

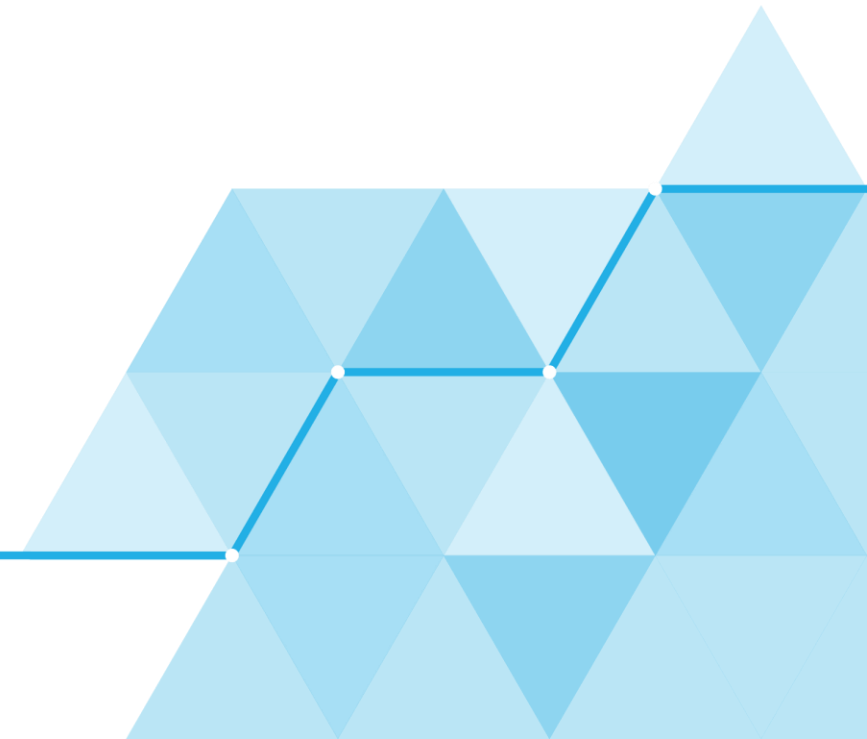


Ministry
of Justice

SEO Mechanical Engineering Manager

Candidate Information Pack

April 2025



Mechanical Engineering Manager Role Overview

Candidate Profile

As a Mechanical Engineering Manager at Ministry of Justice Property, you will have the chance to apply your mechanical engineering expertise to some of the most innovative and exciting social infrastructure projects in the UK.



The successful candidate will be part of the biggest prison expansion programme in a generation, which utilises Modern Methods of Construction and Design for Manufacturing and Assembly to improve efficiency, environmental performance and reduce cost.

They will also visit and work on projects on our existing £8.5 billion estate, supporting the refurbishment of iconic establishments such as HMP Wandsworth, HMP Liverpool and HMP Wormwood Scrubs.

The successful candidate will have a strong background in construction and mechanical engineering. They will be a confident and effective communicator who has experience working in a multi-disciplinary design and/or construction team environment.



The ideal candidate will be driven by the opportunity to change and improve the environment around them.

Salary

Civil Service Grade: Senior Executive Officer (SEO)

Your salary will be dependent on your base location.

For further information regarding the pay scales, please refer to the job advert.

Non-civil service candidates would typically start on the pay band minimum.

This role will be recruited on a national basis.

