

## Role Profile

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| <b>Role:</b>                      | <b>ITS Site Engineer<br/>(Network Monitoring and Reporting)</b> |
| <b>Directorate:</b>               | <b>Highways</b>                                                 |
| <b>Salary Band:</b>               | 6/7                                                             |
| <b>Post reference:</b>            | HW17                                                            |
| <b>Job Evaluation Date:</b>       | n/a                                                             |
| <b>Role statement of purpose:</b> | <b>For the Communication Engineer Level 1 Post</b>              |

Delivery of the installation, maintenance, operational effectiveness and design of traffic control, communications and monitoring systems across Greater Manchester.

### **In addition for the Engineer Level 2 Post**

Provide advice and guidance on future innovative developments for traffic control, communications and monitoring systems.  
Mentoring and coaching less experienced members of staff

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| <b>Reports to:</b> | Engineering Manager (ITS) |
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|           | <b>Key Role Outputs(KROs)</b><br><i>these set out what must be achieved for the post holder to be successful in the role</i>                                | <b>Key Actions for the Communications Engineer Level 1 Post</b><br><i>These set out how the KROs will be achieved – the activities required.</i>                                                                                                                         | <b>Key Actions for the Communications Engineer Level 2 Post</b><br><i>These set out how the KROs will be achieved – the activities required.</i>                                                                                                                                     |
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| <b>1.</b> | Timely, effective and cost-efficient installation, maintenance and operation of traffic control, communications and monitoring systems in line with project | <ul style="list-style-type: none"> <li>Understand, interrupt and translate complex specifications in order to deliver schemes;</li> <li>Carry out standard works to install and maintain on-street electrical equipment and associated monitoring and control</li> </ul> | <ul style="list-style-type: none"> <li>Understand, interrupt and translate some complex specifications in order to deliver the works;</li> <li>Develop innovative solutions whilst installing and maintaining more complex on-street electrical equipment, monitoring and</li> </ul> |

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|    | deliverables                                                                                                                             | <p>systems in a timely, effective and cost efficient manner;</p> <ul style="list-style-type: none"> <li>• Comply with all appropriate standards, legislation, codes of practice and other technical standards relating to on-street electrical equipment including installation standards.</li> </ul>                                                                                                             | <p>control systems;</p> <ul style="list-style-type: none"> <li>• Ensure compliance to all appropriate standards, legislation, codes of practice and other technical standards relating to on-street electrical equipment including installation standards.</li> </ul>                                                                                                                                                                                                              |
| 2. | Timely, effective and cost-efficient design of traffic control, communications and monitoring systems                                    | <ul style="list-style-type: none"> <li>• Design traffic control, communications and monitoring systems.</li> </ul>                                                                                                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>• Design traffic control communications and monitoring systems using modern and future technology.</li> </ul>                                                                                                                                                                                                                                                                                                                               |
| 3. | Investigation and rectification of faults on traffic signal and monitoring and control equipment in line with service performance levels | <ul style="list-style-type: none"> <li>• By visual and technical inspection and examination, identify defects and faults with the operation of traffic signal and control equipment;</li> <li>• Undertake remedial and repair works to ensure the equipment operates at optimal levels;</li> <li>• Undertake testing of equipment to ensure compliance with legislation and it is operating correctly.</li> </ul> | <ul style="list-style-type: none"> <li>• Identify issues, recommend and implement solutions to rectify and resolve the defects and faults identified through inspection on the operation of traffic signal and control equipment;</li> <li>• Using innovative techniques and solutions undertake remedial and repair works to ensure the equipment operates at optimal levels;</li> <li>• Ensure equipment is compliant with legislation and it is operating correctly.</li> </ul> |
| 4. | Ensure all works are undertaken in compliance with Health and Safety legislation                                                         | <ul style="list-style-type: none"> <li>• Understanding of all relevant H&amp;S standards applying to post;</li> <li>• Undertake all works in accordance with Health and Safety legislation and codes of practice;</li> <li>• Adhere to the lone working policy to ensure all works are undertaken safely;</li> <li>• Assess risks of work on the highway in accordance</li> </ul>                                 | <ul style="list-style-type: none"> <li>• Understanding of all relevant H&amp;S standards applying to post;</li> <li>• Ensure all Risk Assessments and Method Statements are accurate and reviewed regularly;</li> <li>• Be an advocate for Health and Safety and ensure all works are undertaken in accordance with Health and Safety legislation and codes of practice;</li> </ul>                                                                                                |

