

# HARBURY LANE CROSSROADS

## Retaining-wall design at a live road junction

**MONTEL CIVIL ENGINEERING / WARWICKSHIRE / WORKS ORDER 1249**

Specialist sheet piling and kingpost walls, combining highway loading requirements with the practical demands of working beside live traffic.

## LIVE JUNCTION

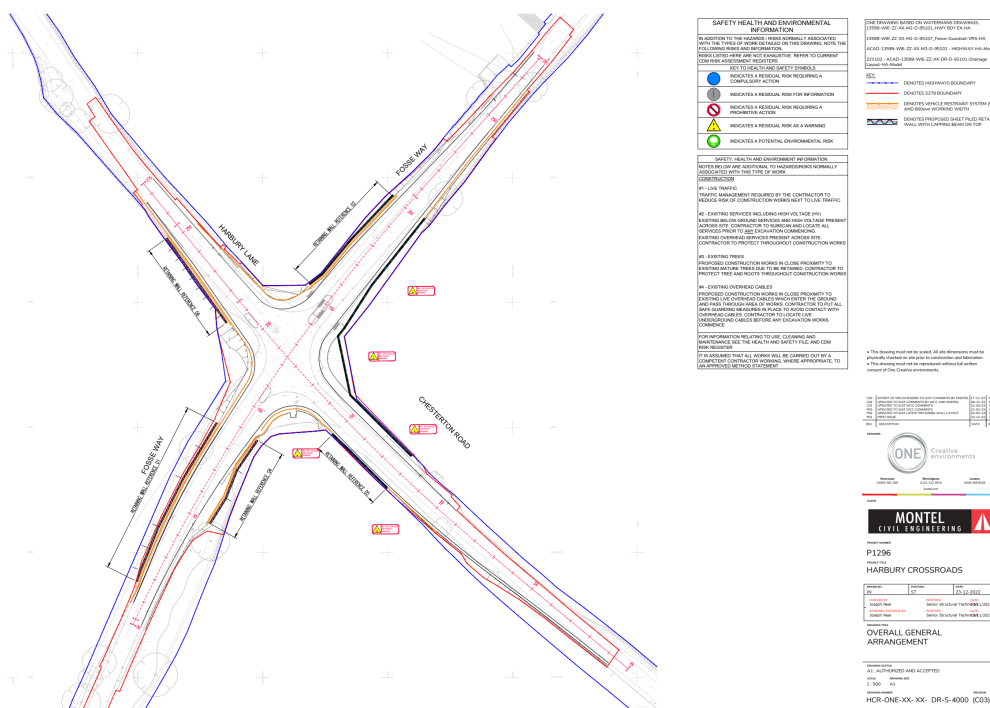
### Four-way highway interface

## TWO WALL SYSTEMS

## Sheet piles and kingposts

## HIGHWAY DESIGN

### Surcharge and accidental loads



Project general arrangement: Harbury Lane, Chesterton Road and Fosse Way. ONE Creative Environments, drawing HCR-ONE-XX-XX-DR-S-4000-C03. Historical reference: not for construction.

## THE ENGINEERING CHALLENGE

Variable ground, changing retained heights and limited working space shaped the design. The retaining walls had to address highway surcharge and accidental loads while fitting around services, traffic and neighbouring properties.

## OUR SPECIALIST CONTRIBUTION

Daace designed the retaining-wall elements for Montel. The developed scheme combined sheet piling at walls 1, 4 and 6 with kingpost-and-panel solutions at walls 2, 3 and 5, coordinated with the wider highway design team.

Project records: design development from 2022; construction and coordination through 2023-2024.

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# SAFETY AT THE LIVE INTERFACE

Planned controls supported by site records, briefings and inspection.

## 01 PROTECT ROAD USERS

Segregated traffic management, controlled deliveries and a banksman monitoring excavator movements. The method included a marked stand-off zone and a banksman-operated stop pendant.

## 02 CONTROL THE GROUNDWORK

Permits to break ground, service identification and stable working platforms. Kingpost methods included protected bores, staged excavation and temporary support during panel installation.

## 03 MONITOR THE IMPACT

Vibration-monitoring arrangements with client-defined limits, an audible alarm and a stop-and-review procedure. Weekly monitoring records are retained in the project file.

## 04 PLAN LIFTS AND ACCESS

Task-specific lifting plans, controlled unloading and site briefings. The methods addressed restricted laydown space, plant positioning and the sequence for installing posts and panels.

## DOCUMENTED ASSURANCE



Site safety information board, photographed during the project audit on 20 December 2023.

### DESIGN AND TECHNICAL REVIEW

Wall-specific calculations, ground models and design risk registers. The reports address SV100 highway loading and enhanced accidental-load cases where vehicle-restraint space was limited.

### COMPLETED SITE AUDIT

The December 2023 audit records traffic management, inductions, daily briefings, signed RAMS, permits to break ground, edge protection and welfare arrangements in place.

## A TRACEABLE PROJECT RECORD

The archive includes revised methods, pile records, lifting checks, monitoring reports and toolbox talks. Design correspondence records coordination of highway requirements and later kingpost connection details.

Sources: WO1249 design reports, sheet-piling method Rev03, kingpost method, site audit and Howard Crook correspondence. Controls summarised from the project records; no final authority-acceptance claim is made.

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