

Guidance Note

G0115 Civil Engineering Competence Management System Framework. (Formerly PR-31950)

Issue No.: A2

Issue date: June 2014

Review date: June 2017

MAYOR OF LONDON

Contents

1	Purpose	3
2	Scope	3
2.1	General	3
3	Organisation & Key Responsibilities	3
3.1	Civil Engineering Competency Assurance and Quality Manager	3
3.2	Civil Engineering Professional Heads	4
3.3	Employing (Line) Managers	4
3.4	LU Civil Engineering Safety Critical Licensing (SCL) Administrator	4
3.5	Internal Verifier (D34 or V1)	4
3.6	Competence Assessors (A1 or D32/33)	4
4	Requirements	5
4.1	General	5
4.2	Assessment Systems	5
4.3	Training	6
4.4	Workplace Assessment	6
4.5	Re-Assessment	6
4.6	Assessment Guidance Notes	6
4.7	Assessor Competence	6
4.8	Induction, Training and Continuing Development of Assessors	7
4.9	Assessor Authorisation	7
4.10	Verification	7
4.11	Evidence Requirements	7
4.12	Knowledge Evidence	8
4.13	Types and Sources of Evidence	8
4.14	Employee's performance & competence	8
4.15	Certification of Competence	11
4.16	Disputes and appeals	11
5	Safety Critical Activities requirements	12
5.1	General	12
5.2	Safety Critical Activities	14
5.3	Safety Critical Activities – Process	14
5.4	Outputs	15
5.5	Periodicity	15
6	Verification	15
6.1	Verification – Internal	15
6.2	Verification – External/Suppliers	16
6.2.1	External/Suppliers Process	17
7	Supporting information	18
7.1	Supporting Documents and Process	18
7.2	Legislation	18
8	References	19
8.1	References	19
8.2	Abbreviations	19
8.3	Definitions	19
8.4	Person accountable for the document	20
8.5	Document history	20
9	Appendix 1 General Forms	21
10	Appendix 2 SCL and Competence Certificate Process	22

1 Purpose

1.1 This is a guidance framework document with the purpose of implementing the competency requirements from the Railway and Other Guided Transport Systems (Safety Regulations) 2006 (ROGS) and the relevant London Underground Standards..

London Underground (Civil Engineering) will ensure that it discharges its responsibilities with regard to the safe and effective operation of its activities by putting in place systems for managing the competence of its employees. The Civil Engineering Competence Management System (CCMS) is based on the guidance of the Office of the Rail Regulator. (Railway Safety Publication 1- Developing and Maintaining Staff Competence)

Competence requirements of staff will, wherever possible, be measured against National Standard Units of Competence. Where no appropriate national standard unit exists, local standard units will be created or customised..

Compliance with the CCMS as described in the in this document will ensure compliance with Railways & Other Guided Transport Systems (Safety) Regulations 2006 (ROGS), Railway Safety Publication 1- Developing and Maintaining Staff Competence (ORR), and London Underground (LU) Category 1 Standard [S1548](#) . It will also ensure compliance with London Underground (LU) Cat 2 standard [S-CV-0010](#) (Competence Requirements for Allowing the Continued use of Civil Engineering Assets in Passenger Service)

2 Scope

2.1 General

This document describes how the competence management of employees in London Underground engaged in Civil Engineering delivery activities is established and controlled in a logical and integrated manner especially in relation to the safety impact of their duties and responsibilities in operations within the Company.

London Underground will encourage and support membership of a professional body as part of professional development and a measure of competence.

Records detailing the outcome of the competence assessment process for each individual will be kept at a secure location and maintained to ensure their currency.

London Underground Civil Engineering procurement processes should ensure that Suppliers have competency management systems equivalent to the LU CCMS

3 Organisation & Key Responsibilities

3.1 Civil Engineering Competency Assurance and Quality Manager

It is the responsibility of the Civil Engineering Competency Assurance and Quality Manager to:

- Define the quality management, processes, methods, objectives and outcomes for the CCMS
- Develop the underpinning work instructions and methods of communication.
- Ensure assessors have ongoing support and their approaches are standardised and updated as necessary.



- Ensure that the assessment records can be verified and audited.
- Ensure that those who have a role in the CCMS understand their responsibilities..