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|    |                                                                                                                          | <p>with relevant legislation and codes of practice;</p> <ul style="list-style-type: none"> <li>• Be an advocate for Health and Safety and ensure all works are undertaken in accordance with Health and Safety legislation and codes of practice.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>• Ensure compliance with lone working policy to ensure all works are undertaken safely;</li> <li>• Assess risks of work on the highway in accordance with relevant legislation and codes of practice.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 5. | Commissioning of traffic signals, traffic control and monitoring systems                                                 | <ul style="list-style-type: none"> <li>• Ensure the correct operation of equipment on-street and at the computer in-station.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>• Responsible for the commissioning and approval of all traffic signals, traffic control and monitoring systems including those with on-street electrical equipment.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6. | On-going operation, management and maintenance of traffic monitoring and control systems and associated computer systems | <ul style="list-style-type: none"> <li>• Investigate and analyse the operation of traffic control and monitoring systems and report on problems both on—street and within the communication and computer systems;</li> <li>• Undertake site visits to assess the correct operation of all equipment including the associated communication equipment;</li> <li>• Ensure all equipment is correctly maintained by the maintenance contractor, organising and directing works as necessary;</li> <li>• Ensure traffic signal operation is optimised to ensure that traffic flow is as efficient as possible and delays and congestion are minimised.</li> </ul> | <ul style="list-style-type: none"> <li>• Manage the Maintenance Contractor to ensure the equipment is correctly maintained by supervising, organising and directing works as necessary;</li> <li>• Investigate and analyse the operation of traffic control and monitoring systems to identify and resolve problems using initiative and innovative techniques both on—street and within the communication and computer systems;</li> <li>• Undertake site visits to assess and recommend the correct operation of all equipment including the associated communication equipment;</li> <li>• Ensure traffic signal operation is optimised to ensure that traffic flow is as efficient as possible and delays and congestion are minimised.</li> </ul> |

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| 7. | Accurate and timely records                                                                        | <ul style="list-style-type: none"> <li>• Completion of accurate inventory records and other technical information and data in accordance with the agreed procedures.</li> </ul>                                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>• Responsible for the maintenance and audit of accurate inventory records and other technical information and data in accordance with the agreed procedures.</li> </ul>                                                                                                                                                                                                                                                                                       |
| 8. | Effective communication of installation, maintenance and operation in line with project timescales | <ul style="list-style-type: none"> <li>• Communicate the results of installation, maintenance and remedial works to relevant stakeholders;</li> <li>• Attend and input into meetings with stakeholders including the Greater Manchester Districts, other public bodies, developers and contractors;</li> <li>• Develop and manage successful relationships with all stakeholders.</li> </ul> | <ul style="list-style-type: none"> <li>• Present outcomes of often complex and all schemes via the appropriate format such as a written or verbal report;</li> <li>• Communicate the results of installation, maintenance and remedial works to relevant stakeholders;</li> <li>• Represent TfGM at meetings with stakeholders including the GM Districts, other public bodies, developers and contractors;</li> <li>• Develop and manage successful relationships with all stakeholders.</li> </ul> |

