its main components were consistent with what is currently regarded as best practice in managing suicide hotspots, according to our own recent review (Cox et al., 2013). The review identified four main approaches in this area: (a) restricting access to means; (b) encouraging help-seeking; (c) increasing the likelihood of intervention by a third party; and (d) providing guidance on responsible media reporting of suicide. It found solid evidence for the efficacy of the first of these, and indicated that the other three show promise. The Masterplan project involved the first three approaches, restricting access to means by constructing fencing, encouraging help-seeking by installing crisis telephones and signs, and increasing the likelihood of intervention by a third party by putting in place closed circuit television (CCTV) cameras and improving the amenity of the site.

The current paper presents the Masterplan project as a case study of a comprehensive response to suicide at a site known to be a hotspot for jumping suicides. Our above-mentioned review pointed to a paucity of examples in the scientific literature of multi-faceted interventions designed to reduce suicides at these sorts of hotspots. More commonly, documented interventions have favoured one or two strategies provided in isolation. For example, we identified six studies of barriers or safety nets installed on bridges and other high man-made structures in New Zealand, the United Kingdom, the United States and Canada (Beautrais, 2001; Beautrais, Gibb, Fergusson, Horwood, & Larkin, 2009; Bennewith, Nowers, & Gunnell, 2007, 2011; Lester, 1993; O'Carroll & Silverman, 1994; Pelletier, 2007; Reisch & Michel, 2005; Sinyor & Levitt, 2010). In only one of these studies was the primary strategy augmented by secondary ones – the installation of barriers at the Clifton Suspension Bridge in the United Kingdom was accompanied by the introduction of CCTV cameras and an expansion of the role of bridge staff to include monitoring of incidents (Bennewith et al., 2007, 2011).

Our review only identified one more comprehensive strategy, and this was not at a hotspot known for jumping suicides but rather one that involved suicides by inhalation of toxic gas. It involved an integrative suicide prevention program of telephone help lines, gatekeeper training and suicide patrols on an island in Hong Kong which had become infamous as a site for suicides by charcoal burning (Wong

et al., 2009). This is not to say that others have not put equally multi-faceted interventions in place at suicide hotspots, but rather that they have not been reported in a way that is readily accessible.

We were contracted by Woollahra Council to document the Masterplan project as a case study, with funds from the Australian Government Department of Health and Ageing. We felt it was important to make the case study available to a broad audience, because doing so has the potential to provide guidance for others who might be undertaking similar exercises in other parts of Australia or overseas. A full report on the case study is available elsewhere (Lockley et al., 2012).

# Method

## Data sources

### *Project documentation and related material*

We undertook a desktop review of relevant project documentation. This documentation included the Masterplan project background documents (including funding applications) and final report, meeting minutes, press releases, media files (newspaper articles, and radio and television segments), relevant extracts from Hansard, operations manuals and relevant coroner's reports. Submissions to, and the report from, a Senate inquiry into suicide were also reviewed because they highlighted problems at Gap Park (The Senate Community Affairs References Committee, 2010).

Two sets of documentation warrant particular mention here. The first of these was an evaluation of the crisis telephones. Lifeline received funding to evaluate its provision of this service at Gap Park, and we reviewed the final evaluation report as part of the case study (Walsh, 2011).

The second set of written materials related to requests for live viewing of footage from CCTV cameras. King's Security kept records of these in the form of reports (submitted weekly since the beginning of 2012, and monthly prior to that), and these were made available to us for the purposes of the case study. They covered the period from February 2010 to December 2012.

### *Discussions with stakeholders*

We held discussions with 18 stakeholders including representatives from the collaborating organisations, technical contractors and the local community. These discussions focused on the process of developing and implementing the Masterplan project, and on lessons learned.

### *Death data from the National Coroners Information System*

We extracted data on suicides at Gap Park from 2001 to 2011 from the National Coroners Information System (NCIS). Deaths recorded on the NCIS with an ICD-10 diagnosis of 'X60-X84' (deliberate self-harm) and/or with the 'intent' column registered as intentional self-harm were interpreted as suicides. Suicides were included in the analysis if the primary mechanism was recorded as 'blunt force' and the secondary mechanism was recorded as 'falling, stumbling, jumping, pushed' and the location was recorded as a public park, recreational area or countryside and the postcode was recorded as 2030 (the postcode covering Gap Park). All NCIS data were de-identified for the purposes of analysis.