Benefits

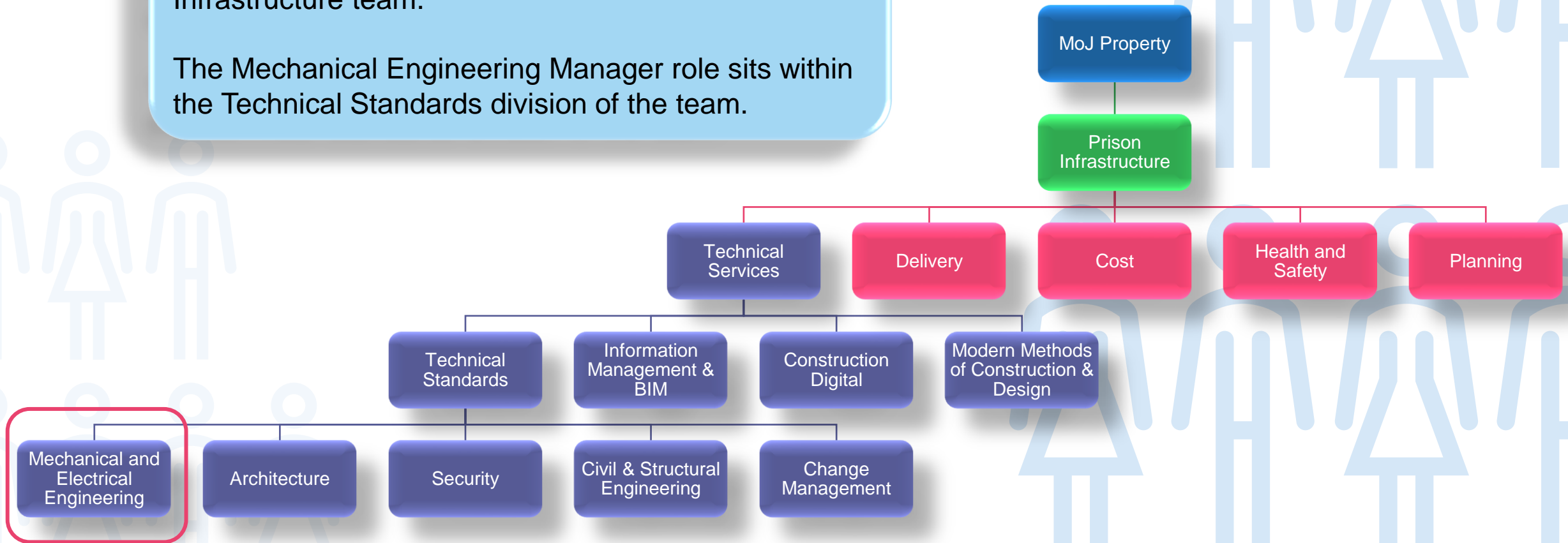
- Civil Service Pension with >28% employer contribution
- Flexible working hours
- Extensive range of training and career development opportunities
- A range of flexible benefits and 'family friendly' policies



The Team

Technical Services is a 20-person specialist team which sits within MoJ Property Directorate Prison Infrastructure team.

The Mechanical Engineering Manager role sits within the Technical Standards division of the team.



What We Do



Technical Services are an award-winning team that are driving innovation and sustainable solutions into our buildings.

We lead the adoption of Modern Methods of Construction, Digital Twins and platform approaches (DfMA) to bring efficiencies and better outcomes.

The MoJ operates a £9B, rapidly expanding estate, and the context we deliver in offers unique challenges and opportunities. We ensure that all construction, refurbishment and capital maintenance projects conform with sustainability, health, safety, security, operational, information and legislative requirements where they are not mandated elsewhere.

We liaise closely with stakeholders to ensure that our properties reflect the specific needs of those that use our estate and support the strategic objectives of the Ministry of Justice.

Our work undertaken to date is leading the way across Government. The Mechanical Engineering Manager's role is key to this continued success.

The work that we do directly impacts the **cost, quality, safety and strategic alignment** of the properties that we build and our ability to operate them effectively.

We provide a direct value contribution to the Ministry of Justice and our stakeholders and **support the strategic objectives of the MoJ.**



What Will You Work On?

HMP Millsike was opened in March 2025 and is the **UK's first all electric prison**.

The Technical Services team formed a key part of the client construction team.

- Our architects and engineers advised project teams on applying our standards, ensuring risks are effectively managed when designs cannot comply.
- We developed standards to support the delivery of an all-electric prison.
- We led the development and testing of the barless window design to support a more rehabilitative environment for prisoners.
- We led installation and development of a Digital Twin to remotely monitor the building's performance.
- We ensured asset information was managed and handed over to the operator effectively.

For more information on HMP Millsike and what it takes to build a prison, you can [watch](#) this video and [read](#) this article.

A Case Study from
HMP Millsike



A Typical Week in the Life of the Mechanical Engineering Manager

Monday – Work from Home: Joining the weekly team meeting to hear the latest updates from the team and share your priorities for the week. Attending a project team meeting in the afternoon for the new prison at HMP Gartree. An urgent ventilation compliance issue has been identified by the project team, they need your advice on how to proceed.

Tuesday – Office Day: Attending the Sustainability Special Interest Group meeting. You've made some key updates to our Air Source Heat Pump specification and have been asked to present the changes to BRE, Mace, Pick Everard, Wates, Kier and other industry leaders.

Wednesday – Visiting Site: Site visit to HMP Gartree with the M&E team to agree a way forward for the urgent ventilation compliance issue. Taking the opportunity to have a site walk with the Wates contractor team to witness the new modular riser units being craned into position.

