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| K008 - Hand Rodding in the U/G Network | |  |
| Module ID – 1325 | |  |

About this document ...

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Content approval

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| --- |
| This is the Issue 5 of this document. |
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**Version History**

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| Version No. | Date | Author | Comments |
| Issue 5 | 21-May-2019 | Accreditation Standards Network Engineering | Document review. Links to external sources validated/updated where appropriate. Author/Approver/Publisher details amended. Change of approver. Section 8 questionnaire made multiple choice. |
| Issue 4 | 28-Nov-2018 | Accreditation Standards Network Engineering | Document review. Links to external sources validated/updated where appropriate. Module guidance updated to reflect latest safety information on COBRA rods. BT logo replaced with Openreach logo. |
| Issue 3 | 23-May-2018 | Accreditation Standards Network Engineering | Document review. Links to external sources validated/updated where appropriate. Author/Approver/Publisher details amended. Change of approver. Practical score grid added to section 7. |
| Issue 2 | 23-May-2017 | Quality Standards & & Accreditation | Document review. Links to external sources validated/updated. Author/Approver/Publisher details amended. Module guidance & NASA checklist have been aligned. |
| Issue 1 | 18-May-2016 | Quality Standards & & Accreditation | New Document |

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# Introduction

The Openreach Accreditation process is an integral part of the Openreach Network Quality Programme (OQP). It is designed to focus on the skills and knowledge of individuals who are required to work on the access network, in order to improve quality of personal workmanship.

The Accreditation process is managed on its own unique data records management system NASA, which is part of FPQ, and builds on the basic criteria that only the line manager knows what his or her people do. It is from this starting point when a manager determines a person’s skill and assigns them to that skill on NASA that the process begins.

This ISIS is reviewed and updated annually. Between reviews any changes are communicated using Access Engineering Communications (AEC).

Links to ISIS, AEC’s, Accreditation documents and other Accreditation modules can found in the

[Technical Library](https://intra.bt.com/bt/openreach/chief-engineer/network-evolution/interface-team/organisation-network_reliability_home_page/aei_library/Pages/index.aspx)

**Answers for all modules are available via the Author of the document (see above)**

In order to comply with the requirements of this Accreditation Module the Assessor must follow the procedure below

* Allow the time shown for the delegate to complete
* Explain that reference documentation can be used
* The criteria for all sections must be fulfilled in order to meet the requirements for this module

# Scope

The module target audience are engineers working on the Openreach network including BT Northern Ireland, BT Operate and External Suppliers (Contractors).

This module is an essential requirement for any Engineer/Contractor providing cables in underground ducting using Hand Rodding techniques.

It will check the delegates understanding & ability to complete cabling using the hand rodding process.

# Description

This module consists of a questionnaire and practical assessment.

Content: This assessment will test the delegate’s knowledge of and ability to install underground cables where hand rodding is the chosen option.

Duration: Questionnaire 45 minutes

Practical 4 hrs

# Measurement

Questionnaire: The delegate must get 80% or more of the answers correct.

Practical: Using the module guidance and ISIS documents for reference, the assessor will check that the delegate completes the tasks at the stages shown. The assessor must not coach more than 1 ‘c’ marking during this assessment.

Post Assessment: Enter results on [NASA](http://dyl00509app02.nat.bt.com:61138/cdsd/www_startup.startup) database

# Method

The assessor should explain to the delegate, they will need to complete

Questionnaire

The delegate must complete a written questionnaire:

Using reference documentation if required, the delegate will complete the Questionnaire. A maximum of 45mins is allowed for this exercise. An 80% minimum pass criteria is required.

Practical

The delegate will be assessed on a simulated cabling task or in a live situation using the current Quality and Technical standards.

* At the designated start Joint Box!
* In Joint Boxes on route!
* **In simulated environments** the engineer will Hand Rod a duct section and install an underground cable between a minimum of 3 surface boxes to demonstrate to the assessor they have a full understanding of the correct work practices and the required quality standards
* **A live situation** the Delegate must be able to carry out the task that they have been given using the Hand Rodding techniques to the current quality standards and practices

# Safety

1. If the delegate displays a disregard for, or lack of knowledge of safety, then STOP THE ASSESSMENT - re-assessment required - refer to –safety module for guidance

# Delegate’s Details

|  |  |
| --- | --- |
| Module No | AEI/ACC/K008 |
| Module ID | 1325 |
| Title | Hand Rodding in the U/G network |
| Date |  |
| Delegate’s name |  |
| UIN/Licence No |  |
| OUC |  |
| Assessor’s name |  |
| Assessor’s UIN |  |
| Practical | PASS/FAIL |
| Questionnaire | PASS/FAIL |
| Notes |  |

**Practical Score:**

|  |  |  |
| --- | --- | --- |
| Total C Pointers | Total Coached | Pass ≤ 30% |
| 3 |  | 1 |

**Questionnaire Score:**

|  |  |  |
| --- | --- | --- |
| Total Possible | Total Correct | Pass ≥ 80% |
| 16 |  | 13 |

