Design & Engineering – **Case study**

Hannover Square Gardens, Westminster, London

Marshalls

Client:	Westminster
Contractor:	FM Conway / WSP
Sector:	Public Realm

Challenge

Within the oval shape of the park, now sit long, inviting granite benches in Marshalls' Callisto. As a result of the asymmetry of the park's oval shape, the raised benches had to follow unique curves to fall in sync and frame the stretch of lawn within. The roots of the resident tall, mature London plane trees also brought limitations for the underground foundation depths as well as an uneven ground level.

Adding to the aesthetic and acoustic appeal of the new park, a new and unique water feature was created as a bespoke piece in Marshalls' Tarvos, a stunning grey granite sourced from Portugal. Two different finishes were selected for the piece – honed and flamed - to add further interest.

Solution

- Adjustment of the profile from a sloping front, squaring off at ground level, to a continuation of the slope through the whole unit, allowed for flexibility should the ground level change due site conditions and tolerances
- 3D modelling of all units, with stepping foundations to ensure that they met the needs of the project as well as being adjusted to the tree root protection zones
- Extra features were incorporated including anti-skate notches to ensure the benches' long-term durability, and lifting slots to facilitate logistics and handling
- To assist with installation, a layout drawing with coordinates was created, considering the unique and bespoke shape

Outcome

- Hanover Square Gardens is now ready to play a valuable role in the district's future, as it changes and grows to fulfil its potential as a destination in the heart of the Capital
- Project support and engagement from design stage through to construction and completion

"We found the team very technically abled and very knowledgeable with regards to buildability, fabrication and timescales. The architect proposed a complex feasibility design, and the team worked well with us to develop it into a fabrication pack, taking account of the challenging site conditions, including adjacent mature trees impacting ground conditions. The sizes and orientation of the proposed benches brought challenges with it and the team's application of 3D modelling proved invaluable and their experience and understanding of how to achieve the desired design. The team kept us informed throughout the final design, fabrication and delivery period.

Feedback from the scheme's client and sponsors have been of great praise for the quality of the benches and they have been very impressed with the outcome."

Conor Saunders, Principal Engineer at WSP.