Thursday – Work from Home: After a long day on site on Wednesday, taking advantage of flexible working to have a later start to the day. Working from home to review some requests to derogate from the mechanical technical standards and drafting report on upcoming changes to legislation that will affect some existing sites.

Friday – Work from Home: Meeting with the Construction Digital team to hear the latest insights from the Digital Twin that was installed at HMP Millsike. Some of the findings will inform changes to the underfloor heating specification which will reduce the operational carbon in future prisons! Using some Flexi-time that you've accrued to have an early finish to the week to spend time with the family.



Modular riser being craned into position on site.

Who You'll Work With

More information on the rest of the Technical Services team



Architecture

The MoJ Property Technical Standards team has subject matter experts who are involved with all the architectural aspects of our estate.

The team help validate and assure construction work across our building estate through adherence to category-specific standards, compliance testing and product approvals.



We manage design queries from a variety of sources, such as commercial manufacturers and contractors plus other MoJ teams who deal with subjects such as fire, health and life safety, commercial frameworks and operational policy. One of the key areas of architectural compliance from a safety and security perspective is the cellular environment. New prison cell construction and fitout are designed and product-tested to meet the Technical Standards.



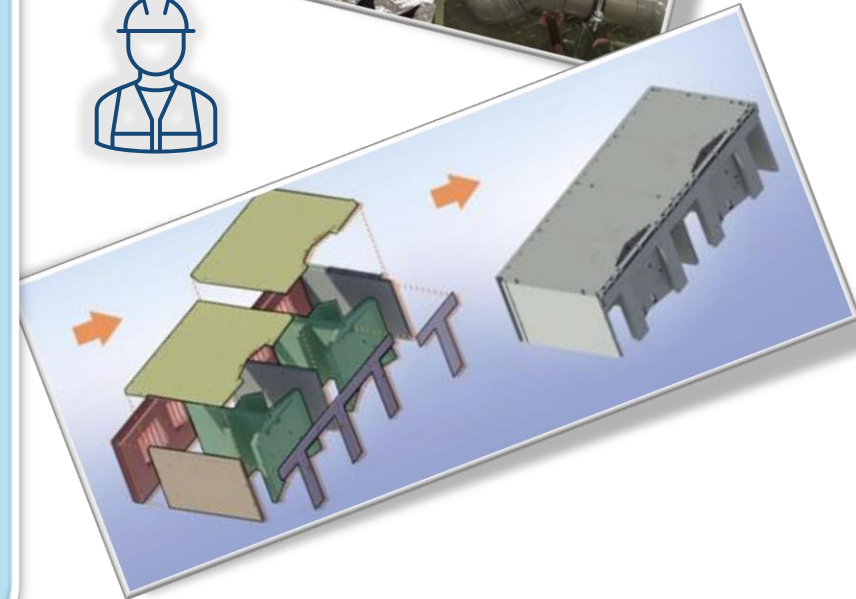
Engineering

We employ experienced Structural, Mechanical, Electrical, and Security engineers who support project teams to deliver buildings efficiently and in line with our requirements. Our engineering teams lead on the development of standards and design guidance and support project teams in its application.

We work on projects that are at the forefront of government property and deliver in a context that provides unique challenges to security, sustainability, health and safety, fire safety and operation.

We work closely with policy and commercial teams to test and validate innovative construction techniques such as modularised risers, low carbon concrete and cement alternatives, panelised concrete construction and more.

Engineers at the MoJ can expect to be involved in varied and challenging work supporting the delivery of a Net Zero Carbon estate, responding to the prison capacity crisis, cross-government construction initiatives, development of digital construction techniques, and our DfMA and Modern Methods of Construction strategy.



Digital Construction

We lead on Digital Construction and candidates will have the opportunity to work closely with the Digital Construction Team in developing innovative solutions and initiatives to solve key problems.



One of our key initiatives is the Digital Twin programme to help understand what Digital Twins could mean for the estate, with a focus on operational energy use reduction.

The digital twin, a digital model of the building, is linked to the physical building by an array of sensors and a management system.

Our Pathfinder is the first Digital Twin completed for the MoJ and possibly the public sector.

It demonstrates exceptional commitment to innovate and make a significant positive impact by:

- Illustrating a viable path to net zero using digital techniques
- Leading the way for more widespread adoption of digital twins across Government Property
- Using technology to drive better operation, improved sustainability and lowering operating costs

Product Testing

To ensure construction methods and products are suitable for the highly bespoke requirements of the custodial estate, particularly the cellular environment, we have testing specification outlining methods and requirements that these assets must meet in-order to be approved for use on the estate.

