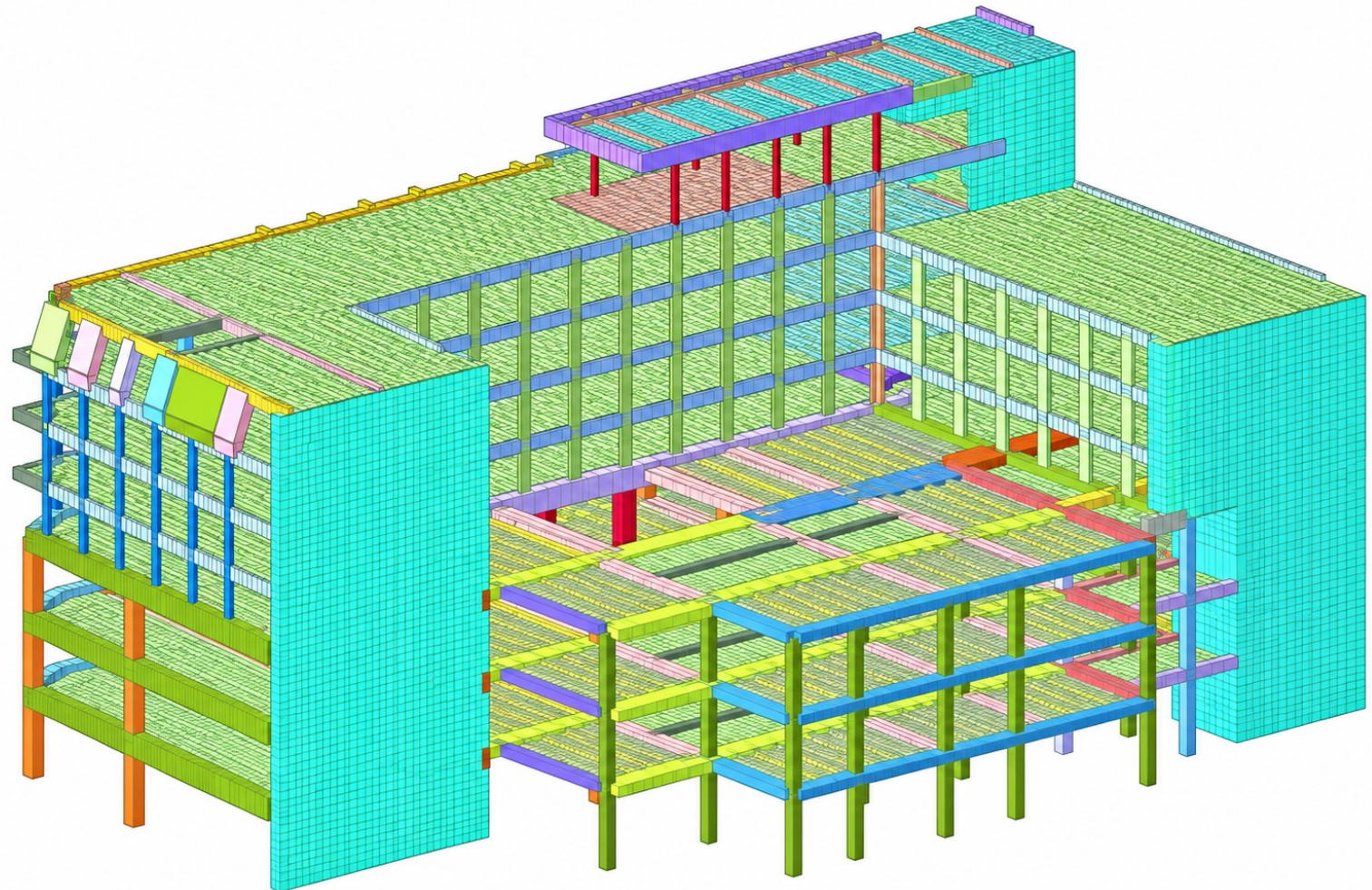


Capability Overview | Project Experience

2026



Engineering expertise grounded in construction

SOL Project Solutions is an independent engineering consultancy with a background in contracting and site delivery. We combine structural engineering expertise with first-hand experience of demolition and construction, supporting clients, consultants and contractors on projects across the UK and Ireland.

Our Mission

To develop practical engineering solutions that add value through efficient design, informed construction sequencing and consideration of how the work will be delivered on site.

Our Experience

Our team brings over 20 years of engineering experience across demolition, temporary works and preconstruction, supporting commercial, residential, industrial and infrastructure projects.

Our Approach

We work closely with clients to understand project constraints. Early involvement helps us explore options and address risks before they become construction problems. We continue to support delivery through specialist design and independent checking.

Supporting projects across the UK and Ireland



Stephen O'Loughlin
CEng MICE MIEI MIDE
Director

A Chartered Engineer with over a decade of experience in specialist demolition, enabling works and temporary works engineering. Stephen leads SOL PS's technical delivery, working directly with clients and site teams on design, independent checking and construction challenges.



Theo Rantis
Preconstruction Lead

Theo brings over 15 years of experience in engineering, construction and technical management, including site delivery on major London projects. His work combines construction methodology, sequencing and buildability to support tender development and project planning.