|    | <b>Compulsory Outputs (COs)</b><br><i>these set out what must be achieved for the post holder to be successful in the role</i>                                                                         | <b>Key Actions</b><br><i>These set out how the COs will be achieved – the activities required.</i>                                                                                                                                                                                                                                                                                                                                                                                                               |
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| C1 | Ensure you comply with all applicable organisational legislation and policy:                                                                                                                           | <ul style="list-style-type: none"> <li>• TfGM Safety Management System (In particular section SMS 201 Roles and Responsibilities)</li> <li>• Dignity at Work Policy;</li> <li>• Risk Management</li> <li>• TfGM policies and procedures</li> <li>• Equality and Diversity Legislation</li> <li>• TfGM Vision &amp; Values</li> <li>• Act in accordance with TfGM’s behaviours and competencies</li> <li>• Chapter 8 – Working on Roadways</li> <li>• G39/1 – Working in the vicinity of DNO equipment</li> </ul> |
| C2 | Any other reasonable duties as required from time to time. The post holder will be required to work Monday to Friday 8am-4pm. There is sometimes a requirement to work unsocial hours and at weekends. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| Key Interdependencies           |                                                                                                                                                                                                                |                 |                |                |                |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------|----------------|----------------|
| <b>Key Contacts</b>             | TfGM Highways staff, Greater Manchester District clients and elected members.<br>Highways England<br>TfGM Metrolink<br>TfGM IS<br>Third-party contractors and developers<br>GM Police<br>Members of the Public |                 |                |                |                |
| <b>Direct reports</b>           | For Comms Engineer Level 2 direct work to Communications Engineer Level 1 and apprentices.                                                                                                                     |                 |                |                |                |
| <b>Budgetary responsibility</b> | None.                                                                                                                                                                                                          |                 |                |                |                |
| <b>Location</b>                 | TfGM, 2 Piccadilly Place, Piccadilly, Manchester, M1 3BG                                                                                                                                                       |                 |                |                |                |
| <b>Office Use Only</b>          | <b>Updated</b>                                                                                                                                                                                                 | <b>Updated</b>  | <b>Updated</b> | <b>Updated</b> | <b>Updated</b> |
| Created                         |                                                                                                                                                                                                                |                 |                |                |                |
| <b>By:</b> David Bland          | Angela Dobbin                                                                                                                                                                                                  | Richard Dolphin |                |                |                |
| March 2014                      | January 2015                                                                                                                                                                                                   | March 2021      |                |                |                |

| ITS Engineer<br>( <i>Knowledge, skills and experience required at selection stage</i> ) |                                                                                                                                                                                           | Level Required   |                  |
|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|
|                                                                                         |                                                                                                                                                                                           | Engineer Level 1 | Engineer Level 2 |
| <b>E</b>                                                                                | <b>Essential Experience:</b>                                                                                                                                                              |                  |                  |
| E1                                                                                      | Experience of installing, maintaining and operation of traffic signal, communication, monitoring and control equipment in the field of traffic control – or similar electronic equipment. | Basic            | Significant      |
| E2                                                                                      | Knowledge and experience of different types of traffic management operation.                                                                                                              | Basic            | Significant      |
| E3                                                                                      | Able to work to tight deadlines and meet funding, quality and operational targets                                                                                                         | Basic            | Significant      |
| E4                                                                                      | Experience of dealing with a range of contractors, suppliers, clients including members of the public                                                                                     | Basic            | Intermediate     |
| E5                                                                                      | Knowledge and awareness of the safety implications of working with electrical equipment on live carriageways                                                                              | Intermediate     | Significant      |
| E6                                                                                      | Experience of decision making and dynamic risk analysis in a fast-moving environment                                                                                                      | Basic            | Significant      |
| E7                                                                                      | Experience of maintaining computer records ensuring they are up to date and are accurate.                                                                                                 | Basic            | Intermediate     |
| E8                                                                                      | Full UK driving licence                                                                                                                                                                   | -                | -                |
| <b>D</b>                                                                                | <b>Desirable experience:</b>                                                                                                                                                              |                  |                  |
| D1                                                                                      | Project management experience; particularly in understanding project management principles, cost monitoring and control and financial management                                          | Basic            | Intermediate     |
| D2                                                                                      | Knowledge of the principals of traffic engineering                                                                                                                                        | Basic            | Intermediate     |
| <b>EQ</b>                                                                               | <b>Essential Qualifications – Technical, Vocational or educational:</b>                                                                                                                   |                  |                  |
| EQ1                                                                                     | BTech in electrical based subject or equivalent experience                                                                                                                                | Full Qual.       | Full Qual.       |
| <b>DQ</b>                                                                               | <b>Desirable Qualifications – Technical, Vocational or educational:</b>                                                                                                                   |                  |                  |
| DQ1                                                                                     | Appropriate Electrical Installation and maintenance qualifications.                                                                                                                       | Full Qual.       | Full Qual.       |
| <b>EA</b>                                                                               | <b>Essential Attributes:</b>                                                                                                                                                              |                  |                  |
| EA1                                                                                     | Experience of working well as part of a team involved in the design, installation, maintenance and operation of traffic control, monitoring and associated equipment                      | Demonstrable     | Demonstrable     |
| EA2                                                                                     | Use initiative to investigate and analyse faults and problems and develop and implement solutions                                                                                         | Intermediate     | Significant      |
| EA3                                                                                     | Effective written and verbal communication skills, to ensure causes of issues and solutions are clearly communicated to relevant stakeholders                                             | Demonstrable     | Demonstrable     |

