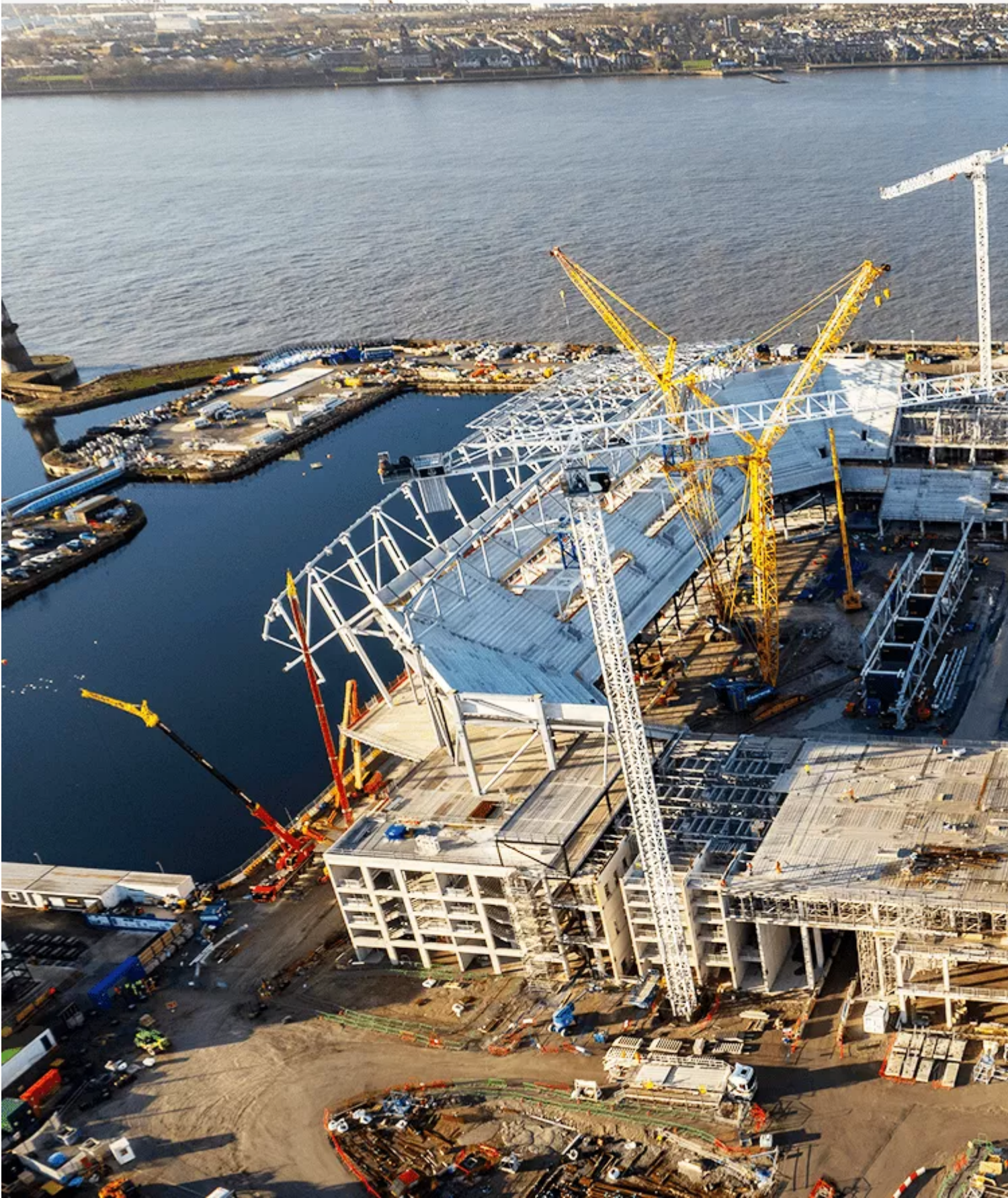




NEW EVERTON FOOTBALL STADIUM ON BRAMLEY MOORE DOCK



Premier league club Everton FC are the longest serving top division club in the history of English football. The club recently began a development for their new 52,000-capacity stadium in Liverpool's Bramley-Moore Dock, which is adjacent to the River Mersey.

This new stadium replaces Goodison Park, which has been the home ground for Everton FC since 1892 and has hosted more top-flight games than any other stadium in England including matches from the 1966 World Cup.

The Bramley-Moore Dock stadium is set to be a new home for Everton Football Club. The enabling works were completed in December 2021. In the year since then, the stadium has begun to take shape.

Main contractor Laing O'Rourke is working to a programme that will see construction completed by the end of 2024.

FACTS

Material: [LECA LWA \(10-20mm\)](#)

Interesting Fact: Leca® LWA was specified to provide a supporting element for a water management and flood prevention system for the stadium.

Delivery Method: Artic Tippers

Main Contractor: Laing O'Rourke

Leca® LWA was specified to provide a supporting element for a water management and flood prevention system for the stadium. The Leca® LWA was used as a lightweight fill around a SDS Aquaswirl unit ensuring that the structure was designed efficiently to carry the load. The structure was a 4m deep pit formed by a box of secant piles, with a base slab dowelled into the piles, and would have needed to be more significant without the use of the lightweight fill.

Water drainage systems can be difficult when the drain runs across a soft soil site. Leca® Lightweight Expanded Clay Aggregate can be used to reduce the pressure to the underlying soils and minimize the likelihood of irregular settlement.

Using free draining Leca® Lightweight Expanded Clay Aggregate as a structural material within a civil engineering development will intercept the percolating water and water rising by capillary action from the sub-formations and direct the rising water away from the upper construction layers to improve load bearing.



Phil Evans, Senior Engineer at Laing O'Rourke, provided an overview of the reason why Leca® LWA was specified for the new stadium development, "The Leca® LWA was used to fill a void for a drainage element called the SDS Aquaswirl Unit. This was effectively a 4m deep pit formed by a box of secant piles, with a base slab dowelled into the piles. The ground in the area is expected to settle over 100mm over the 50 year design life." He goes on to explain that. "The unit (used to discharge storm water on the project into the river) was fixed to the slab, and the Leca® LWA was chosen to limit the weight on the slab, preventing the dowels from failing, as well as providing support to stop floatation of the defender and fill the void."

Standard gravel was originally specified for this section of the development, but Phil Evans, Senior Engineer at Laing O'Rourke, goes on to explain, "Leca® LWA provided a good, cost effective, solution to an engineering problem (against standard gravel). The reduced weight of Leca® LWA was beneficial when compared to standard gravel."

Work will continue on this development and is planned to open to Premier League football fans during the 2024/2025 season.