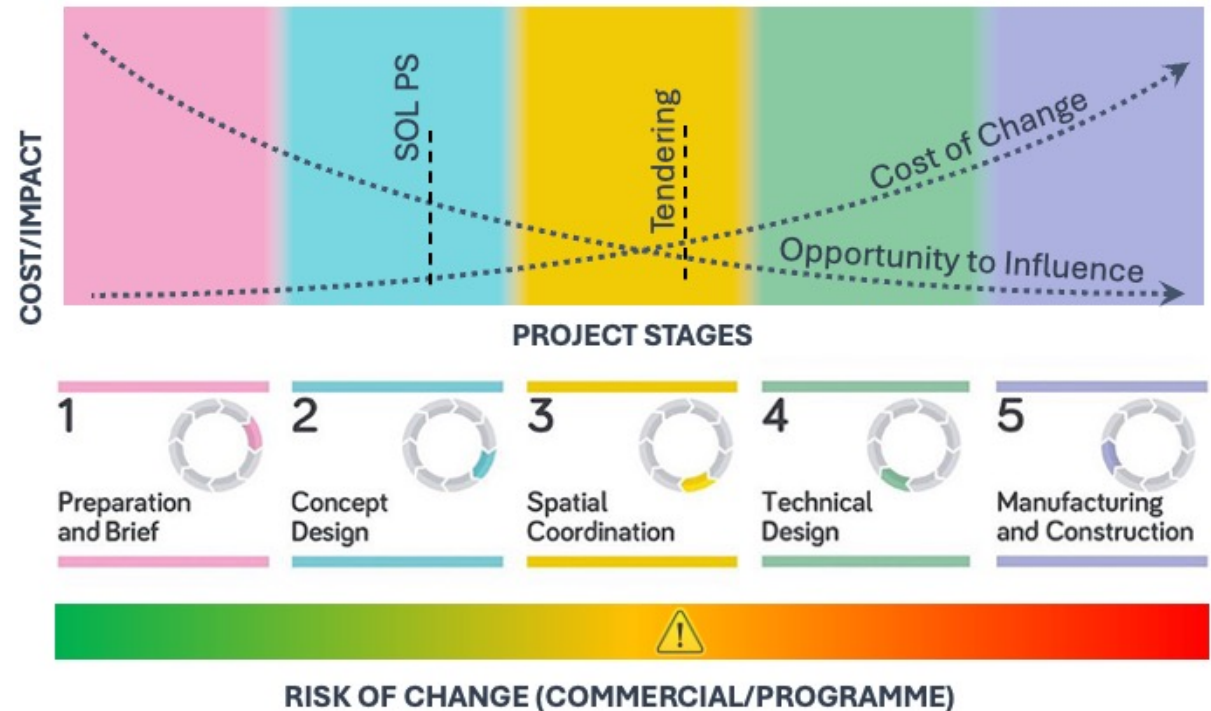
Early engagement to maximise efficiency

SOL Project Solutions provides specialist temporary works and preconstruction engineering to help project teams resolve complex challenges, improve buildability and identify opportunities to reduce costs and shorten construction programmes.

Early specialist involvement allows us to:

- Identify site constraints and buildability risks before key design decisions are fixed.
- Explore alternative construction methods, sequences and temporary works options.
- Clarify interfaces between work packages and strengthen tender information.

This gives project teams a clearer basis for planning, pricing and delivering the works.



Indicative relationship between project stage, design influence and cost of change.



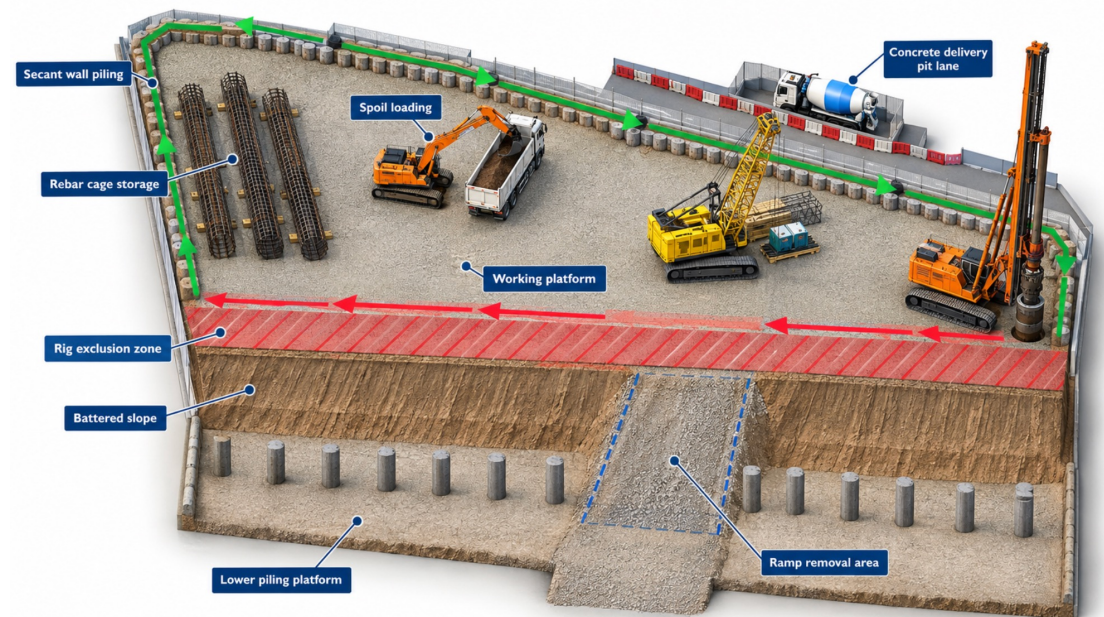
Technical expertise for stronger tenders and practical delivery

SOL PS provides preconstruction support for high-value and complex demolition, basement and superstructure projects. We evaluate tenders, develop construction methodologies and prepare technical reports to help project teams assess proposals and establish how the works will be delivered.

