

Engineering that brings design to life

Award-winning Consulting Structural & Civil Engineers

High-rise Buildings



Project Overview

JMS provided full structural engineering design services for this new 7/8-storey multiple occupancy residential scheme on Goulden Street, Manchester. The superstructure comprises a hybrid of light gauge steel (LGS) and hot rolled (HR) steel, with LGS stud walls and joists supporting Lewis Deck floors throughout the residential levels. A transfer podium at first floor level was developed to accommodate changes in layout and load paths, with hot rolled steel elements providing stability and long-span support where required.

JMS designed lateral stability systems, floor build-ups and key interfaces between LGS and HR steel to meet the structural demands of the development. Coordination was essential to integrate the structure above the podium and retain the existing 25m Victorian chimney stack as part of the site's heritage.

Project Type: Structural

Project Category: High-rise | Commercial

Architect: Tim Groom Architects

Partners: Frameclad

Superstructure

Hybrid Steel
Frame

Podium Transfer
Structure



Project Overview

JMS Engineers delivered comprehensive structural engineering design services for The Oswald at 10B Shepherds Bush Road, London. This development comprises two interconnected six-storey residential blocks, linked via a shared basement, and includes two semi-detached townhouses and commercial units at the lower ground floor level.

The superstructure was designed using reinforced concrete frames to provide robustness and fire resistance. The basement construction involved careful planning to accommodate both residential and commercial functionalities while ensuring structural integrity. JMS also addressed site-specific challenges, including integrating the new structures within the constrained urban environment and coordinating with existing infrastructure.

Project Type: Structural & Civil

Project Category: High-rise | Mixed-use

Architect: Pelican Architectural Design Ltd

Partners: JMS Civils, Project 7 Ltd

Basement

Reinforced
Concrete Frame

Superstructure



Project Overview

JMS Engineers provided comprehensive structural engineering services for the Picture House Apartments at 245 Wood Street, Walthamstow, London E17. The development comprises three distinct structures: a six-storey steel-framed residential block with commercial space on the ground floor facing the High Street, an eight-storey steel-framed residential block at the rear, and two three-storey townhouses.

The front block integrates residential units above ground-floor commercial spaces, necessitating a design that accommodates mixed-use load requirements. The rear eight-storey block features a communal terrace on the sixth floor, requiring careful structural planning to ensure load distribution and stability. The three-storey townhouses were designed to complement the overall development while adhering to residential structural standards.

Project Type: Structural & Civil

Project Category: High-rise | Mixed-use

Architect: Brooks Murray

Partners: JMS Civils, CMT Construction Ltd

Long-Span Floor
Construction

Mixed-Use Load
Transfer Design

Steel-Framed
Superstructure



Project Overview

JMS Engineers led the structural and civil engineering efforts on a four-storey Mikvah development in the London Borough of Haringey, an essential facility for the community. JMS began by overseeing the demolition of existing structures, followed by the installation of an unpropped contiguous piled perimeter retaining wall, reinforced with a capping beam, and subsequent excavation to form a habitable basement.

For the superstructure, JMS designed a robust reinforced concrete framework to support the three above-ground levels, which include a second-floor plant room. Once completed, the building will feature 44 private bathrooms and six Mikvah pools, distributed across the lower floors. JMS provided a full civil and structural design service, ensuring the project met the highest standards of stability and functionality.

Project Type: Civil & Structural

Project Category: High-rise | Basement

Architect: Osel Architects

Partners: Fount Construction Ltd, JMS Civils

Basement

Drainage

Concrete Framed



Project Overview

JMS Engineers provided full structural design services for the residential development at 246–248 Kilburn High Road, London. The project consists of two separate five-storey reinforced concrete-framed buildings - one fronting the High Road and a larger residential block to the rear - designed to deliver 27 new apartments around a central landscaped courtyard.

Both structures utilise RC frames to deliver durability, acoustic performance, and fire resistance. The high street-facing block required careful integration of structural elements within a constrained urban footprint, while the rear block was designed with lateral stability systems to accommodate site geometry and access restrictions. Retaining structures were incorporated to address level changes across the site. Coordination with utility routes and phased construction logistics were key to ensuring buildability on this tight central London plot.