This can cover elements from wall constructions and fencing through to in-cell furniture and fixings.

In doing this we can provide assurance to HMPPS that components and products being specified for use in the cell design and/or environment have been adequately assessed and deemed suitable from a security, safety and wellbeing perspective.

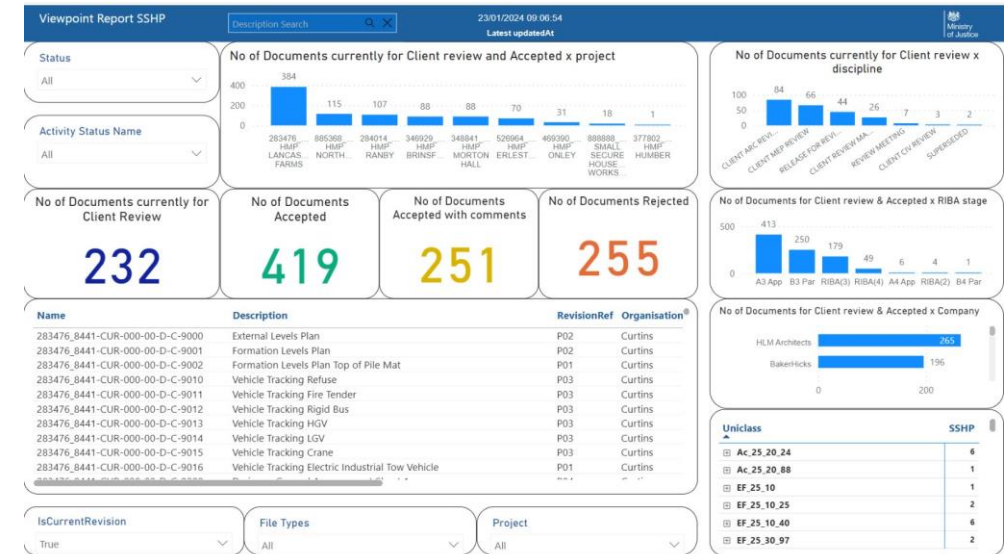
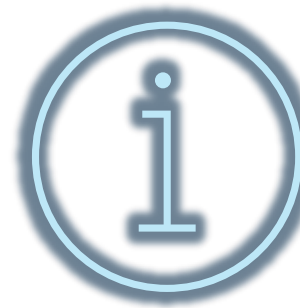
This testing is undertaken in collaboration with suppliers, manufacturers, project teams and UKAS accredited testing facilities to ensure the best designs and outcomes.



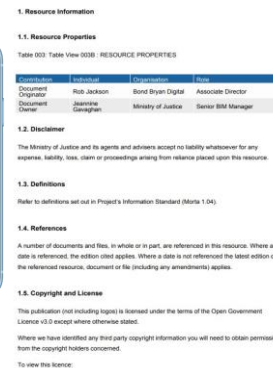
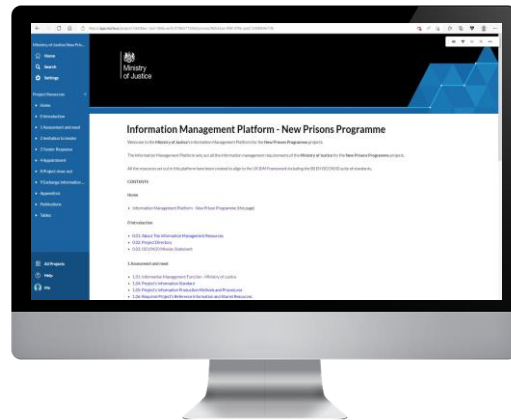
Information Management

The MoJ Information Management team have developed several resources that align with the ISO 19650 Series, Construction Playbook, Transforming Infrastructure Performance, and the UK BIM Framework.

These have been fully embedded in the MoJ frameworks and contracts and ensure that a collaborative approach is adopted.



Modern systems and databases have been developed and are utilised by colleagues to make information management requirements machine readable, thus reducing human error and ensuring that specifications can be readily updated. The MoJ have developed dashboards, so that the delivery of data can be tracked and evidenced, with action taken accordingly. This has enabled efficiencies and time savings across multiple projects of various scales, helping to inform important KPI's. The MoJ Information Management Platform facilitates project updates to be viewed in real-time, providing assurance to the team and greater transparency across the projects portfolio.





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