### *Call-out data from Rose Bay Police*

The police command of Rose Bay is responsible for responding to call-outs to the Gap Park area. Rose Bay Police provided us with a dataset that included relevant call-outs from January 2006 to December 2012. To compile this dataset the police first ran an automated query to identify events where the operation was listed as 'The Gap' or 'Gap', and then did some further investigations to locate other events linked to the site as well as remove events which related to a different 'Gap'. Rose Bay Police also removed confidential and sensitive personal information from the dataset, and cleaned it for duplicates and conflicting information. The data were then tabulated to quantify incidents according to type (such as whether a person '*has stated a believed intention to attend the Gap Park area with the intention of self-harm*') and outcome. For the purposes of the current paper, we have split outcomes into 'jumping

incidents' (i.e., those where the person actually jumped) and those 'where there was a stated or believed intent of self-harm' but the person did not jump.

## **Data analysis**

Qualitative data from the stakeholder discussions and from the project documentation and related material were analysed thematically.

Quantitative data on suicides, police call-outs and requests for live viewings of CCTV footage are reported as frequencies and percentages. Time trends in these data series were examined by joinpoint regression (Kim, Fay, Feuer, & Midthune, 2000), using Joinpoint software, version 4.0.1 (National Cancer Institute, 2013). Joinpoint regression was used to detect whether there were any significant changes in the direction or the rate of increase or decrease ('joinpoints') and to calculate the estimated annual percentage change (EAPC) in each trend segment, assuming a Poisson distribution. The Joinpoint software calculates the EAPC and the corresponding 95% confidence interval (CI), and tests whether the slope of each trend segment differs significantly from zero. Given the relatively short data series available, we specified a maximum of one joinpoint per data series. An overall significance level of 0.05 was used.

# Results

The case study results are presented here in two sections. The first section is purely descriptive and details the Masterplan project and its various components. The second section is more analytic or evaluative, and is split into three sub-subsections which highlight the project's outcomes, impacts and processes, respectively. The sub-sections are presented in this order deliberately, because the ultimate desired outcome is a reduction in suicides at Gap Park, but this relies on certain shorter-term impacts being achieved (e.g., the CCTV footage being used to identify people who may be at risk in order that the police or others can intervene). In turn, these impacts rely on the appropriate processes being in place.

## **Description of the Masterplan project**

As noted, the Masterplan project had a number of inter-linked components which were designed to reduce self-harm by restricting access to means, encouraging help-seeking, and increasing the likelihood of intervention by a third party. The review of project documentation and the stakeholder discussions provided detail on the nature of the activities within each of these three areas, as described below. Table 1 provides a detailed timeline of the Masterplan.

### *Restricting access to means*

Access to means was restricted by the construction of fencing, some of which replaced an old fence and some of which was new. The 130 centimetre high fence along the cliff-tops was designed to act as a barrier but to not disrupt the beauty of the site. It consists of inward curved wire mesh and a wooden handrail. It does not offer footholds, and can be more easily scaled from the cliff-side, so if a person manages to get over it, it is easier for them to get back to the safe side. The fencing component of the Masterplan project was completed in July 2011.

### *Encouraging help-seeking*

Help-seeking was encouraged by two methods. The first involved the installation of two crisis telephones. These telephones link by push button activation to either the emergency services number, 000, or to specially trained Lifeline staff. Calls from these telephones do not join the general Lifeline number queuing system, which can result on people being put on hold. The telephones became operational in February 2010.

The second strategy involved the installation of two signs encouraging help-seeking, designed by the Black Dog Institute. These display the Lifeline number and a message encouraging hope or promoting action. The former says '*Hold on to HOPE. There is always HELP*'. The latter originally said '*Call a friend. Call your family. Call us.*', but this was felt to be inappropriate because people in distress may not have friends or family to call so it was replaced with '*We care. We can help. Day or night!*'. The signs were installed at the same time as the telephones, and make reference to the location of these phones. The signs originally referred to the general Lifeline number (13 11 14). This number was changed to 13 11 15 in June 2012. The new number links directly to the specially trained Lifeline operators.

### *Increasing the likelihood of intervention by a third party*

The likelihood of intervention by a third party was also increased in two ways. The first of these involved the installation of CCTV cameras which allow footage to be transmitted to a remote monitoring hub where it is recorded. On specific request from the police, a trained CCTV operator can also view footage in real time to assist with searches for persons of interest. Digital recordings of the CCTV feed are stored for up to thirty days, and accessible to police for post-event analysis, including for investigations and coronial processes. The system was developed by Security Consultants International and is run by King's Security. It became operational in February 2010.