Project Type: Structural & Civil

Project Category: High-rise | Residential

Architect: Pelican Architectural Design Ltd

Partners: JMS Civils, Planning & Consulting Ltd

RC Frame
Construction

Load-Bearing
Retaining Structures

Superstructure



Project Overview

JMS Engineers provided structural design for the 'Cart & Horses' development at 1 Maryland Point, London - a complex mixed-use scheme combining heritage preservation with new-build construction. Works included a new basement formed beneath the existing historic pub structure, requiring careful sequencing and temporary works to maintain stability during excavation and underpinning.

A lightweight rooftop extension was added to the pub, designed to minimise load impact on the existing building. Adjacent to the pub, JMS designed an eight-storey reinforced concrete framed residential block, also incorporating a basement level. Coordination of foundation design, load transfer and interface detailing between old and new structures was critical in delivering the scheme within tight urban constraints.

Project Type: Structural & Civil

Project Category: High-rise | Mixed-Use

Architect: pH+

Partners: JMS Civils, Brennan Construction Ltd

Underpinning &
Basement

RC Frame Design

Lightweight Roof
Extension



Project Overview

JMS Engineers delivered structural design services for 70–78 Old Hill Street, London - a mixed-use scheme comprising a reinforced concrete-framed apartment block with commercial units at ground floor. The structural solution was developed to accommodate open-plan commercial space at street level, requiring careful coordination of load paths and column positioning to support the residential storeys above.

A roof-level extension was integrated into the design, using lightweight construction methods to limit additional loading on the main frame. The RC structure was designed to manage vertical and lateral forces efficiently within a constrained urban footprint. JMS worked collaboratively with the project team to refine slab thicknesses, simplify detailing, and ensure structural performance aligned with the architectural and commercial requirements.

Project Type: Structural

Project Category: High-rise | Mixed-use

Architect: Oaten Architects Ltd

Partners: Planning & Consulting Ltd

RC Frame Design

Lightweight Roof-level Extension

Long-span RC Transfer Beams



Project Overview

JMS Engineers provided structural and civil design for a 6-storey residential development on Farnborough Road, Hampshire.

The project utilised a fully reinforced concrete frame with SISMO building technology. A key challenge was constructing a basement covering the full footprint of the busy roundabout, which required using sheet piles and CFA piles for the boundary retaining walls. JMS overcame this by collaborating closely with the Local Authority to agree on the Approval in Principle (AIP) and construction management plan.

The development offers 62 one- and two-bedroom apartments with basement parking, demonstrating JMS's ability to navigate complex engineering challenges effectively.

Project Type: Civil & Structural

Project Category: High-rise | Residential

Architect: Kyle Smart Associates

Partners: Savoy Projects LLP

Concrete Framed

Basement

Drainage



Project Overview

JMS Engineers delivered structural design services for the Tayfen Road development in Bury St Edmunds - a mixed-use project comprising 171 one- and two-bedroom apartments across six buildings, along with a ground-floor commercial unit. The buildings, ranging from four to five storeys, required a structural solution that balanced efficiency with the architectural vision.

Providing on-site support, JMS integrated UnisystemLB load-bearing panels, streamlining the construction process and ensuring quality control. The ground-floor commercial space was designed with open-plan layouts, necessitating careful coordination of load paths and column placements to support the residential units above. JMS worked closely with the project team to ensure the structural integrity and performance of the development met all regulatory standards and client expectations.

Project Type: Structural

Project Category: High-rise | Mixed-use

Architect:

Partners:

Offsite-Manufactured
Panel Systems

Superstructure

Structural
Assessment



Project Overview

JMS Engineers are leading the structural engineering for the redevelopment of the 'Boris Building', a circa-1913 structure in Hackney, when it was home to a firm specialising in the manufacture and repair of gas meters.

To accommodate a new third floor, internal works involve partially removing the oak trussed roof. Twin steel beams are installed beneath the roof, clamping the timber truss's top chord, which allows the bottom chord and internal struts to be removed while preserving the arch integrity. The new third-floor steel beams tie the roof arch.

