

St David's, Cardiff City Centre



Giove Large Planters

Background

In 2009, Cardiff City Council commissioned a major development scheme to help boost shopping facilities and tourism in the city.

The project was focused around the redevelopment and extension of the St David's shopping centre in the heart of the city centre, one of the main retail areas in the Welsh capital. The vision was to create a unique shopping, leisure, cultural and tourist destination, in order to establish Cardiff as the gateway to Wales and a leading European destination.

The development of St David's built upon regions already popular in Cardiff, including the original St David's Shopping Centre and The Hayes. The aim was to revitalise the Southern end of the city centre, encouraging people to visit the previously under used area and helping confirm Cardiff as the home of fashion in Wales.

The project involved the construction of a £675m extension to the original St David's Shopping Centre and consisted of two key development phases. The initial phase was the new St David's Centre, adjoining St. David's Hall. The second phase

involved the construction of three main buildings; a new main shopping area, Central Library building and Wales' first John Lewis store.

A key element of the Council's overall development masterplan for the centre was to improve the function, character and quality of the public spaces around the St David's Centre. This was to be achieved with significant investment in the surrounding public realm, bringing a cosmopolitan look and feel to the city centre.

Planting Requirements and Solutions

One of the key design aspirations for the scheme was to introduce attractive planting to improve aesthetics and provide seasonal interest. To do this, robust and attractive planters were required, that were suitable for both plants and trees.

Marshalls were approached by Cardiff City Council to provide a contemporary street furniture solution to enhance the landscape.

Working closely with Cardiff City Council and the project architects Hyland Edgar Driver, Marshalls Street Furniture were able to successfully meet the requirements of the project.

To provide a contemporary, attractive planting solution for plants and small shrubs, a planter from Marshalls Street Furniture's Italian partner, Bellitalia was specified.

The Giove is a planter with a 501L capacity, manufactured from marble concrete. Bellitalia finish the planter using a unique polishing process to leave a smooth sleek finish, which is then treated with a protective varnish to provide a glossy, polished effect.

To be able to introduce tree planting into the area, Hyland Edgar Driver commissioned a bespoke solution for Cardiff city council. They requested the bespoke design of a larger version of the Giove planter to coordinate with the other planters around the site, whilst providing the capacity required to accommodate the root ball of a tree.



Marshalls

Transforming Britain's Landscapes

Marshalls Street Furniture liaised with Bellitalia, who provided a design for the architect's approval, then set about ordering the mould for the larger 2000mm diameter wide and 1100mm high planter.

An initial ten Giove Large planters were supplied to the St David's site, although the Council has since placed an order for a further eight Giove Large planters to enhance other the city centre areas.

To provide visitors with adequate rest areas around the shopping centre, seating was provided by Woodhouse, a sister company of Marshalls Street Furniture specialising in premium coordinated ranges of street furniture and architectural lighting.

The contemporary Geo seat was specified for use around the St David's Centre, which were installed in between the Giove Large planters. The positioning of the seats between the large planters provides visitors with an opportunity to rest in the shade of the overhanging trees. Escofet Socrates concrete benches were also supplied by Woodhouse to provide additional contemporary seating around the St David's Centre.

Security Requirements and Solutions

Marshalls were later approached again by Cardiff Council to discuss physical security requirements for another site within the city centre. Following consultation with the Centre for Protection of National Infrastructure (CPNI), the council was advised to introduce appropriate security measures throughout the city, to provide adequate protection against potential vehicle-borne terrorist attacks.

With the threat of international terrorism currently at unprecedented levels, the UK government has identified the need to introduce effective hostile vehicle mitigation measures to sites at most risk. These are deemed to include any areas

which make up the Critical National Infrastructure (including transport, emergency services and key utilities) and also any 'Crowded Places' with large gatherings of people.

In order to provide assured levels of protection to these areas, the CPNI has devised the BSI PAS 68 standard for vehicle security barriers. This involves the physical crash testing of security products using vehicles of varying size, traveling at differing speeds. To meet the requirements of Cardiff City centre, products specified would need to be capable of resisting an impact from a 7.5 tonne two axle lorry traveling at 50mph.

Working closely with the council, Marshalls Street Furniture were able to provide a truly innovative solution to the Cardiff's counter-terrorism requirements.

Utilising the capabilities and expertise of Marshalls' highly specialised RhinoGuard PAS 68 design team, a high strength steel frame was developed that could be incorporated into Giove Large polished concrete planters to protect a critical site in the city centre.