3.2 Civil Engineering Professional Heads

It is the responsibility of the Civil Engineering Professional Heads to:

- Ensure Civil Engineering competency standards are adequate to control identified risks, relevant for the activity within the LU railway operating environment
- Approve the underpinning standards,, work instructions and assessment criteria used in the CCMS

3.3 Employing (Line) Managers

It is the responsibility of the Employing Managers to:

- Ensure that staff only perform activities they are competent to carry out
- Ensure only suitably licensed personnel carry out safety critical tasks.
- Identify Civil Engineering staff who are required to be competency assessed by the CCMS.
- Implement CCMS standards, and processes .

3.4 LU Civil Engineering Safety Critical Licensing (SCL) Administrator

- Issue a Safety Critical Licence in accordance with the defined process and record the details
- Ensure that SCL records are kept in a secure central location for the required period and are available in accordance with LU Competence Assurance Standard S1548.

3.5 Internal Verifier (D34 or V1)

It is the responsibility of the Internal Verifier to:

- Co-ordinate and monitor the performance of assessors to ensure uniform application of the competency assessment throughout the LU Civil Engineering.
- To keep a database of all assessors.
- Provide guidance and training to assessors.
- To verify sample assessments in terms of completeness, feedback, authenticity and compliance with CCMS standards and process.
- To issue a numbered Internal Verification report on competency assessments which have been verified.
- To record all assessments on a database
- Pass assessments whether or not verified to the Employing manager of the candidate.
- .
- Manage and co-ordinate the CCMS Disputes and Appeals Procedure.

3.6 Competence Assessors (A1 or D32/33)

It is the responsibility of the Competence Assessors to:

- Apply the assessment and acceptance criteria and determine the competence level of all identified staff giving decision and feedback in accordance with CCMS processes.

- Produce auditable records of the assessment process and record the outcome of individual assessments
- Inform the candidate's Line Manager of the outcome of the competence assessment.

4 Requirements

4.1 General

- 4.1.1 Following Recruitment and selection, individuals shall undertake initial training needs assessment to identify relevant training in accordance with the LU Performance and Development process. 4.1.2 Those staff already assessed as competent will be monitored to ensure that their skills and competence is maintained.
- 4.1.2 All assessments and records will maintained and kept in as secure location.
- 4.1.3 All training and assessments will confirmed through certification. All original certification will be retained by staff assessed and copies kept securely by the Competency Assessor
- 4.1.4 Typical forms and details of assessments, records, certifications, etc. are included in Appendix 1.

4.2 Assessment Systems

Each candidate must be assessed against the requirements of the relevant standard of competence and as a minimum the assessment system shall provide for:

- a) Assessment of competence;
- b) Review and /or re-assessment of competence, based on priorities which relate to risk associated with:-
 - performance which does not meet the standard required for work;
 - infrequent performance of the work;
 - changes to safety requirements, procedures or working practices;
 - the expiry date of the certificate of competence,
 - the provision of persons who are competent and authorised to carry out assessments
 - This requires:
 - a system for recording and maintaining records of the competence of each person assessed,
 - the identification of the type of work which each person is to be assessed as competent to perform,
 - recording of the date(s) of assessment and the name of the assessor,
 - expiry date of certification to which the assessment relates,
 - verification of the competence process

4.3 Training

The training strategy contained in the CCMS will address candidate training and development needs in order to:

- a) Remedy any deficiencies in competence identified through assessment against the applicable standards of competence.
- b) Raise a candidate's skills, knowledge, and abilities to a level where he or she may be assessed against applicable standards of competence.

4.4 Workplace Assessment

Assessment decisions shall only be made following the generation and collection of evidence from the candidate's normal workplace. Candidates who undertake a programme of relevant training and development shall return to their normal workplace to gain experience and generate workplace evidence relating to the activities to be assessed. Certificates of competence will not be issued on the basis of training course completion unless a competence based assessment process has been included as part of the training process.

The length of time required by candidates to gain the necessary experience and evidence prior to the assessor making an assessment decision will depend upon:

- The opportunity to undertake the activities;
- The quality of the sources of evidence selected;

The assessor shall ensure that both his/her own safety and the safety of the candidate are maintained at all times.

4.5 Re-Assessment

Persons undertaking civil engineering safety critical activities are reviewed against performance criteria prior to the expiry of the or Safety Critical License periodicity which will normally be 3 (three) years.

4.6 Assessment Guidance Notes

These guidance notes have been developed to assist in the competency assessment process.

The guidance notes enable the assessor to link evidence directly to the relevant standard of competence so that it is easier to judge whether there is enough, good quality evidence to make an assessment decision.