The second measure designed to enhance the likelihood of third party intervention was a set of landscaping works which included a new main entrance, seating, lighting, and tourist information displays. These works were designed to improve the tourist amenity of the site, with a view to increasing the probability that others would be present in the event that an individual was showing signs of distress. They also aimed to foster a change in the public perceptions of the site, tempering its reputation as a suicide hotspot. The landscaping works were completed in July 2011.

## **Outcomes**

Table 2 provides information on the number of reported jumping incidents from 2006 to 2012 (n=76) and confirmed suicides from 2001 to 2011 (n=82) in the Gap Park area obtained from the police call-out dataset and the NCIS, respectively. Discrepancies between the two sets of figures arise for various reasons. In particular, the figures for jumping incidents may be higher than those for confirmed suicides in a given year because, in a small number of cases, the incident was reported and no body was discovered or the jump did not result in death. The gender and age profiles of the confirmed suicides were as follows: males – 56%, females – 44%; <20 years – 4%, 20-29 years – 30%, 30-39 years – 16%, 40-49 years – 27%, 50-59 years – 12%, ≥60 years – 11%. No equivalent breakdowns were available for the police call-out data.

There was a downward trend in jumping incidents from 2006 to 2012, but joinpoint regression analyses showed that this trend was not significant (EAPC = -2.61%, 95% confidence interval [CI] -21.1 to 20.2;  $P = 0.760$ ). The same was true for the trend in confirmed suicides between 2001 and 2011 (EAPC = 6.71%, 95% CI -2.5 to 16.8;  $P = 0.137$ ). There were no statistically significant changes in trend in either jumps or confirmed suicides.

Despite the lack of significant trends in the overall time series, the figures may nonetheless provide early suggestive evidence that suicides may have decreased at Gap Park during and following the establishment phase of the Masterplan project. Both datasets show a peak in the number of incidents in 2010, the year that the crisis phones, signage and CCTV system became operational. Both datasets also show there was a decrease in incidents in 2011, when these elements had been refined and when the fencing was installed and the site's amenity was improved. The police call-out data show that the number of reported jumping incidents had reduced further by 2012 (data on confirmed suicides are not yet available for that year).

## **Impacts**

### *Effectiveness of improved fencing in preventing jumps*

It is difficult to assess the impact of the fence as a discrete intervention. Comparing the period immediately before and immediately after the fence was officially completed would be misleading due to the effects of the construction period, and in any case the fence is one of a suite of actions at the site. However, the police call-out data provide an indication of the fence's utility as a suicide prevention measure.

Figure 1 provides data on the local police command's call-outs to the Gap Park area where there was a stated or believed intent of self-harm from 2006, the year before the project planning commenced, until 2012. Note that these call-outs are in addition to call-outs to 'jumping incidents', described above.

Panels A and B show the total number of call-outs and the call-outs related to individuals located at or approaching Gap Park, respectively. The total number of call-outs in Panel A includes those in Panel B (for which the person was located at or approaching Gap Park) as well as call-outs where there was reason to suspect that the person intended to visit Gap Park to engage in self-harm but he or she did not ultimately do so, had left the location by the time the police arrived, or was not found there. In both

cases, there were spikes in late 2007 and 2008 which may have been linked to the media coverage of a high profile suicide at the site on 2 November 2007, but the trendlines indicate that these call-outs trebled between 2006 and 2012. These trends were confirmed by the joinpoint regression analyses which showed a significant increase in total police call-outs, on average, of almost 13% per year (EAPC = 12.89%, 95% CI 0.3 to 27.1;  $P = 0.047$ ) and, on average, of 16% per year in call-outs related to individuals located at or approaching Gap Park (EAPC = 16.04%, 95% CI 7.1 to 25.7);  $P = 0.005$ ). There were no statistically significant changes in trend on either measure.

Panel C shows the call-outs that occurred when the individual was located over the fence. These call-outs have remained stable in the context of the above increases (EAPC = -0.89%, 95% CI -22.1 to 26.0;  $P = 0.927$ . No significant change in trend). These findings are encouraging. They suggest that although people may still be approaching Gap Park with a view to engaging in suicidal behaviour, relatively fewer of them are poised to jump and need to be talked back to the right side of the fence. Using Panel C as the numerator and Panel B as the denominator, it can be seen that, in 2006, 50% of the call-outs for which the person was located at or approaching Gap Park involved people who had scaled the fence; in 2012, only 20% did. This represents a significant decrease in the percentage of “over the fence” call-outs of almost 14% per year (EAPC=-13.77%, 95% CI -25.0 to -0.9;  $P = 0.041$ . No significant change in trend).

