

|   |                        |  |                       |  |
|---|------------------------|--|-----------------------|--|
| <b>Occupation:</b>                                |                        |  | <b>Apprentice:</b>    |  |
| <b>Name of Authorised Person:</b>                 | <b>First Name:</b>     |  | <b>Last Name:</b>     |  |
| <b>Date of Birth:</b>                             |                        |  |                       |  |
| <b>ECS highway electrical H&amp;S Assessment:</b> | <b>Assessment No.:</b> |  | <b>Expiry Date:</b>   |  |
| <b>Organisation:</b>                              |                        |  |                       |  |
| <b>Contracting Office:</b>                        |                        |  |                       |  |
| <b>Name of Authorising Officer:</b>               |                        |  |                       |  |
| <b>Name of Responsible Manager:</b>               |                        |  |                       |  |
| <b>NVQ Achieved Title:</b>                        |                        |  | <b>Date Achieved:</b> |  |
| <b>NVQ Unit Numbers:</b>                          |                        |  |                       |  |

|                           | NHSS8/HERS Competency & Occupations Matrix – All Sectors – Combined Part One – Common Areas        |  |         |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
|---------------------------|--|--|---------|------------------------|--------------------------------|----------------------|------------------------|------------------------|------------------------|--------------------|--------------------|-------------------|--|------------------|------------|-----------------|---------------------------|
| Competency Element Number | Competency Element Description   | Competency Element included in NVQ Certification (Y / N) | Trainee | Installation Operative | Installation Operative (Crane) | Lead Inst. Operative | Routine Mtce Operative | Mtce Op – Fault Repair | Mtce & Inst. Operative | Painting Operative | Night-time Monitor | Structural Tester | Highways Electrician / Service Operative | Tunnel Operative | Supervisor | Approved Person | Approved Person - Manager |
| Found01                   | Basic Health & Safety (incl. ECS HE H&S assessment) + M.T.   |  | M       | M                      | M                              | M                    | M                      | M                      | M                      | M                  | M                  | M                 | M  | M                | M          | M               | M                         |
| Found 01/1                | Work in Confined Spaces + M.T.   |  | X       |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| Found02                   | Lorry mounted crane – Slinger / Signaller + M.T.   |  | X       |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| Found03                   | Lorry mounted crane – Operator + M.T.  |  | X       |                        | M                              |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| Found04                   | Power Tools including hand tools + M.T.(Power Tools)   |  | X       | M                      | M                              | M                    | 2                      | M                      | M                      | M                  |                    |                   | M  |                  |            |                 |                           |
| Found05/1                 | Mobile Elevating Work Platform + M.T.  |  | X       |                        |                                |                      |                        | 3                      | 3                      | M                  |                    |                   |  |                  |            |                 |                           |
| Found05/2                 | Use of steps and ladders + M.T.  |  | X       |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| Found05/3                 | Erection of Scaffold Towers + M.T.   |  | X       |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| Found05/4                 | Accessing fixed structures at height (other than MEWPS, steps, ladders and scaffold towers) + M.T. |  | X       |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| Found06                   | Temporary Traffic Management + M.T.  |  | X       |                        | 1                              |                      | 1                      | 1                      | 1                      | 1                  |                    | 1                 | 1  |                  | 1          |                 |                           |
| Found07                   | Working in the vicinity of DNO/IDNO Equipment + M.T.   |  | X       |                        | M                              |                      |                        | M                      | M                      | M                  |                    |                   | M  |                  | 3          | 6               | 6                         |
| Inst01                    | Excavate, backfill & reinstate + M.T.  |  | X       |                        | M                              |                      |                        |                        | 1                      |                    |                    |                   |  |                  |            |                 |                           |
| Inst05                    | Install underground cables   |  | X       |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| Inst06                    | Terminate and joint cables   |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            | X               |                           |
| Inst07                    | Avoiding danger from underground services + M.T.   |  | X       |                        | M                              | M                    |                        |                        | 1                      | X                  | X                  |                   |  |                  |            |                 |                           |
| Main04/1                  | Emergency Inspection Procedures  |  | X       |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| Main07                    | Underground Cable test and repair  |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 4A                        | Electrical safety in Non-energised testing   |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 6A                        | Maintenance of Poles, Lanterns & Brackets (Equipment spec)   |  | X       |                        |                                |                      | 10                     |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| 6E                        | Maintenance of supply tails & earthing   |  | X       |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| Test01 (4C)               | Initial Electrical Inspection and Testing + M.T.   |  | X       | X                      | X                              | X                    | X                      | X                      | X                      | X                  | X                  | X                 | M  | X                |            | X               |                           |
| Test02 (6I)               | Periodic Electrical Inspection and Testing + M.T.  |  | X       | X                      | X                              | X                    | X                      | X                      | X                      | X                  | X                  | X                 | M  | X                |            | X               |                           |
| Test07                    | Inspection and Testing for the Addition or Alteration to an Installation + M.T.                    |  | X       |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| Sup01                     | Supervise teams on site  |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  | M          |                 |                           |
| Sup02                     | Set teams to work & supervise Quality, Safety & Productivity                                       |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 8/Sup05                   | CDM Awareness + M.T.   |  | X       |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 | M                         |