Our support includes:

- Technical reports and engineering reviews covering methods, assumptions and exclusions.
- Method statements, construction sequences and phasing studies.
- Temporary works requirements and interfaces between packages.
- Buildability reviews, risk identification and alternative approaches.

We help teams make informed tender decisions and develop clear, buildable proposals for delivery.



Illustrative construction methodology for Method Statement sequencing.

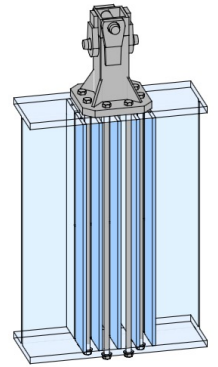
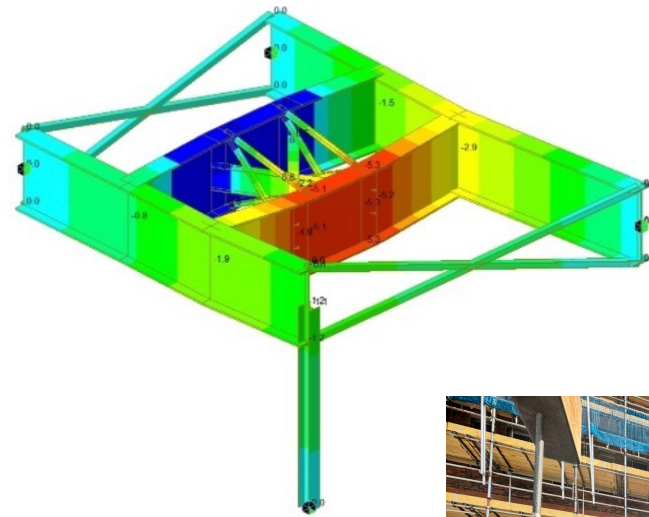


Specialist engineering for every stage of construction

SOL PS provides temporary works design and independent checking for demolition, basement and superstructure construction. We combine structural analysis with practical site experience to develop buildable solutions and assess complex arrangements, from individual support details to overall construction-stage stability.

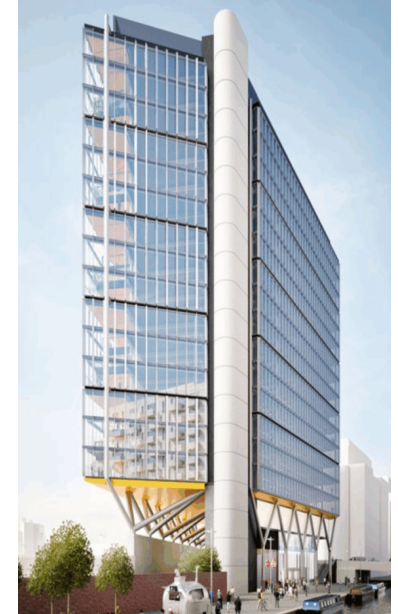
Our capabilities include:

- Tower crane bases, grillages, ties and supporting connections.
- Core stability assessments under staged construction and crane loading.
- Basement propping, excavation support and temporary retaining structures.
- Façade retention and structural support during demolition and alterations.
- Gantry, working platforms and temporary access structures.
- Independent Category 3 checking of complex temporary works.



Examples of Our Project Experience

SOL PS
PROJECT SOLUTIONS



50 Fenchurch Street

Main Contractor: MULTIPLEX

SOL PS Appointed By: Wentworth

Development cost: est. £1 billion

Project Summary

A 36-storey office development in the City of London, featuring vertical landscaping, new public spaces and three basement levels extending beneath the retained listed church tower.

SOL PS Contribution

Category 3 checking engineers on behalf of Wentworth, including scope items:

- Two levels of basement temporary propping including connections.
- Top-down logistics slabs for construction use including mobile crane loadings.
- Vertical and lateral propping support to Grade I-listed Tower of All Hallows Staining.
- Core stability assessment including core-mounted TC, slipform sliding Raptor crane and crane ties from TC1.



Architectural visualisation: DBOX; Eric Parry Architects for AXA IM, via Eric Parry Architects.



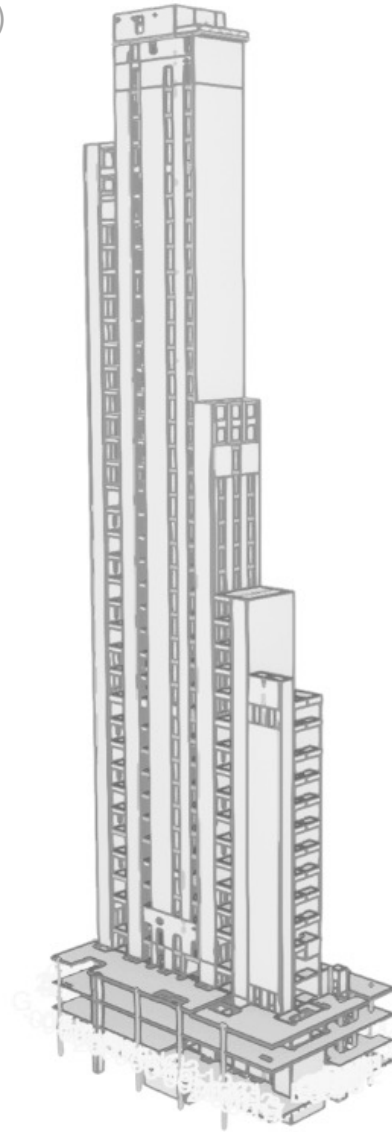
Core Stability Independent CAT 3

SOL PS assessed core stability throughout the construction sequence at 50 Fenchurch Street, accounting for changing crane arrangements and temporary loading as the structure progressed.