As noted, there may be other explanations for these patterns. For example, the CCTV footage may be assisting police to intervene earlier (see below) and enabling them to avert potentially fatal situations. However, it is likely that the improved fencing is playing a role. These interpretations are consistent with the views expressed by Rose Bay Police during the stakeholder discussions.

### *Use of CCTV footage for post-event analysis and real-time searches for at-risk individuals*

The stakeholder discussions and analyses of project documentation suggest that in its early phase of operation the CCTV footage was primarily used to assist post-event analysis. CCTV footage has been used to confirm the earlier presence of persons at the Gap Park site, particularly when bodies have been located in Sydney Harbour. In at least one case the footage has been used to confirm the self-harm event for the family of the deceased. CCTV footage has been used in coronial processes, and by police to study the final actions of suicidal individuals aiming in part to improve future detection of at-risk people. Other reasons have included for missing persons searches or for homicide investigations. Representatives from Rose Bay police, Kings Security and Woollahra Council all commented on the usefulness of the recorded footage for post-incident analysis.

Over time, the CCTV system has improved and has become increasingly useful in assisting the police to search for individuals who might be at risk. Table 3 shows that the number of requests for assistance in searches has increased substantially, from 47 in 2010 to 203 in 2012. It also shows that the number of instances in which the CCTV operator was able to sight the individual in question has increased. Four (9%) of the 47 requests for live viewings of CCTV footage in 2010 resulted in sightings or possible sightings, whereas 81 (40%) of the 203 requests in 2012 did so. Stakeholders attributed this increase, at least in part, to improvements in the camera technology. They also indicated that this had been a key factor in the increased responsiveness of the police to potentially life-threatening situations, identified in Figure 1. The size of Gap Park meant that finding people before the introduction of the cameras often took some time, and the cameras have sped up the search process. This is clearly beneficial in circumstances where early intervention has the potential to save lives.

### *Use of the crisis telephones and related signage*

The evaluation of the crisis telephones suggests that they have experienced a number of issues (Walsh, 2011), and this was confirmed in our own stakeholder discussions. In particular, there has been a large volume of silent calls, false alarms, and hoaxes. False alarms for the first period of operation were primarily attributed to tourists mistakenly pressing the telephone button, believing it would provide tourist information. Multi-language information was therefore posted to explain the purpose of the phones. CCTV cameras were also installed at the telephone locations; they had not initially been placed there due to privacy concerns. These cameras are used to check whether calls are likely to be genuine thus requiring police attendance at the site. False alarm or hoax calls are associated with incorrect use or activation of the telephone help-points. Nevertheless, in a small number of cases the telephones have played an important role, either by enabling bystanders to directly summon help, or through use by the suicidal person themselves. For example, the police call-out data refers to one case where the suicidal person specifically mentioned the direct link to Lifeline having saved his life.

The signage is difficult to evaluate because it is not possible to determine who has seen it and how they have responded to it. One positive observation, taken from the evaluation of the crisis telephones (Walsh, 2011), is that there has been increase in calls to Lifeline that were made on mobile phones and originated in the Gap Park area. A plausible explanation for this is that distressed people are reading the signs and heeding their advice.

### *Improved amenity of the site*

It would be very difficult to assess whether the seating, lighting, and new entrance aspects of the Masterplan have indeed affected the site's reputation and subsequent draw for persons considering self-harm. What can be said is that the infrastructure developments are visually pleasing, and in keeping with the natural character of the site as per the priorities originally identified in community consultations.

They may also be having their desired effect in terms of increasing the number of people visiting the site, thereby improving the chances that intervention will occur in the event of a threatened jump. Again, the fact that police call-outs are increasing (see Figure 1) adds some weight to this contention.

## **Processes**

The stakeholder discussions shed some light on the processes that were considered to be important in the implementation of the Masterplan project. Uniformly, stakeholders noted that the strength of their relationships and ongoing collaboration were key to the project's success. The shared vision and agreed strategic directions formalised these collaborative arrangements, so all parties were aware of their complementary roles. Stakeholder workshops continue to be held as required, and a number of further enhancements and adjustments to the Masterplan project have been identified. Having suicide prevention and mental health specialists on hand has been important, both in providing advice on possible strategies, and in responding to personal trauma due to close connections to incidents at the site. The police continue to be the primary interveners in potential self-harm incidents. Woollahra Council has been able to provide leadership, coordination, community consultation, landscape design expertise, and funding. The Masterplan project experience has also resulted in the Council, in partnership with the Black Dog Institute and Lifeline, planning and implementing a number of community mental health and self-harm minimisation education activities. Raising community awareness in this way has been crucial to the Masterplan project's success.