The RhinoGuard 75/50 planter frame was initially crash tested in accordance with BSI PAS 68 by itself, using a fully laden 7.5 tonne N2 lorry traveling at 40mph. The vehicle was stopped with ease with zero penetration beyond the frame. Following this, the frame was then tested at 50mph using a larger 7.5 tonne N3 vehicle, again completely immobilising the vehicle.

The RhinoGuard 75/50 Planter Frame can be supplied inside almost any cosmetic planter design, however, before the frame could be used inside the Giove planter, an additional test was required. Due to the large size and significant wall thickness of the concrete planter, the Giove was deemed to be structural, therefore meaning that it

was likely to provide a different crash test result to that of the frame alone.

The Giove was fitted with the RhinoGuard 75/50 frame and crash tested using a 7.5 tonne N3 vehicle traveling at 50mph, again bringing the vehicle to a complete stop.

Results

Following completion of the St David's project, the shopping centre is now the eleventh largest in the UK, with an expected average footfall of 33 million visitors each year.

The street furniture specified gives the surrounding public space an attractive, cosmopolitan look, which remains sympathetic to the historic architecture surrounding the modern St David's centre.

Use of the Giove Large planter provides an ideal solution for tree planting in an urban street scene, which is proven to show many benefits. Many studies have shown natural landscaping to have a positive impact on well-being, with benefits to both physical and mental health being attributed to spending time in green spaces.

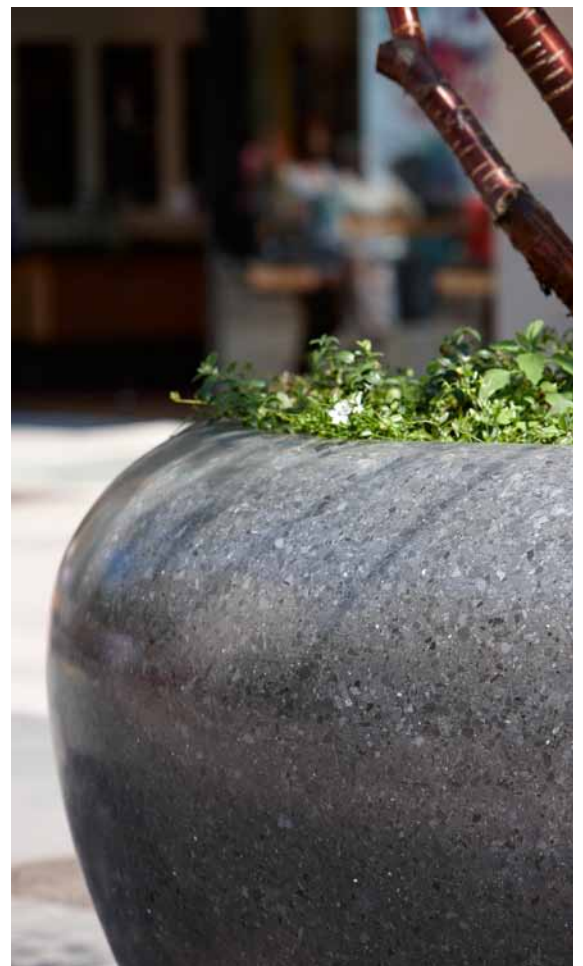
The enhancements to shopping centre and the surrounding area have gained international recognition for Cardiff. St David's was crowned international shopping centre of the year in 2010 by Global Retail Leisure International, beating competition in Portugal and Singapore

By incorporating the RhinoGuard 75/50 Planter Frame into the Giove Large planter, the City Council is able to integrate assured counter terrorism security into the Cardiff street scene, safeguarding against vehicle-borne attacks without sacrificing design quality.





Standard Giove Planters



Nero Polished Concrete Finish



Crash tested in accordance with BSI PAS 68, using a 7.5 tonne N3 lorry traveling at 50mph.



Woodhouse Geo Seats

Client:

Cardiff City Council

Architect:

Hyland Edgar Driver

Contractor:

Skanska

Marshalls Products Used:

- Giove Planter
- Giove Large Planter
- RhinoGuard 75/50 Planter Frame with Giove Planter
- Geo Seat
- Escofet Socrates Bench

Specialists Involved::

Marshalls Street Furniture
Woodhouse



Escofet Socrates Benches