4.7 Assessor Competence

All assessments and re-assessments shall be carried out by a competent and authorised Civil Engineering Competency Assessor. The appointment of an assessor will be made by the Head of Department or Professional Head of the discipline within which the assessor will operate. The criteria for certification and authorisation as an assessor are as follows:

- a) The assessor should have sufficient expertise in the work activities which he or she is required to assess. The level of competence required will be determined by the person authorised to make the appointment taking due regard of the knowledge, qualifications and experience held by the assessor candidates which would allow them to establish the competence of candidates working within the discipline they have been nominated to assess.

- b) Evidence of competence as a workplace assessor, as exemplified by the standards of competence defined in the National Vocational Qualification (NVQ) A1 (or D32/33). The evidence shall provide proof that the assessor understands and can put into practice the requirements of the assessment systems required by the London Underground Civil Engineering.

Each competence assessor will be issued with a certificate which will indicate the standards of competence for which he/she is permitted to carry out assessment.

4.8 Induction, Training and Continuing Development of Assessors

At the point of nomination it will be established that the prospective assessor fulfils the technical experience requirements of the assessor role.

The prospective assessor will then receive induction in the form of a briefing from an Internal Verifier or designated Lead Assessor. This briefing will cover the duties and responsibilities of an Assessor practical guidance in conducting assessments. The briefing will cover human aspects such as; environment, privacy, integrity, diplomacy and empathy. The tools for assessing will be issued and discussed along with the processes which are employed by the CCMS to establish the competence of their staff.

The prospective assessor will be trained in assessment skills to the level of NVQ A1 (or D32/33). standard by attending an appropriate training course. The assessor will undergo an assessment as to his/her readiness to carry out the function and will be certificated accordingly by an awarding body (e.g. C&G, CITB)

Having achieved the A1 Qualification, the assessor will then be mentored through the CCMS processes.

4.9 Assessor Authorisation

A list of competent assessors and the standards of competence which they are authorised to assess shall be maintained by the Civil Engineering Competency Assurance and Quality Manager.

4.10 Verification

See Section 6.0

4.11 Evidence Requirements

4.11.1 Performance Evidence

The Assessment Checklists specify what forms and quantity of performance evidence shall be presented for each element.

There are two types of performance evidence:

- a) Products of the candidate's work - items that the candidate produces or works on, or documents produced as part of the activity. The evidence may be in the form of a report, records, or photographs generated as part of the work, and collated in the form of a candidates portfolio of evidence.
- b) Evidence of the way the candidate carried out activities - evidence of the candidate undertaking the activities required to demonstrate competence. This takes the form of assessor observation, authenticated candidate testimonies of the activity, witness testimonies, or accreditation of prior learning where the candidate can demonstrate that

the required standard has been met in the recent past (previous 24 months).

4.12 Knowledge Evidence

The knowledge evidence section contained in each element of the standards of competence specifies the knowledge and understanding necessary for competent performance. Knowledge is about knowing what should be done, how it should be done, why it should be done and what should be done if circumstances change. Knowledge evidence can also be used to achieve coverage of contingencies and items of range that are not covered by performance evidence.

Knowledge evidence shall be collected for all of the items listed under the knowledge evidence required for each element. Evidence of an individual's knowledge can be drawn from formal written, oral or electronic multiple choice tests, informal questioning in the workplace, and directly from performance evidence. Where this is not implicit in the candidate's performance, evidence shall be supported by the collection of knowledge evidence such as questioning or candidate reports.

4.13 Types and Sources of Evidence

Assessment of competence must be made using the following range of types of evidence:

- a) Direct observation of candidate performance in the normal work environment carrying out naturally occurring activities. Some evidence shall be provided in this way unless it is not reasonable practicable or it is considered to be unsafe to do so;
- b) Direct observation of candidate performance in a training or other environment away from the workplace carrying out simulated activities;
- c) Written questions both multiple choice or short answer;
- d) Oral questions, both ad hoc and from prepared lists;
- e) Candidate testimonies and statements;
- f) Products of the candidate's work;
- g) Accreditation of prior learning;

To be considered valid all evidence must be recorded in a manner which is readily verifiable. It is the assessor's responsibility to ensure that the evidence presented is a product of the candidates own work, is up-to-date, and that different sources of evidence are consistent. All assessments will be subject to Internal Verification.

4.14 Employee's performance & competence

New Starters – New employees in safety critical roles will be assessed by a competent person during the first six months of their employment.

Employee's performance & competence should be continuously monitored and reported at least once per year. The Overall competence must be reviewed and /or assessed at least once every 3 years. However, if during that time an employee's job changes they will need to be reassessed against new activities.

Assessment activities need to be undertaken by assessors who are deemed competent as each job role will require different capabilities from their assessors. The relevant