## Discussion

The Masterplan project has led to an increased level of understanding, communication and awareness between the Woollahra Council and the other agencies involved, which has resulted in a greater commitment to mental health promotion and suicide prevention. It is still early days, but the Gap Park Masterplan project is showing positive signs in terms of reducing suicides at the site. There has been a reduction in the numbers of reported jumps and confirmed suicides, particularly in recent times, although the trends are not statistically significant. There has been a significant increase in the number of police call-outs to intervene with people who are showing signs of suicidal intent but have not yet reached the cliff's edge. The fencing and the CCTV footage appear to have played an important role here; arguably, the crisis telephones and their associated signage have been less successful in averting incidents of self-harm.

### Limitations of the case study

Before discussing the lessons from the Masterplan project in more detail, several limitations of the case study should be noted. Firstly, there are issues to do with timing. The Gap Park Masterplan project spanned a five-year period, from 2007 to 2011. Different components of the project took varying amounts of time to complete, and took effect at different times. This makes simple before-and-after examinations of police call-out data and confirmed suicide data difficult. In addition, several of the major components were only completed fairly recently, so it may be too early for their true effects on suicidal activity to be judged.

Secondly, there are some nuances with the various quantitative datasets that may introduce biases:

- The NCIS data may provide an under-count of suicides. Coroners are not required by law to find on intent unless the person died in custody or care, or the coroner believes that the public

interest will be served by addressing the circumstances. They apply a legal test known as the 'Briginshaw standard' before making a finding of suicide. This increases the quality and amount of evidence needed to prove suicidal intent, and in effect requires a more rigorous standard of proof than the usual civil standard of 'balance of probabilities'. It has been said that this creates a 'presumption against suicide' (Abernethy, Baker, Dillon, & Roberts, 2010). In addition, coroners may be conscious of the possibility that a finding of suicide will unnecessarily distress and stigmatise family members or have legal or financial ramifications for them (Freckleton & Ranson, 2006).

- The police call-out data were limited to cases where the police became involved. They relied on coding that may sometimes have been subjective, particularly when it related to the classification of 'intent'. The increases observed in call-outs to fatal and non-fatal incidents at Gap Park may reflect the increased capacity of the police to identify and respond to people at risk, rather than increases in incidents themselves.

Finally, there are some limitations with the qualitative data. We relied on documentary evidence and evidence from a relatively small number of stakeholders. This means that some perspectives may not have been included, and those that were were often subjective. Having said this, there was consistency across the documentation and stakeholder discussions. To a large extent, the data from these qualitative sources also corresponded with the information from the quantitative sources.

### **Lessons from the Masterplan project**

Several elements of the Gap Park Masterplan project stand out as being crucial to its success. The multi-agency collaboration was a particularly important feature. Interested parties worked together to get the Masterplan project off the ground, guided in their efforts by a formal set of strategic directions. Each party had a distinct role, and all brought particular skills and experiences to the project. The Woollahra Municipal Council appropriately took the lead, and provided guidance at every step along the way, and

co-ordinated the process. They ensured that the voices of those who had been affected by incidents at Gap Park were heard. They also brought in specific expertise as required, including suicide prevention and mental health experts as well as those with expertise in relevant infrastructure development. This multi-agency collaboration is consistent with recommended practice in managing suicide hotspots (Lockley et al., 2012; National Institute for Mental Health in England, 2006).

The Masterplan was also multi-faceted, encompassing a range of self-harm minimisation strategies. It restricted access to means through the construction of a fence designed to dissuade or delay access to the cliff's edge. It encouraged help-seeking through the installation of crisis telephones and relevant signage. It increased the likelihood of third party intervention through the introduction of a system of CCTV cameras and by improving the amenity of the site. Individually, these types of intervention are regarded as three of the four 'best bets' for reducing suicide at known hotspots (Cox et al., 2013).

Collectively, they provide a suite of strategies where the whole may be greater than the sum of the parts (Lockley et al., 2012; National Institute for Mental Health in England, 2006).