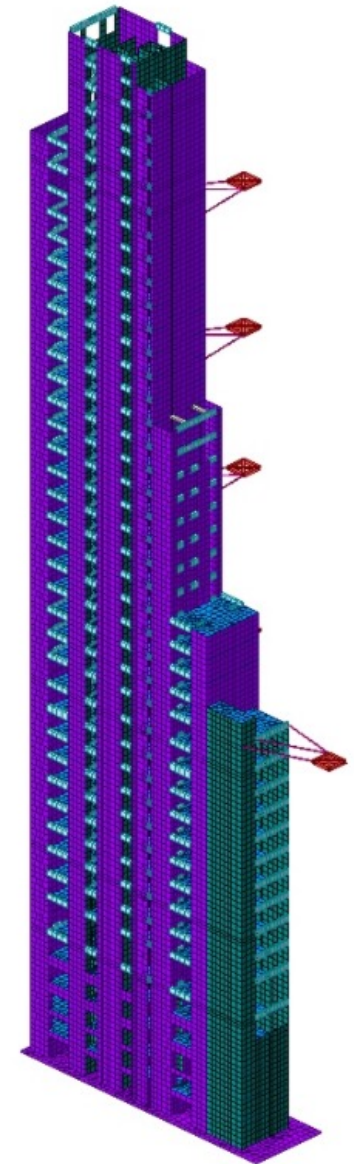
- Sliding tower crane rising with the slipform, with loads applied at successive elevations.
- External tower cranes tied to the core and core-mounted crane loads.
- Changes in core geometry, structural configuration and loading at successive construction stages.

The assessment considered the combined effects of these arrangements to identify the governing stability conditions and verify the core's performance during construction.

1)



2)



Legend:

1) 3d .ifc viewer model of 50FEN core

2) Images from MIDAS Gen 2026 model of core including ties from TC1.



Basement Temporary Works

SOL PS carried out the CAT 3 checking package for all substructure elements on the 50 Fenchurch Street project.

The top-down logistics slab was checked for construction plant including a series of 400-tonne crane outrigger positions.

The P1 propping level comprises steel tubular shores with bespoke SHS sections and concrete 'coffins' supported vertically by plunge columns.

P2 propping comprised larger diameter tubular struts due to the increase in loads, and steel waling beams around the basement perimeter.

Included in the basement CAT 3 scope, were 3nr raft pour checks with tower crane loading and the checks associated with the stability of the Grade I-listed Tower of All Hallows Staining suspended above the deep excavation.

1)



2)



Legend:

- 1) Basement propping, logistics slab and TC bases CAT 3 checked by SOL PS.
- 2) Grade 1 listed church tower with vertical and lateral bracing independently checked by SOL PS



Paddington OSD (“Over Station Development”)

Main Contractor:  **mace**

SOL PS Appointed By: Wentworth

Project Summary

A 19-storey development above Paddington Station, providing 235,000 sq ft of office and retail space with landscaped terraces and a canal-side entrance.

SOL PS Contribution

Category 3 checking engineers on behalf of Wentworth.

Checking scope included:

- TC2 and TC3 core-mounted bespoke grillages and connections.
- TC1 crane tie checks into West Core.
- Core stability checks of East and West Cores including wind loading, notional horizontal loads as per Eurocode guidance, TC grillage loads and tie forces.



