



**PENFOLD VERRALL**

EARTHWORKS SPECIALISTS

# New Monks Farm Development

**Earthworks & Remediation**

**2019 to 2021**





# Introduction

This case study showcases the complex earthworks and remediation project undertaken for the development of New Monks Farm on behalf of Adenstar Developments and their client Brighton & Hove Albion FC.

As a team of Brighton & Hove Albion supporters, this project was especially exciting for us. Given the connection to the football club, it was a high-profile development, one that initially faced resistance from the local community with concerns raised about the scale of the project and its potential impact on local infrastructure.

Despite these challenges, the contract was a prestigious opportunity for us and, as the primary earthworks contractor for the entire development, it allowed us to demonstrate a wide range of our capabilities, all while being mindful of the community's sensitivities. The project involved significant challenges, not least the site's history as a former inert landfill and the need to address environmental considerations.

Despite these obstacles, the team successfully completed the project, demonstrating their resilience and commitment to delivering high-quality results.

# Earthworks & Remediation Scope of Project

Large-scale earthworks were carried out to transform a former inert landfill into a mixed-use development, which included the following key works:

**Excavation & Re-compaction:** 210,000m<sup>3</sup> of material was excavated and recompactd in preparation for the construction of 600 new homes and associated roads, ensuring the site met the required C.B.R standards.

**Topsoil Stripping & Stockpiling:** 96,000m<sup>3</sup> of topsoil was stripped from the development area and stockpiled for future re-use.

**Piling Mat Construction:** 24,000m<sup>2</sup> of piling mat was constructed using concrete excavated from the site, which was then processed into 6F5 material by our in-house recycling division.

**Relocation of Traveller's Site:** The existing Traveller's site was relocated to facilitate the widening of the A27, which involved a cut and fill operation to create 18 new pitches.

**Football Pitches:** Brighton & Hove Albion FC expanded their training facility to accommodate the women's team, for which we prepared the formation for the three pitches to be laid.



**Site Preparation for IKEA Store:** The site for the new IKEA store, including a 1,000-space car park, was prepared with significant cut and fill and compaction works.

**Environmental Remediation:** Contaminated soils were relocated to the Country Park under a Materials Management Plan.

**Country Park Development:** The remaining surplus soil was used to reshape the former landfill area into an 18-hectare country park, which included new watercourses, habitat ponds, and a flood defence bund.

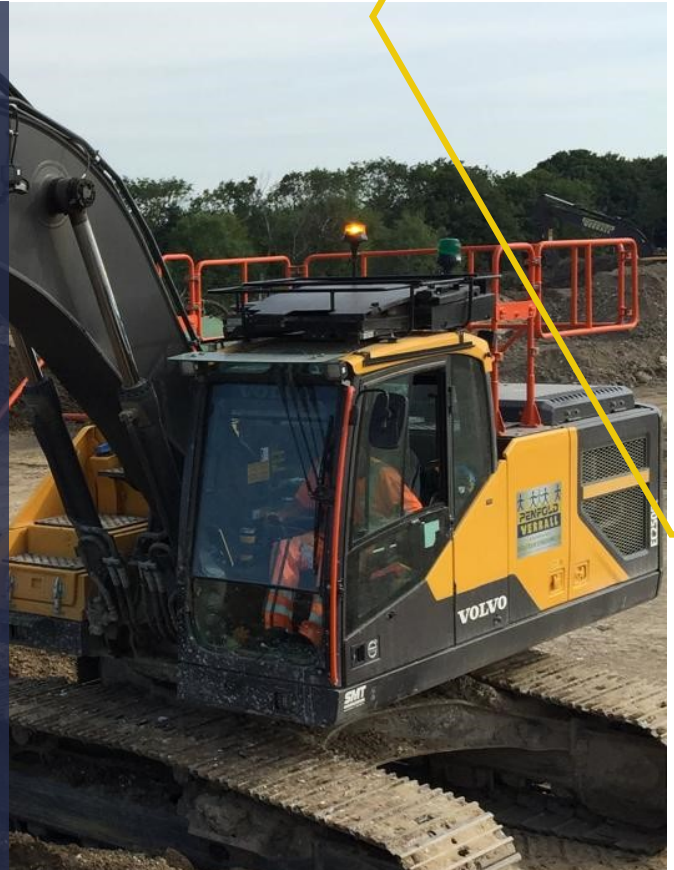
**Ecological Management:** Special attention was given to the protection of local wildlife, including nesting birds, fish, and newts, with measures in place to safeguard these species throughout the development.