As an aside, it is worth noting that the fourth type of intervention that has been described in the scientific literature – encouraging responsible reporting of suicide at hotspots – was not ignored in the Masterplan project. Australia has a well-established program known as *Mindframe* which has worked with media professionals for the last decade to improve reporting practices (Skehan, Greenhalgh, Hazell, & Pirkis, 2006). Trainee and working journalists across the country have received written resources and face-to-face presentations on how to frame stories about suicide in a manner that is unlikely to influence vulnerable individuals to engage in copycat suicidal acts. It would not have been appropriate for the Masterplan project to develop new resources, but it did ensure that any information that was given to the media about the project was consistent with the advice in the *Mindframe* resources.

The Gap Park Masterplan project was beset by some difficulties along the way, and these may provide insights for those embarking on similar exercises. Funding was a major issue, particularly in the early

stages. Awareness-raising was also necessary at the beginning, but once the collaborating partners and the community ‘came on board’ there was a united effort to address the issue of suicide. There were technological hitches with both the CCTV system and the crisis telephones. These were modified as time went on and additional funding became available. In the case of the CCTV system, improvements included increasing the speed of footage transmission and installing better cameras. In the case of the crisis telephones, modifications included multi-language explanatory signs. The Lifeline phone number displayed on signage at the site has also been changed to the number linked to the specialist operators to facilitate more immediate support to persons in distress who may call from their mobile phones. Rose Bay Police and Lifeline note that it is not uncommon for a person considering self-harm have to have a mobile phone and to use it at their most vulnerable times.

### **Response to critics**

Some might argue that the Masterplan project was an expensive approach to take, given that other methods of suicide are more common than jumping in Sydney. In a given year, hanging typically accounts for almost half of all suicides in this city, and poisoning accounts for a further quarter. Jumping is the next most common method, but is responsible for a substantially lower 10%. We would argue that suicides by hanging and poisoning do not afford the same opportunities for direct intervention on a significant scale because they do not cluster at ‘hotspot’ sites. They also do not have the same case fatality rate or the same potential impact on bystanders. For these reasons, we believe that the Masterplan project – particularly conducted in the way it was, as part of a broader program of upgrading the Gap Park site – was an appropriate response. It is also worth noting that many of ‘big ticket items’ associated with the project (e.g., the fencing and other infrastructure) were one-off costs, and that ongoing maintenance will be relatively much less expensive. Of course, this is not to say that it shouldn’t be complemented by other interventions that target other suicide methods.

## **Conclusions**

The collaborative nature of the Masterplan project and its multi-faceted approach appear to be reaping benefits in terms of a decrease in self-harm incidents at Gap Park. A longer time period is necessary to confirm the apparent reduction, but the early signs are positive. The collaborating partners are continuing to explore ways to improve the effectiveness of the self-harm minimisation initiatives established under the Masterplan project.

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**Table 1: Gap Park Self-Harm Minimisation Masterplan project timeline**

<b>2007</b>	
<b>May</b>	Gap Park Masterplan commissioned by Woollahra Municipal Council.
<b>June</b>	Council officers working group meeting #1 held.
<b>July</b>	Council officers working group meeting #2 identifies suicide as an issue but calls for realistic limits for what a landscape Masterplan can be expected to address.
	Council officers working group meeting #3 held at Gap Park to gather information and discuss historic and current bushland regeneration practices and goals.
<b>August</b>	Suicide prevention forum held and attended by working group members and suicide prevention specialists from Prince of Wales Hospital and Lifeline.
	Community safety committee meeting held involving representatives of the Woollahra Council, Parks, police, community, Neighbourhood Watch, Thompson Berrill Landscape Design and the Vaucluse Progress Association.
	Community workshop held to facilitate community participation in identifying the strengths, issues and opportunities for the Masterplan development.
<b>September</b>	Site visitor survey conducted by Thompson Berrill Landscape Design.
<b>November</b>	Thompson Berrill Landscape Design present the draft Masterplan to Woollahra Councillors.
	Masterplan on public exhibition at the Council Customer Service Centre, Watsons Bay Library and on the Woollahra Council website.
<b>2008</b>	
<b>March</b>	Masterplan adopted by Woollahra Council.
<b>April</b>	Woollahra Council approaches made to Federal and State Ministers for funding self harm prevention.
<b>December</b>	Security Consultants International contracted for CCTV design.
<b>2009</b>	
<b>January</b>	Woollahra Council receives \$248,000 from Round 1 of the Australian Government Regional and Local Community Infrastructure Program, which is allocated to CCTV installation.
<b>March</b>	Application to Round 1 of the strategic projects component of the Regional and Local Community Infrastructure Program (unsuccessful).
<b>July</b>	Black Dog Institute joins The Gap campaign.
	CCTV component tendered.
<b>August</b>	Tender for CCTV awarded to King's Security.
<b>September</b>	Mental Health Workshop and Youth Mental Health Forum held by Woollahra Council with the Black Dog Institute.
<b>December</b>	\$91,000 allocated under Round 2 of the Regional and Local Community Infrastructure Program.
<b>2010</b>	
<b>January</b>	Application made to Round 2 of the strategic projects component of the Regional and Local Community Infrastructure Program (unsuccessful).
<b>February</b>	Phones installed and operational.
	Original signs installed.
	Cameras operational and recording images.
<b>March</b>	Inquest begins into the death of Charmaine Dragnon, a young newsreader who took her own life at The Gap in 2007.
	CCTV system 'opened' by Senator Michael Forshaw.
<b>April</b>	Political party, the Greens, join call for Federal funding.
	Help-seeking signage installed at Gap Park, including general Lifeline number.
<b>May</b>	Federal budget released with no funding for the Gap Park Masterplan.
<b>June</b>	Woollahra Council advised application to Round 2 of the strategic projects component of the Regional and Local Community Infrastructure Program for \$2.1 million has been unsuccessful due to 'an oversubscription of applications'.
	Debate over Gap Masterplan funding in Federal Parliament.
<b>July</b>	Application to Round 3 of Regional and Local Community Infrastructure Program.
	Prime Minister Julia Gillard launches the Australian Labor Party's re-election health policy, pledging \$277 million to initiatives to prevent suicide, including 'improving safety at suicide 'hotspots', such as The Gap in Sydney'. This is criticised for not specifically supporting The Gap Masterplan.

