

Job Description

For Engineer Positions

This form is used to provide a complete description of the specific job (or role) and defines the skills, knowledge and abilities required to undertake the specific and generic role profile.

Section A: Specific Role Profile

The specific role profile provides key information relating to the salary and working conditions e.g. location of a job, along with the current focus of the job role and a brief description of the main duties.

Role Details

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| Job Title: | Graduate Civil Engineer | JEID | EN001 |
| Salary Grade: | Grade G | | |
| Team: | Highways Capital Delivery, Bridge & Structural Design and Traffic Control & Information Systems | | |
| Service Area: | Environmental Services | | |
| Primary Location: | Shire Hall, Warwick (Hybrid) | | |
| Political Restriction | This position is not politically restricted. | | |
| Responsible to: | Peter O'Connor, Chris Simons | | |
| Responsible for: | N/A | | |

Role Purpose

Engineering Design Services, Warwickshire County Council (WCC) is a civil engineering business unit within the Local Authority. The core business is comprised of the design and construction of new highway improvement schemes, but also design and maintenance of the County's highway structure assets and traffic control and information systems.

WCC are aiming to appoint two new Graduate Engineers. The proposed posts will be in the Highways Capital Delivery, Bridge & Structural Design and Traffic Control & Information Systems teams.

The Highways Capital Delivery team in Engineering Design Services comprises new and experienced engineers dedicated to project delivery at both the design and construction phase. Its aim is to improve safety, tackle congestion and enhance travel opportunities in the county. Projects include new link roads, junction improvements, cycle schemes, traffic safety schemes and town centre regeneration schemes.

The Bridge and Structural Design Team are responsible for the technical design of new highway structures often working as part of large integrated teams including a wide range of engineering disciplines. Projects range from new highway and drainage infrastructure to the improvement or replacement of existing structural assets which have fallen into disrepair or require a change in use.

The Traffic Control and Information Systems Team designs and maintains traffic signal junctions, pedestrian crossings, variable message signs and other Intelligent Transport Systems as part of Warwickshire's programme of highway improvements as well as developer- funded schemes. In addition, the team monitors and ensures that existing traffic signals and pedestrian crossings operate efficiently.

As a graduate civil engineer at Warwickshire County Council, you will be joining our diverse engineering team, assisting other Engineers in the delivery of projects ranging from small highway improvement schemes to multi-million-pound infrastructure projects.

Role Responsibilities

Typically, the day-to-day work for the successful candidates can involve any stage of a project including the production of feasibility studies for new schemes; the technical design of new highways and structures using a broad range of techniques including advanced structural modelling software and calculations; communicating and liaising with a wide range of stakeholders and members of the public; preparing and tendering construction contracts including drawings, specifications, and contract documents; construction site supervision and contract administration.

Section B: Generic Role Profile

The generic role profile provides a list of the main tasks that cover the broad range of duties and responsibilities performed at this level for the job role. An employee may not be undertaking all of these at any one time, but they could be expected to do so under their contract of employment.

Generic Role Details

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| Job Role: | Engineer – Level 1 |
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Main Tasks

- To work under the close supervision of more senior officers, delivering simple projects, undertaking straightforward studies, investigations, inspections, assessments, audits and considering applications and claims, including the interpretation and application of technical and planning standards and legal requirements, provision of briefing notes / technical reports as necessary and to assist with the supervision of contractors and consultants undertaking simple routine work.
- To assist with the supervision of contracts and consultant commissions and support the development and supervision of a range of transport/ engineering schemes and projects, providing technical support / information including assessing construction risk and safety implication of proposals, completing CDM documents, issuing prequalification questionnaires to contractors and issuing works instructions.
- To assist with the monitoring of costs and budgets for transport projects or engineering works or other procured services.
- To undertake routine monitoring, maintenance and responsive activities across all disciplines, prioritising and arranging remedial actions as necessary *e.g.*
- addressing minor traffic management problems
- assessing the condition and safety of the highway
- dealing with minor street lighting works etc

- undertaking general bridge or site inspections
- To undertake a wide range of engineering or transport planning processes and procedures requiring checking, analysis, interpretation of information and interaction with stakeholders as necessary, including issuing of routine statutory notices and work required to support legal processes *e.g.*
- traffic Regulation Orders
- section 38 / 106 and 278 Agreements and other planning related matters
- highway licenses and 'stopping up' notices
- To undertake day to day maintenance and updating of records, registers, inventories, plans and other information to ensure that information, databases and contacts are accurate and complete, including the investigation and resolving of queries as relevant.
- To carry out straightforward planning or design for transport projects or engineering works using CAD or mapping software to produce drawings and plans with due regard to design standards, policies and regulations.
- Attend meetings to deal with straightforward issues, to provide information and advice and to obtain views of partners/ stakeholders and to provide support to more senior officers at meetings with elected Members, public and stakeholders, to undertake consultation, provide information and advice and answer routine technical and policy questions and assist senior officers with writing committee reports.
- To deal with a range of routine customer enquiries complaints and associated correspondence, including the provision of advice and carrying out minor investigations as necessary *e.g.* responding to highways insurance claims.