|  | NHSS8/HERS Competency & Occupations Matrix – All Sectors – Combined Part Two – Specialist Areas                       |  |                 |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |  |
|--|---|--|-----------------|------------------------|--------------------------------|----------------------|------------------------|------------------------|------------------------|--------------------|--------------------|-------------------|--|------------------|------------|-----------------|---------------------------|--|
| Competency Element Number  | Competency Element Description  | Competency Element included in NVQ Certification (Y / N) | Trainee         | Installation Operative | Installation Operative (Crane) | Lead Inst. Operative | Routine Mtce Operative | Mtce Op – Fault Repair | Mtce & Inst. Operative | Painting Operative | Night-time Monitor | Structural Tester | Highways Electrician / Service Operative | Tunnel Operative | Supervisor | Approved Person | Approved Person - Manager |  |
| Public Lighting – Specialist Areas                                 |   |  | Scope Selected: |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |  |
| Inst02   | Erect, remove and realign columns and other street furniture  |  | X               |                        | M                              |                      |                        |                        | M                      |                    |                    |                   |  |                  |            |                 |                           |  |
| Inst03   | Install electrical equipment and wiring only  |  | X               |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |  |
| Inst04   | Install high mast lighting  |  | X               |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |  |
| Main01   | Painting of structures + M.T.   |  | X               |                        |                                |                      |                        |                        |                        | M                  |                    |                   |  |                  |            |                 |                           |  |
| Main02   | Routine General Maintenance   |  | X               |                        |                                |                      | M                      | M                      | M                      |                    |                    |                   |  |                  |            |                 |                           |  |
| Main03   | Remove and replace components   |  | X               |                        |                                |                      |                        | M                      | M                      |                    |                    |                   |  |                  |            |                 |                           |  |
| Main04/2   | Emergency Work  |  | X               |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |  |
| Main05   | Operate raising and lowering columns  |  | X               |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |  |
| Main06   | Maintaining high mast lighting  |  | X               |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |  |
| Rep01  | Identify and replace faulty components  |  | X               |                        |                                |                      |                        | M                      | M                      |                    |                    |                   |  |                  |            |                 |                           |  |
| Rep02  | Diagnose fault on equipment and replace faulty component  |  | X               | X                      |                                |                      | X                      | X                      | X                      | X                  | X                  | X                 |  |                  |            | X               | X                         |  |
| Rep03  | Locate faults on underground cables   |  | X               | X                      |                                |                      | X                      | X                      | X                      | X                  | X                  | X                 |  |                  |            |                 |                           |  |
| Insp01   | Visual Inspection Optical Structural & Electrical   |  | X               |                        |                                |                      |                        | M                      | M                      |                    |                    |                   | M  |                  |            |                 |                           |  |
| Insp02   | Night-time monitoring   |  | X               |                        |                                |                      |                        |                        |                        |                    | M                  |                   |  |                  |            |                 |                           |  |
| Test03   | Periodic structural testing   |  | X               |                        |                                |                      |                        |                        |                        |                    |                    | M                 |  |                  |            |                 |                           |  |
| Test04   | Photometric performance testing   |  | X               |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |  |
| Traffic Sign non-electrical works / unlit signs – Specialist Areas |   |  | Scope Selected: |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |  |
| Inst02   | Erect, remove and realign columns and other street furniture  |  | X               | 9                      |                                | M                    |                        |                        | M                      |                    |                    |                   |  |                  |            |                 |                           |  |
| Main01   | Painting of structures + M.T.   |  | X               |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |  |
| Main02   | Routine General Maintenance   |  | X               |                        |                                |                      |                        |                        | M                      |                    |                    |                   |  |                  |            |                 |                           |  |
| Main04/2   | Emergency Work  |  | X               |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |  |
| S203   | Appreciation of Traffic Sign Products & associated legislation and guidance   |  | X               |                        |                                | M                    |                        |                        |                        | X                  | X                  | X                 |  |                  | M          |                 | M                         |  |
| S301.7   | Excavate & install in Embankments   |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |  |
| S501   | Erect Columns and Brackets (Posts) over 140mm dia. In multi-post foundations / Erect passively safe columns and posts |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |  |
| S501.1   | Installation of passively safe structures and equipment   |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |  |
| S512.1   | Install sign assembly up to 3 sq. m - sign plate and sign lighting unit only (excluding connection)                   |  | X               | 9                      |                                | M                    |                        |                        | M                      | X                  | X                  | X                 |  |                  |            |                 |                           |  |
| S512.2   | Install sign assembly 3-15 sq. m - sign plate and sign lighting unit only (excluding connection)                      |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |  |
| S512.3   | Install sign assembly over 15 sq. m - sign plate and sign lighting unit only (excluding connection)                   |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |  |
| S513   | Install sign assembly on gantries & overhead structures   |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |  |
| S707   | Traffic Sign performance inspection and testing   |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |  |
| Slot Cutting – Specialist Areas                                    |   |  | Scope Selected: |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |  |
| SC01   | Cut slot to specification   |  | X               | 4                      |                                | M                    |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |  |
| SC02   | Lay Cable & seal  |  | X               | 5                      |                                | M                    |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |  |
| SC03   | Repair Faulty Cable   |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |  |
| SC04   | Access to cabinet through ducts etc.  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |  |

