



Christchurch – Oxford Terrace

Case Study



Background

The Terrace is a hospitality precinct located in the city of Christchurch, New Zealand. The precinct, also known as the “heart of hospitality” is home to over 24 businesses, ranging from restaurants, bars, offices, and retail. The Terrace has been designed to encourage visitors to embrace the outdoors; conveniently providing outdoor dining options, various restaurants and bars in proximity, and scenic landscapes for people to enjoy. In light of the hustle and bustle within Christchurch’s heart of hospitality, the city often hosts unique events and shows which take place in The Terrace precinct, meaning foot traffic within the location is always high.

Oxford Terrace is the road that runs The Terrace precinct. It is a one-way southbound shared street for limited vehicles such as delivery trucks for the businesses located in the precinct, as well as the pathway for the Christchurch Tram. Prior to engaging with Gunnebo to install a Hostile Vehicle Mitigation solution, Oxford Terrace was signed to limit traffic entry at its junction with Hereford Street, however many vehicles continued to enter at all times of day. Through a combined desire to manage access and protect the people of Christchurch, the city decided to implement a security solution which would act as a deterrent for vehicle threats, a protection barrier for people and an access control layer for traffic.

Solution

The Terrace precinct was re-built into a world-class hospitality hot spot within the CBD after the area was destroyed in the 2011 Christchurch earthquakes. Upon the early stages of re-opening the premises, perimeter protection was identified as desirable Oxford Terrace, however not installed at the same time as the space was re-launched. The city realized the requirement to install perimeter protection was evident. Installing both static and retractable bollards would allow the city to control the access of vehicles within permitted timeframes without impeding people's freedom of movement.

In addition to controlling vehicle access, Christchurch City Council were wanting to implement safety precautions following the terrorism attack on the two Christchurch Mosques in March 2019. Installing a Hostile Vehicle Mitigation solution to protect the people, and assets within The Terrace was a long-standing request from local police. The Council requested that pedestrian activity within the precinct be protected, and it was determined the ultimate way to resolve the access control issues as well as protecting the community was through the implementation of Hostile Vehicle Mitigation.



Installed at Oxford Terrace, Christchurch are 11 static bollards and a set of 3 retractable bollards. The retractable bollards are installed across Oxford Terrace, at its junction with Hereford Street, where the tram line is located. The static bollards are positioned surrounding the entrance where foot traffic is

heavier but could have still been prone to a vehicle entering. The bollards installed have been crash rated to PAS-68 standard. This standard has been defined by the Centre for the Protection of National Infrastructure (CPNI) as “a standard method for testing the impact performance and protection rating of a Vehicle Security Barrier when impacted by different categories of vehicles at specified speeds.”

The retractable bollards allow for vehicle access to be controlled and the tram flow to not be impeded. The bollards retract down into the ground upon automated command so a vehicle or tram can travel through the thoroughfare. There are major benefits to installing retractable bollards in locations where access is still required but needs to be controlled. Sites can monitor what vehicles enter the space and when, preventing vehicles from being able to access during undesired timeframes, heightening overall security without impeding accessibility.



By placing static bollards on the perimeter, potential vehicle access has now been eliminated. These bollards act as a permanent protection barrier, stopping any vehicle from accessing the precinct. There are also benefits to installing static bollards in locations that require permanent protection at a perimeter. Static bollards allow for pedestrians to move about freely without compromising the protection against hostile vehicles or vehicles violating access.



The combination of retractable and static bollards builds a vehicle access control point (VACP) barrier, which is crucial to maintaining the integrity of a location's perimeter. So, in addition to a physical access barrier, a robust solution needs to be established for all possible scenarios that could occur at the VACP. These could include emergency vehicle access, public transport access, rejection of vehicles, and more.

Challenge

With the location of The Terrace in a busy CBD area with a tram line travelling through, installation was always going to prove to be a challenge. The installation of Hostile Vehicle Mitigation was a first of its kind for Christchurch City Council and there was a requirement to ensure traffic and public transport wasn't impeded whilst installation occurred. The program schedule had tight restrictions due to the operation of the tram, as well as still providing vehicle access for business deliveries as well as a pedestrian entrance.



Due to the location of the project, much of the works were required to be carried out overnight or early hours of the morning. In addition to location challenges, the site also had a range of unmarked services that were identified and had to be protected throughout the installation to cause no further disturbances to the city.



Gunnebo were proactive at reaching solutions for the project throughout the design and construction phase, even when hampered with restrictions surrounding COVID, compromising travel between Australia and New Zealand.

Jacob Bradbury
Manager, Planning & Delivery Transport

Christchurch City Council

Results

Since the installation of the static and removable bollards at The Terrace, the prior vehicle access issues have been resolved without pedestrian or tram access being impacted. The bollards have created a barrier for the vehicle access point of The Terrace, also provides locals with piece of mind to know a highly frequented location is now protected against vehicle borne attacks.

The Council are pleased with the installation of bollards, providing the community with a sense of safety and security. In addition, the ability to control vehicle access to permitted times has seen a decrease in disruption to the precinct.



What would you rate your new solution out of 5?

(1 being the lowest, 5 being the highest)



“5, The bollards have increased security without compromising freedom of movement, significantly”

Jacob Bradbury – Manager, Planning & Delivery Transport – Christchurch City Council



Images 1 & 2 courtesy of: 1 – (The Terrace, n.d.) 2 - (Council, n.d.)

For More Information



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