# Progression of Works

Throughout the three-year project, we faced a number of challenges due to the site's history. Originally intended for an 18-hole golf course, the land was located on a low-lying floodplain. To make the golf course viable, the area had been heavily land-raised, having previously served as an inert landfill.

This complex history posed significant challenges during the cut and fill operations, as we encountered a variety of soil types, each with its own moisture content. As a result, we had to exercise great care and flexibility to manage the varying conditions effectively throughout the project.

These conditions posed challenges in maintaining consistent and stable soil compaction, requiring careful management to meet the project's specifications and avoid issues with drainage and stability.



The varying soil types and the site's history meant that each section needed individual treatment to achieve the desired compaction. We also encountered buried concrete, hardcore and chemical contamination, as identified in the site investigation. In areas designated for housing, we removed any debris that could interfere with the piling foundations, recycling all hardcore materials into 6F5 for use in the IKEA store's piling mat. This approach helped maintain foundation integrity while promoting sustainability throughout the project.



# Project Statistics

This project marked one of our first forays into long-term earthworks, and we achieved some impressive results while carrying out the work.

210,000m<sup>3</sup> previously tipped soils excavated & recompactd

96,000m<sup>3</sup> topsoil stripped & stockpiled

Recycling operation was carried out, recovering and crushing 24,000m<sup>3</sup> of material

24,000m<sup>3</sup> pilling mat constructed

18 hectares of hard-landscaping for the new Country Park

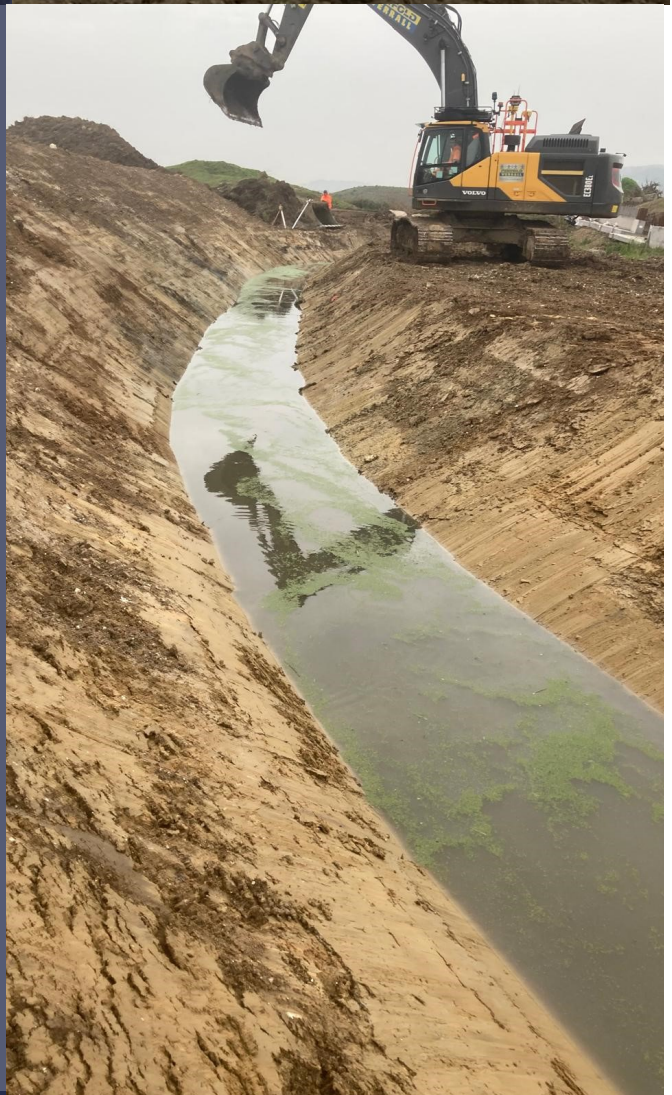
# Challenges Faced

## Site Specific Issues

In addition to the challenging ground conditions, we had to pay close attention to the site's ecology, as numerous watercourses were already present, and new ones were being created. The presence of nesting birds, fish, and newts required us to implement careful environmental management practices to ensure we protected local wildlife throughout the project.

## Covid 19

The most significant challenge, however, was that the entire project took place during the Covid-19 pandemic. Our team had to manage the complexities of delivering a major development amid one of the most significant public health crises in over a century. Despite these challenges, the team stayed focused and committed, successfully meeting all revised deadlines set by our client.



# Project Summary

Delivering this project is a testament to the team's resilience, adaptability, and dedication to high-quality results, even in the face of challenging circumstances. It highlights our ability to meet both our goals and our clients' objectives, no matter the obstacles. The team's commitment to quality, attention to detail, and proactive approach to environmental considerations ensured a successful outcome for both the client and the community.