|      |                                                                                                                                                                                             |              |              |
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| EA4  | Personal behaviour that is in line with the TfGM statement of values and behaviours                                                                                                         | Demonstrable | Demonstrable |
| EA5  | Self-motivation and personal drive to complete tasks, including whilst working at isolated locations adjacent to live traffic, to required timescales and quality standards                 | Demonstrable | Demonstrable |
| EA6  | Flexibility and ability to adapt to changing workload demands and new organisational challenges                                                                                             | Demonstrable | Demonstrable |
| EA7  | Personal commitment to ensure services are equally accessible and appropriate to the diverse needs of service users                                                                         | Demonstrable | Demonstrable |
| EA8  | The ability to work effectively and productively as part of a team responsible for the operation of traffic signals and associated equipment.                                               | Demonstrable | Demonstrable |
| EA9  | Manages time effectively in order to deliver against milestones and commitments                                                                                                             | Demonstrable | Demonstrable |
| EA10 | A commitment to deliver the agreed work plan to the timescale and standards required                                                                                                        | Demonstrable | Demonstrable |
| EA11 | The post holder will be required to work a shift pattern (early 7am-3pm or late 11am-7pm) Monday to Friday to ensure operational requirements are delivered during peak traffic conditions. | Demonstrable | Demonstrable |
| EA12 | Willingness to work outside of normal working hours to ensure operational requirements is achieved.                                                                                         | Demonstrable | Demonstrable |

- Basic: Ability to provide at least one example and an understanding of the relevant task/ principle
- Intermediate: Ability to provide more than one example and an understanding of the relevant task/ principle
- Significant: Ability to provide a number of examples and an in-depth understanding of the relevant task/ principle
- Demonstrable: Ability to provide evidence of ability to undertake the relevant task

## **Notes on progression through the career grade**

- Progression beyond the bar to the higher grade will depend on both individual competency and whether there is a business requirement to operate at the higher level. It is not automatic.
- Post holders are considered for progression where there is evidence that they meet the criteria.
- Managers should ensure that all employees affected fully understand how career grades work, how they will be assessed and what criteria and levels of performance are required.
- Managers must assess the performance of all career grade post holders on a regular basis, during one to one meetings and at their performance review. Criteria for assessments must be fair, objective and consistent with the career grades.
- A career grade is not related to performance related pay. Progression through a career grade is dependent upon an employee performing against agreed criteria and will be discussed with the line manager. To help the employee progress, training needs should be identified through the performance review process and one to one meetings.