| NHSS8/HERS Competency & Occupations Matrix – All Sectors – Combined Part Two – Specialist Areas |  |  |                        |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
|---|--|--|------------------------|------------------------|--------------------------------|----------------------|------------------------|------------------------|------------------------|--------------------|--------------------|-------------------|--|------------------|------------|-----------------|---------------------------|
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| <b>Traffic Signals – Specialist Areas</b>   |  |  | <b>Scope Selected:</b> |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| 3A  | Traffic & Pedestrian Control Principles                              |  | X                      |                        |                                |                      | M                      |                        |                        | X                  | X                  | X                 | M  |                  | M          |                 |                           |
| 5A  | Installation Techniques  |  | X                      | 8                      |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 5B  | Access to cabinet through ducts etc.                                 |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 6B  | Traffic Controller Fundamental Principles                            |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 | M  |                  |            |                 |                           |
| 6C  | Detector Fundamental Principles (Standard)                           |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 | M  |                  |            |                 |                           |
| 6F  | Urban Traffic Fundamental Principles                                 |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 6G  | Monitoring & Control Fundamental Principles                          |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 6H  | Traffic Controller Maintenance                                       |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 6J  | Detector Maintenance   |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7A  | Commissioning Procedures   |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7B  | Transmission System & Techniques Fundamentals                        |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7C  | Signal Configuration   |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7D  | Advanced Traffic Principles  |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7E  | Advanced Detector Techniques   |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7F  | Ancillary Control & Monitoring Equipment Units                       |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7G  | Monitoring Equipment Skills  |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7H  | Microprocessor Optimised Vehicle Actuated Mtce                       |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7I  | Road Transport Passenger Information Systems                         |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| <b>Communications – Specialist Areas</b>  |  |  | <b>Scope Selected:</b> |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| COM01 (6B)  | Communications. Control Fundamental Principles                       |  | X                      |                        |                                |                      | M                      |                        |                        | X                  | X                  | X                 | M  |                  |            |                 |                           |
| COM02 (6C)  | Comms. Detector Fundamental Principles                               |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| COM03A  | Comms. Installation Technique – infrastructure                       |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| COM03B  | Comms. Installation Technique – non-infrastructure                   |  | X                      | 9                      |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| COM04   | Mtce of Underground cables for Comms                                 |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| COM05   | Maintenance of specialist Comms equipment (equipment specific)       |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| COM06   | Commissioning Procedures – Comms                                     |  | X                      | X                      |                                |                      | X                      |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7B  | Transmission System & Techniques Fundamentals                        |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7G  | Monitoring Equipment Skills (equipment specific)                     |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| <b>Electric Vehicle Charging Points</b>   |  |  | <b>Scope Selected:</b> |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| EV1   | Install EV Charging Point  |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| EV2   | Connect and/or Commission EV Charging Point                          |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| EV3   | Maintain EV Charging Point   |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| <b>Other on street Highway Electrical Equipment/Terminals (not covered by other sections)</b>   |  |  | <b>Scope Selected:</b> |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| HET1  | Install Other Highway Electrical Terminal (define)                   |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| HET2  | Connect and/or Commission Other Highway Electrical Terminal (define) |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| HET3  | Maintain Other Highway Electrical Terminal (define)                  |  | X                      |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |

