

Senior Telecoms Design Engineer (Multiple)

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About Us

We are the UK network service provider making digital infrastructure simple.

Whether indoors or outdoors, we make sure our customers can always connect their customers. We bring together mobile operators, central and local government, and real estate providers to work together in new ways using: Collaborative commercial models, combined real-estate and telecoms know-how, and global best practice.

We have 6000+ mast site locations, have connected 2000+ buildings and support 200+ outdoor networks. And our managed sites include some of the biggest, most challenging wireless environments in the UK, including railway stations, Canary Wharf, City of London and events like the London Olympics.

The Role

We are recruiting for **multiple Senior Telecoms Design Engineer** opportunities. The roles are being recruited on a fixed-term or day rate contract basis for 6-12 months and may be extended.

While both roles support the design and delivery of wireless connectivity solutions across a range of environments, **one position** will have a particular focus on **rail stations and Project Reach**, requiring previous experience of working within rail environments and familiarity with Network Rail standards and processes. The other position will focus more broadly on in-building wireless and venue deployments, with some involvement in Project Reach. For this role, rail experience would be beneficial but is not essential.

As a Senior Design Engineer, you will be a subject matter expert for RF and solution design, working autonomously across live, high-profile programmes, including the design and delivery of wireless solutions within complex rail station environments for major client rollouts such as Project Reach, through to enterprise, NHS, government, and MNO deployments – with multiple stakeholders including clients, Mobile Network Operators (MNOs), and supply chain partners.

You will bring deep RF and design capability, strong engineering judgement, and mastery of the company's core portfolios (DAS, IDSC, etc) or vendor/supplier-specific systems. The right candidate combines technical excellence with a practical mindset – finding solutions that are technically sound, deliverable, and commercially sensible, often under time pressure and in complex build environments.



Key responsibilities

- **RF Design and Solution Architecture:**

- Own RF and site solution design activity for your assigned portfolio or programme (such as Project Reach) – from survey through to post-integration validation.
- Design RF solutions for complex venues, including stadia, transport hubs and large public spaces, as well as traditional in-building wireless environments, ensuring high-capacity, resilient mobile coverage.
- Build and maintain a reference library of proven solutions, products, and design guidance spanning the range of environments the team supports – actively identifying, evaluating, and selecting appropriate equipment and design approaches to resolve design and build challenges.
- Evaluate and select structural products, ancillary equipment, and hardware (active and passive) appropriate to each site scenario, balancing performance, cost, and practicality.
- Translate high-level coverage and business requirements into technically sound, buildable designs, applying value engineering principles throughout – finding where a pragmatic solution meets the requirement without unnecessary cost or complexity, and driving that approach within the supply chain.
- Produce Design Packs, client or regulatory clearance submissions, and Post-Integration Reports to the required standard, ensuring CDM compliance is met.
- Review, challenge, and approve supplier design submissions from Approval in Principle through to As Built and Handover Pack.
- Specify and coordinate RF and physical surveys; analyse survey data to inform and optimise designs.
- Apply deep knowledge of RF fundamentals – interference, PIM, VSWR, path loss – with the capability to diagnose and resolve complex RF issues across any portfolio or vendor system.

- **Autonomous Technical Leadership:**

- Act as the primary technical authority for RF design within your programme(s) – operating with a high degree of independence and initiative.
- Identify design risks and issues early; develop and implement solutions without reliance on escalation.
- Challenge existing design approaches where a better or more efficient solution exists, and drive adoption of improved methodologies across the team.
- Develop and champion standards for RF design tool usage, output quality, and design documentation.
- Specify, manage, and monitor testing criteria post-installation and through client or MNO network integration.

- **Strategic Impact & Business Growth:**

- Work with the sales and bid teams to translate high-level requirements into technically sound and commercially viable solutions, supporting RFP and tender submissions with expert technical input.
- Identify emerging technology trends and translate them into actionable design guidance, assessing the readiness of design tools and methodologies to support them.
- Contribute directly to business growth, efficiency, and competitive advantage through technical contributions that span multiple portfolios and client programmes.

- **Supplier and Stakeholder Engagement:**



- Lead engagement with design and testing suppliers – setting performance expectations, conducting reviews, and managing quality of outputs.
- Interface directly with clients, MNOs, and programme stakeholders (such as Network Rail on programmes like Project Reach) on design-related matters, providing clear and confident technical communication.
- Handle design-related escalations promptly, ensuring issues are resolved and communicated effectively.
- Support the evaluation and onboarding of new design suppliers or products where required.