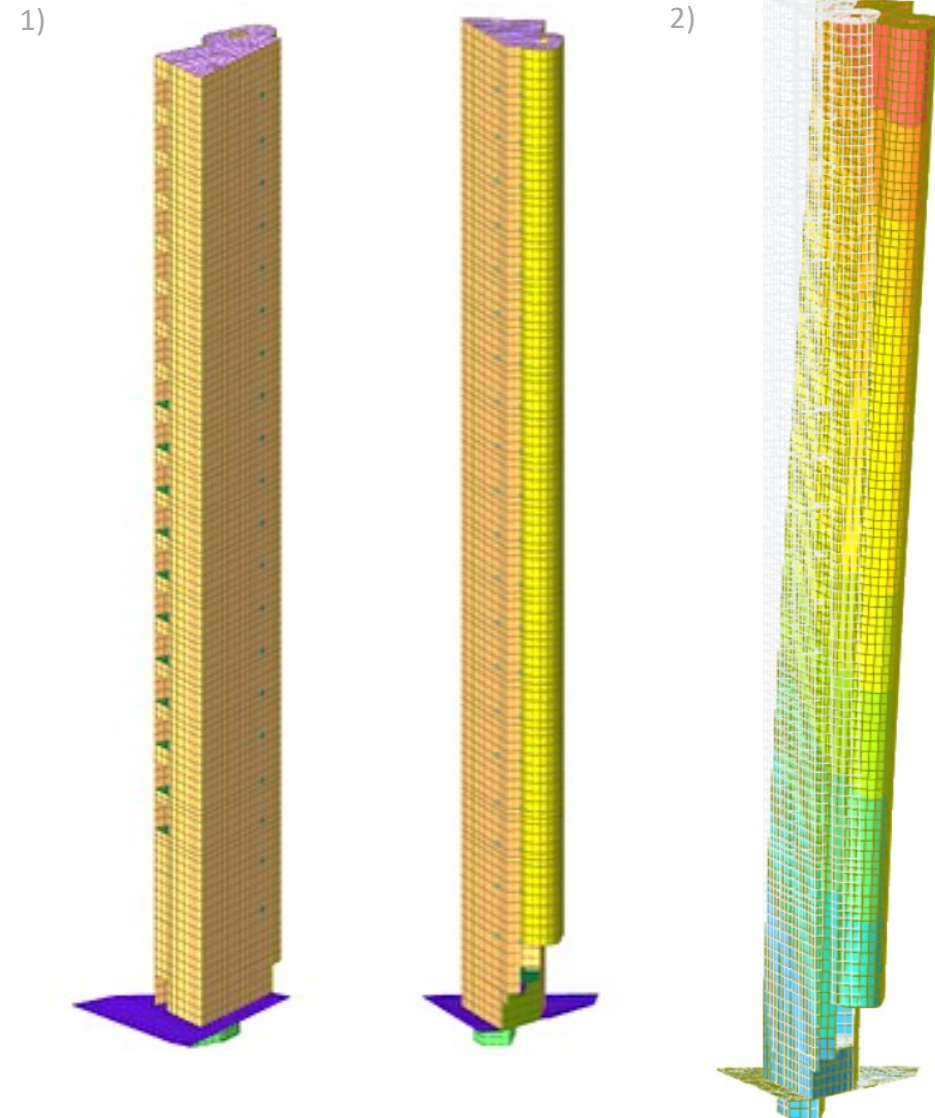
Architectural visualisation: Paddington OSD; Grimshaw Architects for Helical / Places for London, via Property Week (13 February 2026).



Core Stability Independent CAT 3

SOL PS undertook structural stability assessments of the East and West cores, strength against the relevant Eurocode requirements, and displacement against the agreed project criteria.

Each core wall panel was assigned reinforcement based on the proposed reinforcement schedules, allowing panel-by-panel verification of reinforcement adequacy under the assessed loading conditions.



Legend:

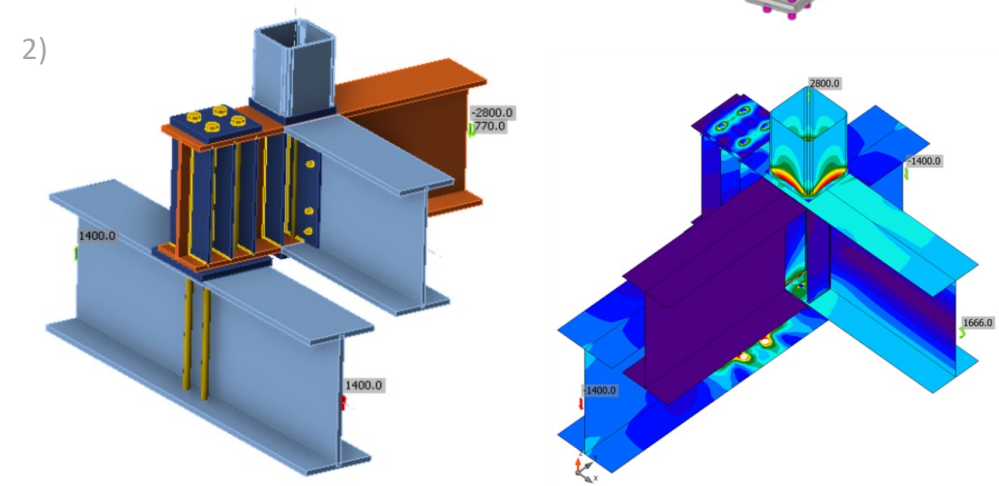
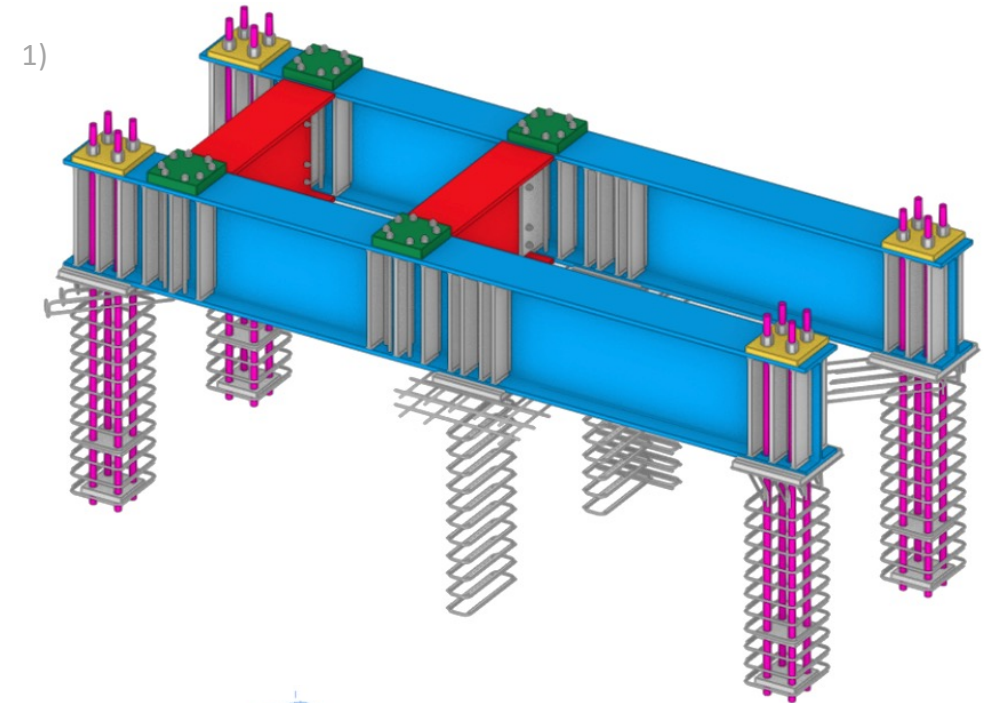
- 1) Images from MIDAS Gen 2026 model of East core including ‘floating’ cell to north east.
- 2) Deflected and undeflected profile of the proposed East Core in the temporary load case.