In the basement, secant piling enables full excavation with minimal de-watering. A reinforced concrete substructure supports the three-storey superstructure, which is built with hot-rolled steelwork to deliver a durable and efficient framework for this redevelopment.

Project Type: Structural & Civil

Architect: SK Architects

Partners: JMS Civils, Crownage

Project Category: High-rise | Basement

Concrete
Substructure

Basement

Extension



Project Overview

JMS recently completed works on the Hoxton Street, mixed-use residential and commercial development. Foundation and basement works featured piled foundations and reinforced concrete (RC) pile caps, along with a contiguous piled retaining wall and liner walls for basement stability. The basement houses technical rooms, bike storage facilities for over 60 bicycles, and utility areas.

The superstructure includes a five-storey RC frame with RC downstand beams and columns, creating large, open-plan ground-floor commercial spaces. Upper floors are dedicated to residential units, complemented by communal areas and private gardens.

Sustainable urban drainage systems (SuDS) were integrated, reusing existing connections to meet regulations.

Project Type: Civil & Structural

Project Category: High-rise | Mixed-use

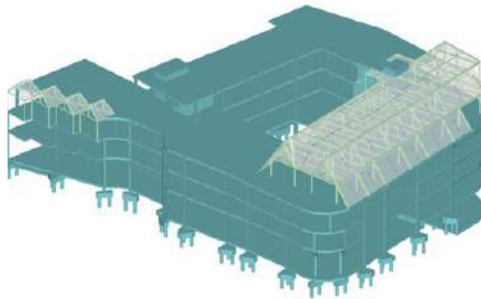
Architect: Rowan Orchid Architects

Partners: JMS Civils, TNV Construction Ltd

Superstructure

Basement

Drainage



Project Overview

JMS Engineers provided full structural design for 1-11 New Rents, Ashford - a new-build mixed-use hotel, retail and residential development. The structure comprises a three- and four-storey reinforced concrete frame on piled foundations, with ground-floor parking and a partial basement housing M&E services.

A partial-footprint basement was designed to accommodate M&E plant, requiring excavation, temporary works, and retaining wall detailing within a restricted site boundary. Above the third floor, JMS designed a lightweight two-storey steel-framed mansard roof structure, carefully coordinated with the concrete frame below to manage differential stiffness and load transfer. The hybrid RC and steel solution was developed to optimise material use while maintaining flexibility for varied occupancy and architectural layouts.

Project Type: Structural

Architect: Hollaway Studio

Partners:

Project Category: High-rise | Mixed-use

Superstructure

RC & Steel-
Framed Structure

Partial-Footprint
Basement



Project Overview

JMS Engineers provided structural design for a four-storey residential apartment block in Camden. The structure features loadbearing masonry walls supporting reinforced concrete floor slabs, designed to deliver robustness, fire resistance, and acoustic performance suited to a high-density residential scheme.

Foundations were designed to accommodate variable ground conditions and nearby structures, with consideration given to settlement control and party wall constraints. The structural layout was developed to provide regular load paths, avoiding the need for intrusive transfer structures.

JMS coordinated closely with the architect to ensure floor spans, wall positions and service zones aligned, allowing for efficient construction and long-term durability.

Project Type: Structural & Civil

Project Category: High-rise | Residential

Architect: Eyal Moran Architects

Partners: JMS Civils, Star Real Estate Ltd

Loadbearing
Masonry Design

RC Floor Slab
Integration

Foundation
Design



Project Overview

JMS Engineers delivered structural design for the redevelopment of 54–62 High Street, Bromley - the planned transformation of a former department store into a mixed-use residential and commercial development. The scheme involves converting the existing first and second floors into apartments, while adding three new residential storeys above.

The vertical extension required detailed assessment of the existing structure's capacity, with strengthening works introduced to support the additional loads. JMS designed a lightweight steel frame for the new upper levels, minimising impact on the retained structure below. Alterations to the ground-floor commercial space includes new structural openings and internal support adjustments to suit the revised layout, all coordinated to maintain integrity during phased construction.

Project Type: Structural

Project Category: High-rise | Mixed-use

Architect: Oaten Architects Ltd

Partners:

Lightweight Steel-
frame

Vertical Extension

Structural
Assessment



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