<b>August</b>	The Liberal-National Coalition announces that if elected it will provide the \$2.1 needed to complete The Gap Masterplan. Australian Federal election.
<b>September</b>	Prime Minister Julia Gillard announces the Labor Government will provide up to \$1.1 million in funding to the Woollahra Municipal Council for infrastructure to reduce suicide and self-harm at The Gap.
<b>October</b>	Coroner's report into 2007 death of Charmaine Dragun at The Gap released.
<b>November</b>	\$91,000 allocated under Round 3 of the Regional and Local Community Infrastructure Program. Donald Ritchie, a local man who has intervened in numerous suicide attempts at Gap Park, receives NSW local hero award from Department of Immigration and Citizenship.
<b>2011</b>	
<b>February</b>	Donald Ritchie receives Australian of the Year local hero award.
<b>March</b>	Woollahra Council holds ' <i>Let's talk about mental health</i> ' forum with panel members from the Brain and Mind Research Institute, Sydney Medical School, Woollahra Council's community development section, Black Dog Institute, Wesley Mission, and Uniting Care mental health training program.
<b>July</b>	Installation of curved fence, additional signage, lighting and seating declared complete by Mayor Isabelle Shapiro.
<b>September</b>	Woollahra Council receives Living Is For Everyone (LIFE) Award from Suicide Prevention Australia.
<b>2012</b>	
<b>May</b>	Don Ritchie passes away.
<b>June</b>	Woollahra Council advised of successful application for \$477,869 for Phase 3 of the Masterplan as part of the Australian Government's 'Improved Safety to Suicide Hotspots' program. Signage amended with new message.
<b>August</b>	Woollahra Council wins the 'Excellence in Collaboration 2012' at the 2012 NSW Local Government Managers Australia Management Excellence Awards.
<b>September</b>	Coastal pathway in Gap Park upgrade completed.

**Table 2: Number of jumping incidents<sup>a</sup> and confirmed suicides<sup>b</sup> in the Gap Park area, 2006-12 and 2001-11**

<b>Year</b>	<b>Reported jumping incidents</b>	<b>Confirmed suicides</b>
<b>2001</b>	N/A	7
<b>2002</b>	N/A	8
<b>2003</b>	N/A	4
<b>2004</b>	N/A	2
<b>2005</b>	N/A	3
<b>2006</b>	15	11
<b>2007</b>	11	11
<b>2008</b>	6	5
<b>2009</b>	7	7
<b>2010</b>	18	13
<b>2011</b>	12	11
<b>2012</b>	7	N/A