Tower Crane Grillages Independent CAT 3

SOL PS carried out independent Category 3 checking of the tower crane grillages at Paddington OSD.

- Assessment of crane load cases across multiple jib orientations to identify governing forces and moments.
- Verification of grillage member strength and load transfer into the supporting structure.
- Detailed connection checks using IDEA StatiCa, including local stress assessment.



Legend:

- 1) TC2 tower crane grillage from Trimble Connect identifyis.
2) IDEA StatiCa connection model and output stress profile.



Holborn Viaduct

Main Contractor: MULTIPLEX

SOL PS Appointed By: Erith

Development value: c. £167 million

Project Summary

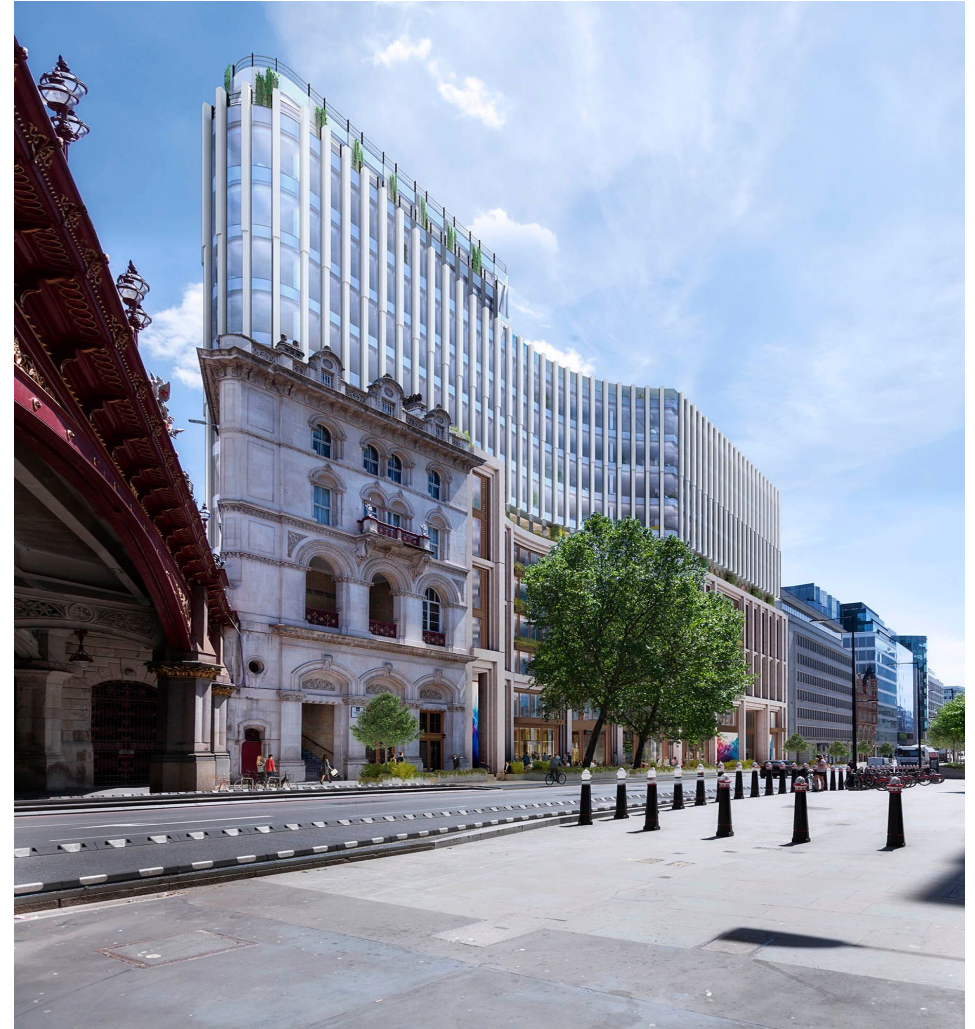
A 14-storey commercial development at Holborn Viaduct, providing approximately 405,000 sq ft of office accommodation with landscaped terraces and integration with the adjoining listed gatehouse.