# Questionnaire

|  |  |  |
| --- | --- | --- |
| No | Question | Mark |
| 1 | What type of Hand Rods are available?  A. Rods duct 1, 3, 5 and also Continuous Rods.  B. Rods duct 1, 2, 5 and also Continuous Rods.  C. Rods duct 1, 2, 4 and also Continuous Rods. |  |
|  |  | 1 |
| 2 | What reason would Hand Rods would be employed?  A. Difficult to use mechanised rodding systems or where the time involved in setting up the mechanical equipment is not justified.  B. Because the local council say they must be.  C. When duct space is less than 25mm available. |  |
|  |  | 1 |
| 3 | What are Hand Rods suitable for pulling in?  A. All cable sizes a draw rope and cabling rope.  B. All sub duct sizes a draw rope and cabling rope.  C.A draw rope, cabling rope and short lengths of light cables. |  |
|  |  | 1 |
| 4 | What sizes do short length Hand Rods come in?  A. 25mm x 1m or 2m. 6.7mm x 3m.  B.25mm x 2m or 3m. 14mm x 2m.  C. 25mm x 2m or 3m. 9mm x 2m. |  |
|  |  | 1 |
| 5 | What must you ensure when connecting sections of short length rods together?  A. All sections of rod must be the same.  B.Sections screwed fully home.  C. Must be taped together. |  |
|  |  | 1 |
| 6 | What indication on the rod is given that rods are fully connected together?  A. Arrow alignment indicator.  B. Threads are just visible.  C.The spring catch is engaged. |  |
|  |  | 1 |
| 7 | What tool is used when disassembling short length rods?  A. Pliers 1A.  B.Pliers Rods Sweep.  C. Pliers rod disassemble No 3. |  |
|  |  | 1 |
| 8 | There are 3 versions of CBS Orange continuous rod. What are their diameters?  A 6.7mm. 9mm. 14mm.  B. 6.9mm. 9mm. 25mm.  C. 6.8mm.9mm.14mm. |  |
|  |  | 1 |
| 9 | What must be fitted at the leading end of short length hand rods 1 & 2?  A Cable fixing 1A.  B. Adapter rod 6A.  C.Combined Leader/Follower (C/L/F). |  |
|  |  | 1 |
| 10 | What adapter rod is used to marry to a duct motor?  A.Adaptor rod 2A or 3A depending on end.  B Adapter rod 5.  C. Adapter rod 7. |  |
|  |  | 1 |
| 11 | What attachment is fitted to the leading end of Hand rod 5?  A. Attachment 1A to male end of rod, Attachment 2A to female.  B. Attachment 1A to Female end of rod, Attachment 2A to male.  C. Attachment rod 3A to male end of rod, Attachment 4A to male. |  |
|  |  | 1 |
| 12 | What is used to connect Hand rods 1 or 2 to Hand rod 5?  A.Adaptor rod 7.  B. Adapter rod 1A.  C. Adapter rod 5. |  |
|  |  | 1 |
| 13 | What piece of equipment is used to extend the duct outside the joint box to aid hand rodding?  A. Kopex.  B. Swept tee duct.  C. Guide rod flexible. |  |
|  |  | 1 |
| 14 | What must you **not** do if an obstruction is encountered when hand-rodding?  A, Add more rods.  B. Hammer end of rod to break through obstruction.  C. Repeatedly ram the obstruction. |  |
|  |  | 1 |
| 15 | There are 2 versions of RiteLite yellow continuous rod. What are their diameters?  A. 6.7mm and 9mm.  B. 6mm and 9mm.  C. 9mm and 14mm. |  |
|  |  | 1 |
| 16 | Can the RiteLite rods be spliced repaired?  A. Yes  B. No. It must be returned for replacement. |  |
|  |  | 1 |

# Module Guidance

|  |  |
| --- | --- |
| Assessment Pointer |  |
| Trained /Skilled |  |
| Delegate has completed relevant training to enable the installation of U/G cable using Hand Rodding Techniques. | X |
| Questionnaire completed with a score of 80% or above | X |
| Personal Protective Equipment (PPE) |  |
| Personal safety equipment available - Gloves, Eye shields, Helmet etc. used correctly where and when required. | X |
| Safety/Security |  |
| Site set up to the current safety standards using the correct safety equipment. (Gas Test Work point correctly guarded, plant protected from weather and o/s interference etc ) | X |
| Tools & Equipment |  |
| Delegate has the correct tools and equipment and they are in good order to complete the task to the current work practices and quality standard. | X |
| Tools and equipment used correctly and safely | X |
| **Joint Box Plant** |  |
| Care taken not to cause any damage to existing plant in Joint Boxes | X |
|  |  |
| Installation of U/G cable/BFT using sectional Hand Rods |  |
| Rodding position Set-up correctly (Rodding from outside joint box) | X |
| Correct fittings used on Rod ends | X |
| Rods connected together correctly | C |
| Cable Installed into underground ducts using hand rodding techniques  (Draw rope used if cable larger Diameter than rods.) | X |
| Grip used and attached to rods/rope correctly | X |
| Installed in short lengths. | X |
|  |  |
| Installation of U/G cable/BFT using Continuous Rod |  |
| Rodding position Set-up correctly ( depending on access ) | X |
| All **COBRA rod** equipment is to be inspected and if there’s damage - **do not use it.**  Check the retained end of the **COBRA rod is** installed correctly and securely taped in its housing using insulating tape.  Always check before using that the retained end is **still in place** and cannot work loose. | X |
| The Rod has a protective end fitted | C |
| The rod passes through an eye that will not allow the rod to unravel | C |
| The cage has a working braking system | X |
| Cable Installed into underground ducts using hand rodding techniques | X |
| Installed in short lengths. | X |

# References

[Technical Library](https://intra.bt.com/bt/openreach/chief-engineer/network-evolution/interface-team/organisation-network_reliability_home_page/aei_library/Pages/index.aspx)

END OF DOCUMENT