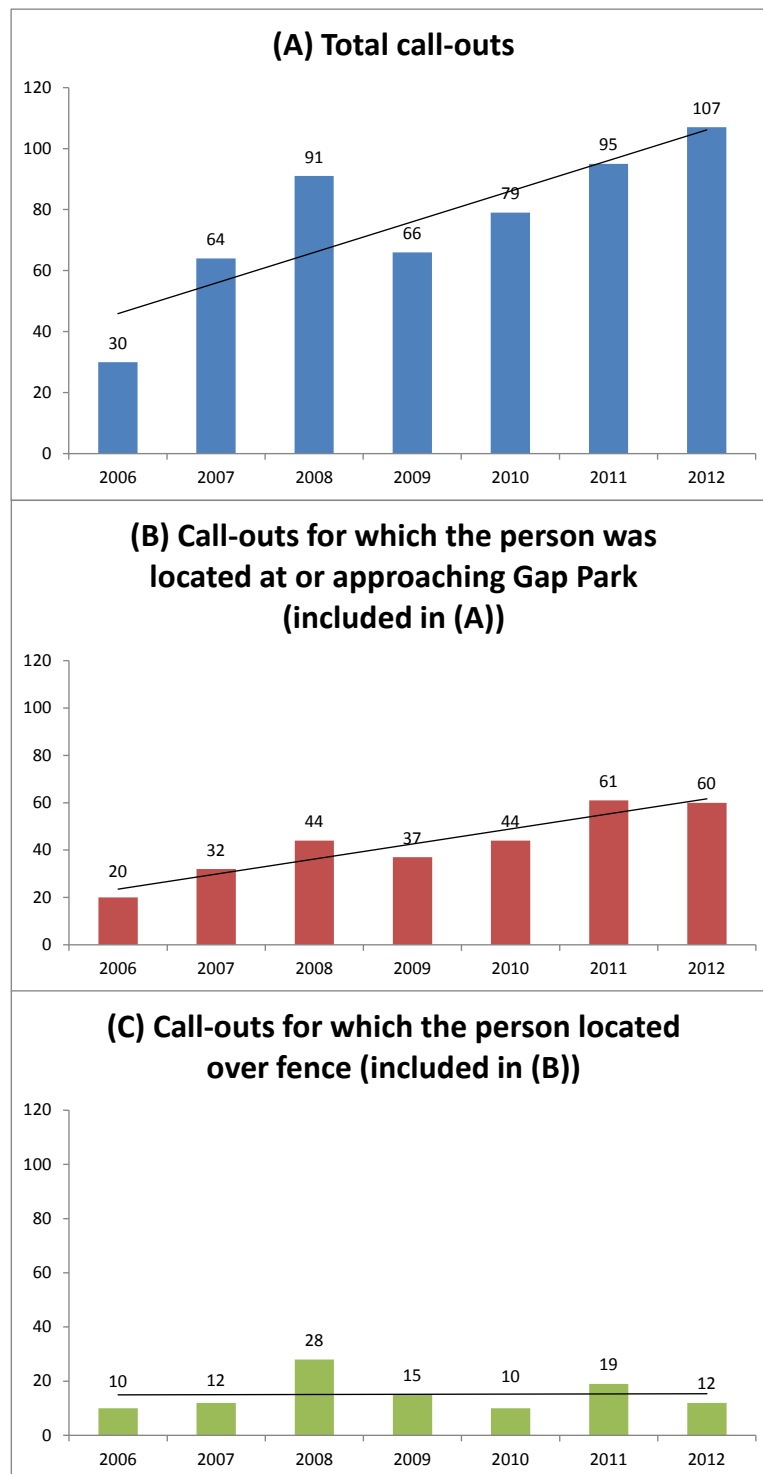
- a. *Source:* Rose Bay Police call-out data
- b. *Source:* National Coroners Information System data

**Table 3: Outcomes of requests for live viewing of CCTV footage at Gap Park, 2010-2012<sup>a,b</sup>**

	<b>Person of interest sighted or possibly sighted</b>	<b>Person of interest not sighted or request cancelled</b>	<b>Outcome unknown</b>	<b>Total</b>
<b>2010</b>	4	27	16	47
<b>2011</b>	13	87	31	131
<b>2012</b>	81	117	5	203

- a. *Source:* King's Security Gap Park CCTV monthly monitoring reports.
- b. 2010 data is from February to December.

**Figure 1: Number of police call-outs to Gap Park area where there is a stated and believed intent of self-harm<sup>a,b,c</sup>**



- a. *Source:* Rose Bay Police call-out data
- b. Excludes call-outs related to investigations of reported jumps (reported in Table 2), false alarms and hoaxes
- c. 'Total call-outs' includes call-outs for which the person was located at or approaching Gap Park, as well as call-outs where there was reason to suspect that the person intended to visit Gap Park to engage in self-harm but he or she did not ultimately do so, had left the location by the time the police arrived, or was not found there.