Section B: Person Specification

The person specification provides a list of essential and desirable criteria (skills and competencies) that a candidate should have in order to perform the job.

Each of the criteria listed below will be measured through; the application form (A), a test / exercise (T), an interview (I), a presentation (P) or documentation (D).

Essential Criteria

Assessed By:

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| NVQ Level 3 or equivalent in a relevant subject | A |
| The ability to independently interpret and analyse varied and complex information or situations. | A, I |
| The ability to communicate, in person and/or writing, complicated or sensitive information with varied audiences | A, I |
| Have experience of using ICT including relevant Engineering/Transport Planning systems <i>e.g.</i> CAD | A, I |
| To be able to use own initiative to respond independently to problems and unexpected situations | A, I |
| The ability to work under pressure including meeting deadlines and dealing with interruptions | A, I |
| The ability to cope in situations where there is an emotional demand arising from the work being undertaken | A, I |
| Experience of contributing to the development of Engineering/Transport Planning Policies and Procedures | A, I |

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| The ability to co-ordinate a number of elements within a project plan. | A, I |
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Desirable Criteria

Assessed By:

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| For positions in Highways Capital or Bridge & Structural Design, an ICE accredited Bachelors Degree in Civil Engineering or related subject For positions in Traffic Control in Information Systems, a Bachelors Degree in Electrical or Electronic Engineering, Civil Engineering, IT & Computing or Transport Planning | A |
| Experience working/interning in a design/site office in the Civil Engineering industry | A, I |
| Participation in any engineering related extra-curricular activities | A, I |
| Previous experience of engineering design CAD or modelling software | A, I |
| Demonstrate an awareness of major Civil Engineering projects in the UK | A, I |
| Demonstrate an awareness of sustainable development and how the industry can become more sustainable in the future. | A, I |

Section C: Working Conditions

The working conditions relate to those non-contractual elements of the job that may impact on the holder of the position, as well as those workplace-based responsibilities that are part of this job. These are not contractual but provide a guide to the working conditions and the potential hazards and risks that may be faced.

Health & Safety at Work

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| To take responsibility for your own health, safety and wellbeing, and undertake health and safety duties and responsibilities for your role as specified within Warwickshire County Councils Health and Safety Policy, and all other relevant health and safety policies, arrangements, procedures, systems of work as specified for the post/ role. |
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Potential Hazards & Risks

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| The potential significant hazard(s) and risk(s) for this job are identified below (those ticked). The purpose of recording this information on the job description is so that the health status of the potential and actual post-holders can be assessed with regard to the significant hazards and risks. These hazards and risks should be based on the appropriate activity, process and/or operation risk assessment whereby all of the significant risks are identified, recorded and appropriately controlled. The list below is therefore not an exhaustive list because it is the risk assessment that details all significant risks that could arise out of or in connection with the work activity, but any others will be identified in the 'other' section. | |
| <input type="checkbox"/> Provision of personal care on a regular basis | <input type="checkbox"/> Driving HGV or LGV for work |
| <input type="checkbox"/> Regular manual handling (which includes assisting, manoeuvring, pushing and pulling) of people (including pupils) or objects | <input type="checkbox"/> Any other frequent driving or prolonged driving at work activities (e.g. long journeys driving own private vehicle or WCC vehicle for work purposes) |
| <input checked="" type="checkbox"/> Working at height/ using ladders on a regular/ repetitive basis | <input checked="" type="checkbox"/> Restricted postural change – prolonged sitting |
| <input checked="" type="checkbox"/> Lone working on a regular basis | <input checked="" type="checkbox"/> Restricted postural change – prolonged standing |
| <input checked="" type="checkbox"/> Night work | <input type="checkbox"/> Regular/repetitive bending/ squatting/ |

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| | kneeling/crouching |
| <input type="checkbox"/> Rotating shift work | <input type="checkbox"/> Manual cleaning/ domestic duties |
| <input checked="" type="checkbox"/> Working on/ or near a road | <input checked="" type="checkbox"/> Regular work outdoors |
| <input checked="" type="checkbox"/> Significant use of computers (display screen equipment) | <input type="checkbox"/> Work with vulnerable children or vulnerable adults |
| <input checked="" type="checkbox"/> Undertaking repetitive tasks | <input type="checkbox"/> Working with challenging behaviours |
| <input type="checkbox"/> Continual telephone use (call centres) | <input checked="" type="checkbox"/> Regular work with skin irritants/ allergens |
| <input checked="" type="checkbox"/> Work requiring hearing protection (exposure to noise above action levels) | <input checked="" type="checkbox"/> Regular work with respiratory irritants/ allergens (exposure to dust, fumes, chemicals, fibres) |
| <input type="checkbox"/> Work requiring respirators or masks | <input type="checkbox"/> Work with vibrating tools/ machinery |
| <input type="checkbox"/> Work involving food handling | <input type="checkbox"/> Work with waste, refuse |
| <input type="checkbox"/> Potential exposure to blood or bodily fluids | <input type="checkbox"/> Face-to-face contact with members of the public |
| <input checked="" type="checkbox"/> Other (please specify): | Working near watercourses and in locations where discarded/used drug paraphernalia may be present. |