- **Knowledge Creation, Mentorship & Process Enhancement:**

- Lead the creation of proprietary design methodologies, guidance documents, and reference tools that benefit multiple portfolios and programmes.
- Mentor junior engineers, lead technical discussions, and develop training materials; create and review link budgets as part of technical assurance.
- Review and approve complex design packages

- **Safety & Compliance:**

- Ensure all designs comply with relevant safety, telecoms and site-specific standards, including CDM and ICNIRP requirements.
- Support safe delivery through compliance with RAMS, company health and safety policies, and applicable industry regulations.
- Maintain all required training, certifications and site access accreditations.

Education and Knowledge

- Strong understanding of RF fundamentals: interference, PIM, VSWR, path loss, coverage prediction.
- Proficiency in iBwave or Ranplan for system design and modelling.
- Experience working within rail environments and collaborating with rail stakeholders would be advantageous. Experience with Network Rail standards and processes is highly desirable **for rail-focused positions**.
- BEng / MEng in Electronic Engineering, Telecommunications, or related discipline (or equivalent demonstrable experience).

Skills and Experience

- Significant RF design experience in complex delivery environments.
- Demonstrable capability in equipment selection and specification across varied site scenarios.
- Experience delivering RF design solutions within the UK rail sector, ideally including Network Rail infrastructure projects, would be advantageous and **is essential for candidates seeking to be considered for rail-focused positions**.
- Familiarity with Network Rail processes, standards, approvals, and stakeholder requirements is desirable.
- Experience in UK rail or similarly complex/regulated environments is preferred.
- Experience engaging directly with MNOs or other stakeholders at a technical level.
- Experience specifying and overseeing RF testing and post-integration validation.
- Ability to operate autonomously and make sound technical decisions without close supervision.



- Experience working safely and effectively within operational environments, coordinating with multidisciplinary project teams and stakeholders. Experience within operational rail environments would be advantageous **for rail-focused positions**.

Personal Attributes

- Self-starter – comfortable owning a technical workstream end-to-end with limited day-to-day direction.
- Outcome-focused – motivated by delivery, not perfection for its own sake.
- Pragmatic engineering mindset, able to balance technical rigour with delivery timescales and cost.
- Resilient and adaptable – able to manage competing priorities in a fast-paced programme environment.
- Collaborative communicator – confident working directly with suppliers, customers, and senior stakeholders.
- Flexible – willing to travel nationally to rail sites and adapt working patterns to programme demands, including out of hours where required.

Our Values

Our values are what set us apart from the rest. They are what enable us to bring assured connectivity wherever it's needed. We use these values to inform everything we do and the way we act as professionals – think of them as what's important to us collectively, as well as how we prefer to work.

The successful candidate will be aligned with our company commitments:

- Engineering excellence (we're engineering experts and the quality of our output is second to none)
- Do the right thing (we're neutral in our position, doing what's best for our people, our partners, our customers, society and the environment)
- Set the pace (we act quickly and work efficiently, setting the pace for our projects and industry standards)

Sustainability and CSR

We implement environmental, social, and corporate governance:

- Innovate for Impact:
 - We pride ourselves on many industry firsts, driven by both technical and commercial innovation. From access to assured connectivity indoors in hospitals to smarter cities, we'll continue to improve access to connectivity where it matters most.
- A thriving workforce:
 - We're nimble and fast-growing and our success relies on diverse talent from a range of backgrounds. From this running start in an industry with known diversity challenges, we're putting structure and focus around our diversity, equity and inclusion efforts.
- Embracing Net Zero:
 - This year we've baselined our carbon footprint. We choose to include key measures for the future like waste management and will be focused on our supply chain.



Diversity, Equity, Inclusion, and Belonging

We value an inclusive environment at Freshwave and commit to celebrating the enriching contributions and perspectives that people from differing backgrounds and experiences bring. Equal opportunities are not only the key to our recruitment and selection strategy, but also to every other aspect of our employment. We'll ensure that a level playing field is provided from which everybody, without exception, can thrive.

Reasonable Adjustments

Here at Freshwave, we're dedicated to making our recruitment process inclusive and comfortable. We recognise that applying for a new job can be daunting for some, so let us know if there is anything we can do to enable you to be yourself. We'll look to provide reasonable adjustments during our process to support all applicants.

To Apply for this role please include a copy of your CV to recruitment@freshwavegroup.com