|   | NHSS8/HERS Competency & Occupations Matrix – All Sectors – Combined Part Two – Specialist Areas |  |                 |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
|---|---|--|-----------------|------------------------|--------------------------------|----------------------|------------------------|------------------------|------------------------|--------------------|--------------------|-------------------|--|------------------|------------|-----------------|---------------------------|
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| VMS incl. Information Signs – Specialist Areas          |   |  | Scope Selected: |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| 6C  | Detector Fundamental Principles (Standard)  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 6G  | Monitoring & Control Fundamental Principles   |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 6J  | Detector Maintenance  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| VMS01   | Installation Techniques – VMS / Info signs – Infrastructure                                     |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| VMS02   | Installation Techniques – VMS / Info signs – non-Infrastructure                                 |  | X               | 9                      |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| VMS03   | Mtce of specialist VMS equipment (equipment specific)   |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| VMS04   | Commissioning Procedures (VMS) (equipment specific)   |  | X               | X                      |                                |                      | X                      |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7B  | Transmission System & Techniques Fundamentals   |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7E  | Advanced Detector Techniques  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7F  | Ancillary Control & Monitoring Equipment Units  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7G  | Monitoring Equipment Skills (equipment specific)  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7I  | Road Transport Passenger Information Systems  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| Environmental & Monitoring Equipment – Specialist Areas |   |  | Scope Selected: |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| ME01 (6B)   | Monitoring Equipment Fundamental Principles   |  | X               |                        |                                |                      | M                      |                        |                        | X                  | X                  | X                 | M  |                  |            |                 |                           |
| ME02  | Env. & Monitoring Equip't Installation Technique - Infrastructure                               |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| ME03  | Env. & Monitoring Equip't Installation Technique – non-Infrastructure                           |  | X               | 9                      |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| ME04  | Mtce of underground cables for Env. & Monitoring equip't  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| ME05  | Mtce of specialist Env. & Monitoring Equipment (equipment specific)                             |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| ME06  | Commissioning Procedures - Environmental & Monitoring Equipment                                 |  | X               | X                      |                                |                      | X                      |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7B  | Transmission System & Techniques Fundamentals   |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| 7G  | Monitoring Equipment Skills (equipment specific)  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| Cameras – Specialist Areas                              |   |  | Scope Selected: |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| Main05  | Operate raising and lowering columns  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| CAM01   | Installation Techniques – Infrastructure  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| CAM02   | Installation Techniques – Terminate & Joint Cables  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| CAM03   | Installation Techniques – Non-Infrastructure Camera Equipment                                   |  | X               | 9                      |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| CAM04 (6A-M601a)  | Routine Optical Mtce of cameras   |  | X               |                        |                                |                      | M                      |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| CAM05 (6A)  | Maintenance of cameras  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| CAM06   | Maintenance of underground cables (incl. data cables) for Cameras                               |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| CAM07 (6J)  | Detector Maintenance  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| CAM08 (7A)  | Commissioning Procedures – Inspection, Setup & functional testing                               |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| CAM09 (7B)  | Transmission System & Techniques Fundamentals   |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| CAM10 (7F)  | Ancillary Control & Monitoring Equipment Units  |  | X               |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |

| Competency Element Number  | Competency Element Description   | Competency Element included in NVQ Certification (Y / N) | Trainee | Installation Operative | Installation Operative (Crane) | Lead Inst. Operative | Routine Mtce Operative | Mtce Op – Fault Repair | Mtce & Inst. Operative | Painting Operative | Night-time Monitor | Structural Tester | Highways Electrician / Service Operative | Tunnel Operative | Supervisor | Approved Person | Approved Person - Manager |
|--|--|--|---------|------------------------|--------------------------------|----------------------|------------------------|------------------------|------------------------|--------------------|--------------------|-------------------|--|------------------|------------|-----------------|---------------------------|
| <b>Road Tunnels (tunnel bore infrastructure &amp;/or immediate surrounds as a result of the tunnel) – Specialist Areas – Note:</b> <ol style="list-style-type: none"> <li>For Tunnel lighting, Electrical / Emergency Distribution Points (EDP) - use Public Lighting section</li> <li>For Tunnel traffic signs, VMS, SOS, Wayfinder signs – use Public Lighting / Traffic Sign / VMS sections as appropriate</li> <li>For Tunnel road loops – use Slot Cutting section</li> <li>For Tunnel traffic control signals – use Traffic Signal section</li> <li>For Emergency Roadside Telephones (ERT) – use Communications section</li> <li>For CCTV, Vehicle Accident Incident Detection (VAID), Radar – use Cameras and / or Comms sections as appropriate</li> <li>For Environmental controls (e.g. visibility, pollutants) – use Environmental &amp; Monitoring section</li> </ol> |  |  |         |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| Record for each tunnel   | Tunnel Specific Induction  |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  | M                |            |                 |                           |
| T1   | Cathodic Protection (active) - Installation Techniques                   |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T2   | Cathodic Protection (active) - Commissioning Procedures                  |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T3   | Cathodic Protection (active) - Maintenance                               |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T4   | Cross Passage Doors (non-manual) - Installation Techniques               |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T5   | Cross Passage Doors (non-manual) - Commissioning Procedures              |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T6   | Cross Passage Doors (non-manual) - Maintenance                           |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T7   | Jet Fan Control Panels - Installation Techniques                         |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T8   | Jet Fan Control Panels - Commissioning Procedures                        |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T9   | Jet Fan Control Panels - Maintenance                                     |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T10  | Photometer - Installation Techniques                                     |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T11  | Photometer - Commissioning Procedures                                    |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T12  | Photometer - Maintenance   |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T13  | Public Address System - Installation Techniques                          |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T14  | Public Address System - Commissioning Procedures                         |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T15  | Public Address System - Maintenance                                      |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T16  | Pumps (in bore infrastructure) - Installation Techniques                 |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T17  | Pumps (in bore infrastructure) - Commissioning Procedures                |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T18  | Pumps (in bore infrastructure) - Maintenance (excluding major overhauls) |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T19  | Radio Interrupt - Installation Techniques                                |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T20  | Radio Interrupt - Commissioning Procedures                               |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T21  | Radio Interrupt - Maintenance  |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T22  | Smoke Control panel - Installation Techniques                            |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T23  | Smoke Control panel - Commissioning Procedures                           |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T24  | Smoke Control panel - Maintenance  |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T25  | Ventilation - Installation Techniques                                    |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T26  | Ventilation - Commissioning Procedures                                   |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| T27  | Ventilation - Maintenance  |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| <b>Bus Shelters – Specialist Areas</b>   |  | <b>Scope Selected:</b>                                   |         |                        |                                |                      |                        |                        |                        |                    |                    |                   |  |                  |            |                 |                           |
| BS1  | Install Bus Shelter  |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| BS2  | Connect and/ or Commission Bus Shelter                                   |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |
| BS3  | Maintain Bus Shelter   |  | X       |                        |                                |                      |                        |                        |                        | X                  | X                  | X                 |  |                  |            |                 |                           |

M = Mandatory; X = Not available as an option. All blanks are available as additions. “+ M.T.” = plus mandated training. Note that where training is not mandated under HERS, this does not mean that no training is required; it is the employer's responsibility to determine what training is required for each of their employees for each such competence element. Refer to the heading and the last page of the relevant site assessment form for the course reference and to the Highway Electrical Training Specification for details of the courses and accepted alternatives.