SOL PS Contribution

SOL PS carried out independent Category 3 checking on behalf of Erith for temporary works supporting the basement construction sequence.

Our checking scope included:

- Top-down logistics slab supporting construction operations;
- Basement propping split across two levels including concrete capping beam and corbels, and steel waling beams and connections.



Architectural visualisation: PLP Architecture, Holborn Viaduct project page.



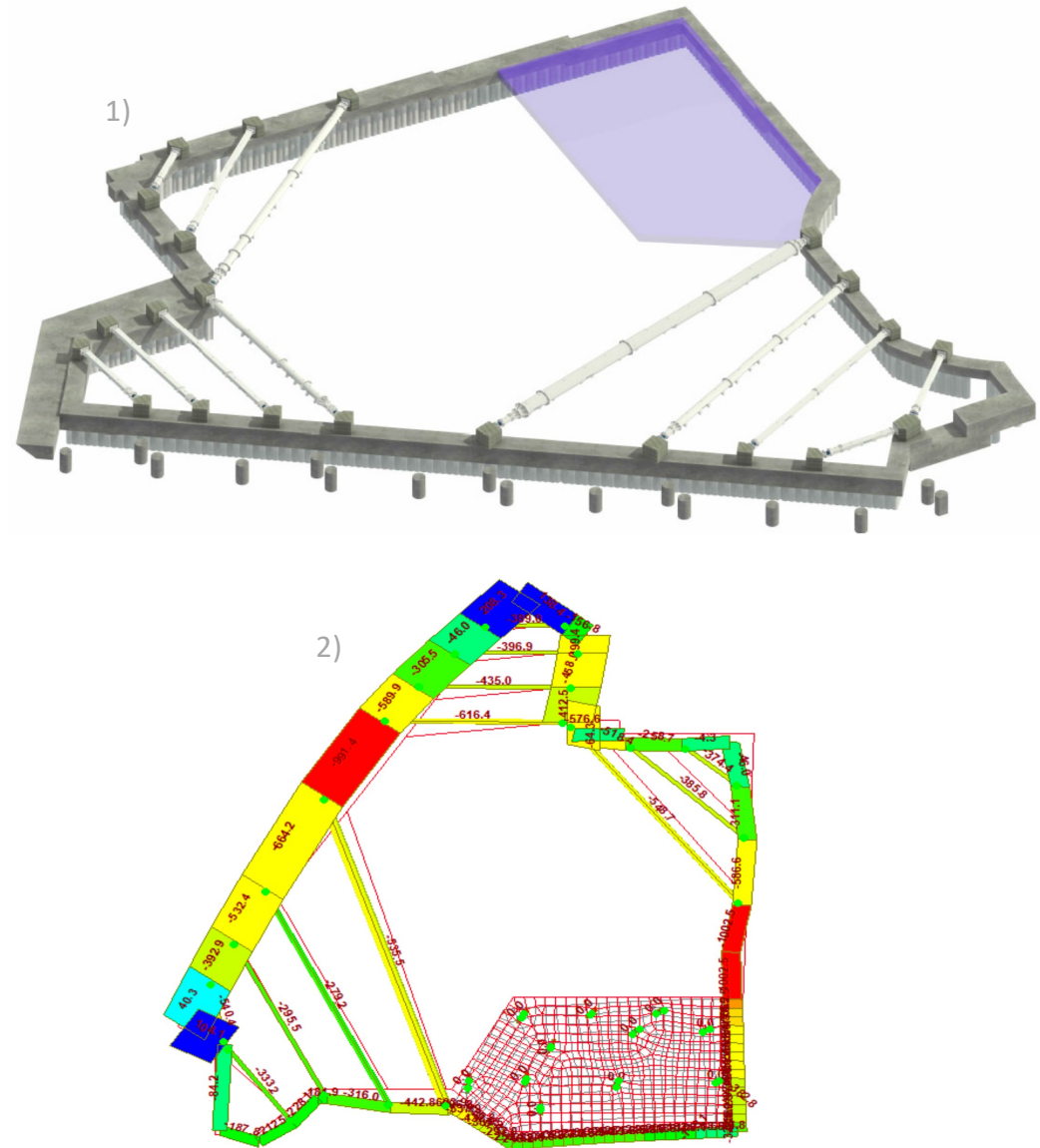
Basement Temporary Works

SOL PS undertook independent Category 3 checking of the top-down logistics slab, associated plunge columns and basement propping across two split levels at Holborn Viaduct.

The assessment included:

- Slab bending and punching shear checks at concentrated loads and column supports.
- Plunge column strength and buckling checks, considering restraint conditions during excavation.
- Prop axial capacity and buckling stability at both levels.
- Capping beam bending, shear and reinforcement adequacy at prop reaction locations.
- Load transfer and interaction between the slab, propping and supporting structure through the construction sequence.

The temporary works were assessed as an interconnected system, accounting for changes in loading and support conditions as basement construction progressed.



Legend:

- 1) Proprietary propping arrangement at ground level.
- 2) Axial force output from the MIDAS Gen analysis model.



Timber Square

Construction Managers:  **mace**

SOL PS Appointed By: Erith

Development Cost: c. £442 million

Project Summary

An office development in Southwark combining the retained and extended Print Building with the new 15-storey Ink Building. Designed by Bennetts Associates, the scheme uses hybrid steel and timber construction, with landscaped terraces and a new public square.