**\*\*\*The over-riding principle of these Competency Matrices is that if a given employee carries out work which falls under any Competency Element, then the element becomes “mandatory” for them, and there must be evidence to support the claim of competency in that area. Employees must at all times at work have valid HERS cards.\*\*\***

| Key to cells containing numbers (this applies to all pages of the “Appendix 3” combined matrix):  |   |
|---|---|
| 1.  | Mandatory for Public Lighting, Traffic Signals, except where work under Found06 is entirely subcontracted to contractors registered to NHSS 12AB, C or D as appropriate |
| 2.  | Mandatory for Traffic Signals, Communications, VMS incl. Information Signs, Env. & Monitoring Equip’t unless installing underground cable only                          |
| 3.  | Mandatory for Public Lighting   |
| 4.  | Mandatory for Slot Cutting operatives carrying out slot cutting   |
| 5.  | Mandatory for Slot Cutting operatives carrying out backfilling  |
| 6.  | Mandatory for Approved Persons accessing the interior of feeder pillars, lighting columns or cabinets   |
| 7.  | Not used  |
| 8.  | Mandatory for Traffic Signal operatives carrying out pole, cabinet or signal head installations   |
| 9.  | Mandatory unless installing underground cable only  |
| 10.   | Mandatory for Public Lighting and Traffic Signals   |
| SC01 – Cut slot to specification would include, for example, Induction, Weight in Motion, Piezo and also includes the cutting of slots for Extra Low Voltage supplies to illuminated street furniture on the highway (e.g. centre islands). |   |

## Declaration by employee

As the named operative above, I confirm that the assessments undertaken to demonstrate my sector specific occupational competence have been conducted during my normal onsite works.

|               |  |                     |  |
|---------------|--|---------------------|--|
| Learner Name: |  | Learner Occupation: |  |
| Signature:    |  | Date of Signing*:   |  |

\* The date of signing this document shall be on or after the last site assessment completed within the portfolio of evidence.

## Declaration by Authorising Officer

**I hereby declare that:**

1. I accept the conditions as detailed in the HERS Handbook Guidance Notes for on-line applications and confirm that all the necessary evidence is in place
2. I have assessed the competence of the employee in the relevant common and specialist areas and against applicable competency elements in accordance with the NHSS8/HERS requirements, having added in all additional competence areas beyond the standard mandatory elements and I believe he/she is competent to carry out work in those elements marked “M” or “Y” above
3. The applicant has the relevant site assessment forms appropriate to the competency levels indicated in the standard competency criteria and sufficient onsite experience after initial training either in the highway electrical sector or an associated sector
4. The relevant competency elements have been mapped across to the NVQ gained by the employee (where so gained) with any elements not covered by the NVQ having site assessment forms and associated evidence in place including that all Highways Electrician or Service Operatives have gained or will gain an NVQ Level 3 to enable them to carry out electrical inspection and testing. Where the NVQ certification is more than five years old, additional evidence must be provided to ensure the competency elements claimed are still current.
5. The details on this form are correct to the best of my knowledge and the photograph is a true likeness of the employee
6. I accept that if I have made any false statements in this application that this may render me liable to prosecution for fraud

|  |  |
|--|--|
| Signature of Authorising Officer (for initial application for this organisation and for hard copy in portfolio): |  |
| Dated:   |  |

|   |  |
|---|--|
| Signature of Responsible Manager (for initial application for this employee for this organisation and for hard copy in portfolio) |  |
| Dated:  |  |

|  |                         |  |
|--|-------------------------|--|
| <b>Authorising Officer Details</b>                                 | AO Registration Number: |  |
| Organisation (if different to Authorised Person organisation name: |                         |  |
| Usual work address (to which the cards will be sent):              |                         |  |