SOL PS Contribution

SOL PS carried out independent Category 3 checking of the top-down logistics slab and basement propping supporting the excavation and construction works.

Our checking scope included:

- Logistics slab stability and strength assessments against imposed loading from mobile cranes, excavation machinery and plant.



Architectural visualisation: Bennetts Associates, Timber Square project page.

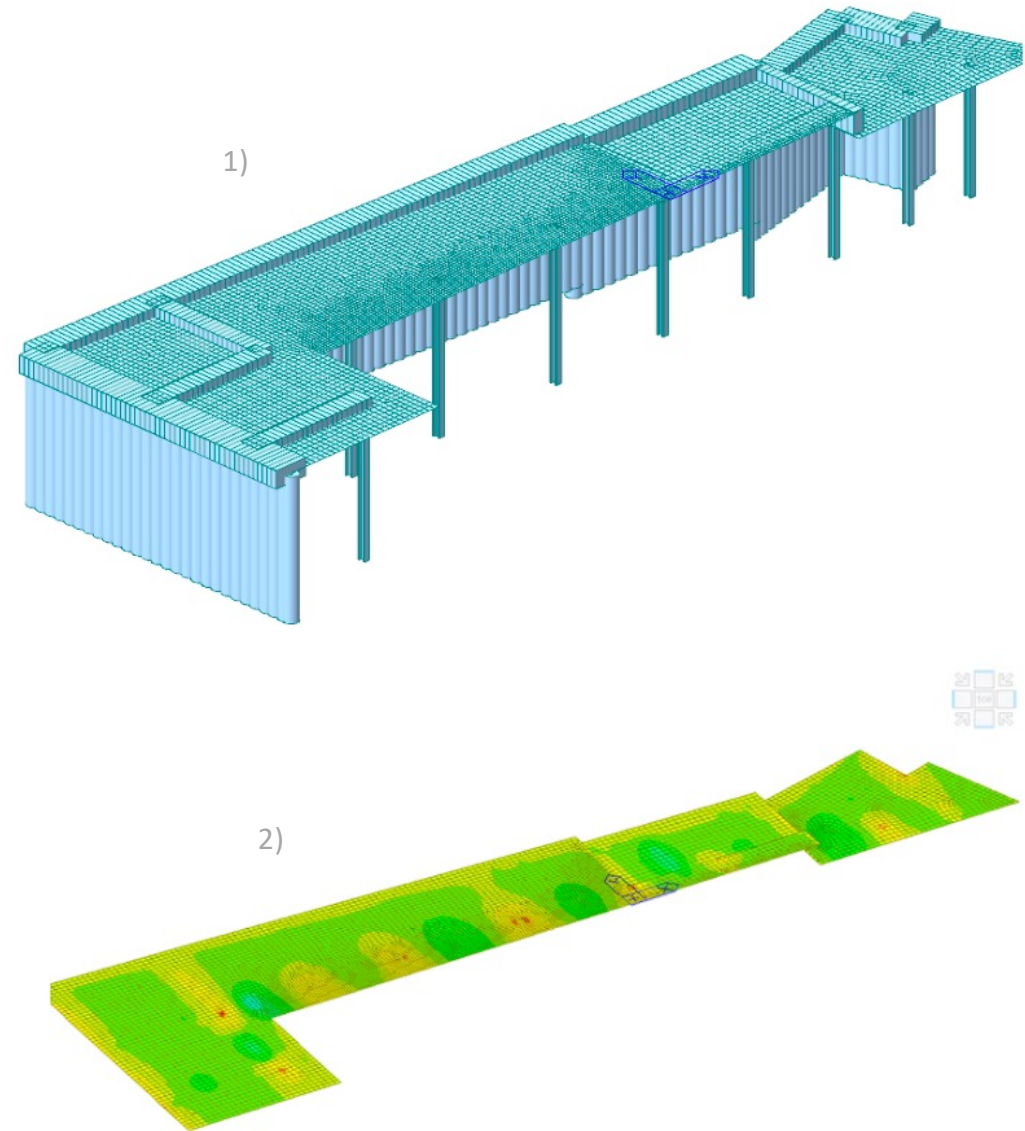


Basement Temporary Works

SOL PS carried out the independent Category 3 checking of the top-down logistics slab, associated plunge columns and basement propping including interfaces with the neighbouring development.

The assessment included:

- Assessment of loads provided for mobile cranes, excavators and HGVs and other construction plant.
- Review of temporary fill/build-up loads and construction traffic slab stresses.
- Plunge column buckling assessment, embedded cast-in plates and slab punching shear checks.
- Lateral assessment for top-down slab against earth retaining loads.
- Raking prop assessment against axial loads and member buckling to EC3 standards and capping beam reinforcement checks to EC2 standards.



Legend:

- 1) MIDAS Gen model of the top-down slab complete.
2) Force output in MIDAS Gen model for EC2 checks.



Proven capability on complex projects

The projects featured demonstrate SOL PS's experience in delivering specialist design and independent checking on major, high-value developments.

Our work spans demanding temporary works packages, from crane supports and core stability to basement propping and construction logistics slabs. These commissions demonstrate our ability to assess complex loading, construction sequences and structural interfaces with technical rigour and practical understanding.

We bring the same attention to every appointment, from a standalone design check to an extensive temporary works package.

To contact us, send your enquiry to admin@sol-ps.com or scan this QR code to visit our website.

