



Qualification Manual

Qualification title: EAL Level 4 NVQ Diploma in
Business-Improvement Techniques

Qualification code: 600/0297/9

Issue: B

EAL Level 4 NVQ Diploma in Business-Improvement Techniques - Issue B

www.eal.org.uk

Copyright © 2013 EAL (Excellence, Achievement & Learning Limited). All Rights Reserved.



Contents

Contents.....	1
1.0 About EAL	3
2.0 Achievement of the qualification	4
3.0 Centre and qualification approval	5
4.0 Qualification specific information	6
5.0 Assessment strategy	10
5.1 Learners	10
5.2 Assessors.....	10
5.3 Internal verifier role and requirements.....	11
5.4 External verifier role and requirements	12
5.5 Technical requirements for assessors, internal and external verifiers	13
5.6 Assessment environment	14
5.7 Planning and carrying out the assessment	15
5.8 Witness testimony	15
5.9 Assessment evidence requirements	16
6.0 About the NVQ units.....	18
Appendix 1: Learner registration and certification.....	19



1.0 About EAL

Since 1964, EAL (**Excellence, Achievement and Learning**) has been awarding superior vocational qualifications and apprenticeship components for engineering, building services and related sectors.

Developed to the highest technical standard, our qualifications are regularly updated to reflect regulatory and technical changes. We support the providers of our qualifications with an unparalleled level of service to ensure that learners are well prepared for the roles they plan to take on.

EAL recognise the value of skills in the work environment as one of the five key drivers of productivity; essential for economic growth and bringing a number of wider social benefits. Through its programme of continuous improvement EAL strives to meet the demand from employers for high performing, high quality products.

In 2012, EAL changed its name from EMTA Awards Limited to **Excellence, Achievement and Learning**, to better reflect its wide reaching position across industry – providing qualifications, not only in Engineering and Manufacturing, but also specialising in Building Services Engineering, Gas Utilisation, Environmental Technologies, Business Services and closely related sectors.

1.1 Equality and diversity statement

EAL expects its centres to enable individuals to have equal access to training and assessment for qualifications irrespective of their sex, marital status, age, religion, colour, race, nationality, ethnic origin or disability. In essence, centres must deliver our qualifications and units in accordance with relevant Equalities Legislation.

Centres are required to have in place a policy to ensure that such discrimination does not occur either directly, indirectly or as a result of pressure from other bodies. This policy should apply to all satellite centres and there should be arrangements in place to monitor its application and effectiveness.

1.2 Complaints

Customer service is a fundamental part of EAL's commitment to industry. Our long-term partnership with industry and recognised centres – which is underpinned by our unique external verification service and world class customer service – means our support is based on unrivalled understanding of our customers' needs.

EAL aims to ensure that all customers receive a high quality and efficient service and we continually monitor the levels of service provided. There may be times, however, when you may feel that we have not provided an adequate service.

In these situations, please contact our customer services team:

EAL Customer Services

Tel: +44 (0)1923 652 400

Email: customercare@eal.org.uk



2.0 Achievement of the qualification

This qualification is achieved when all the necessary units have been completed. The centre will then be able to apply for the learner's NVQ certificate of achievement. The learner will also receive a certificate of unit credit, listing all the units they have achieved.

However if learners do not complete the full qualification they have been registered on they can still claim a certificate of unit credit for the units achieved. This will mean that learners will still have proof of their ability and could complete the full qualification at a later date.

Units can also be taken individually (stand alone units). This manual must be used in conjunction with the delivery and assessment of any individual units to ensure that assessment requirements and methodologies are consistently applied.

There are various other qualifications which this qualification could relate to. Details on these can be obtained from the [EAL website](#) or alternatively contact:

EAL Customer Services
Tel: +44 (0)1923 652 400
Email: customercare@eal.org.uk

2.1 Qualification support materials

The following assessment support materials are available for this qualification:

- **Assessment routes:**
These contain the details of the nationally recognised units. These documents allow both the learner and the assessor to record the progress through the qualification selected. The assessment routes contain the performance to be assessed, the knowledge to be assessed and the evidence required from the learner to demonstrate their competence.
- **Learner guide (including performance assessment plan and evidence record):**
This guide explains to the learner how they will be assessed, and also gives ideas for evidence. It can be given to the learner during induction to help them understand the qualification and assessment requirements.

2.2 Funding for this qualification

EAL accredits qualifications via regulatory bodies. The regulatory bodies then pass the information to the relevant funding agencies. Once funding is available, centres will be able to check and register against the learning aim to ensure funding is drawn down. If you are unsure whether funding is available, the first point of contact should be via your internal funding system, or alternatively contact EAL for information.



3.0 Centre and qualification approval

Centres wishing to run this qualification will need to comply with this qualification manual and EAL's centre approval criteria for this qualification. Centres must also put in place the appropriate physical and human resources and administration systems to deliver the qualification effectively.

For *existing* EAL centres to put this qualification on your centre remit:

To add this qualification to your centre qualification remit, create and complete a qualification approval application form in Smarter Touch and submit to EAL.

For *non* EAL centres to gain centre approval to run this qualification:

EAL Customer Services will be pleased to help. Please contact them on:

EAL Customer Services

Tel: +44 (0)1923 652 400

Email: customercare@eal.org.uk

4.0 Qualification specific information

Rule of combination (qualification structure)

The qualification is obtained by following either one of two available pathways. The learner is required to complete the mandatory assessment routes and the appropriate number of optional assessment routes.

EAL Level 4 NVQ Diploma in Business-Improvement Techniques

Pathway: Process Improvement - NVQ Number: 600/0297/9PRO

The learner is required to complete the **six** mandatory assessment routes plus **one** of the optional assessment routes and **five** further optional assessment routes of which **three** may come from the Quality Improvement pathway.

Mandatory assessment routes: **all** must be completed

EAL code		Assessment route title	Level	CV	GLH	Ofqual code
QBIT2/001	■	Complying with statutory regulations and organisational safety requirements	2	5	35	A/601/5031
QBIT4/002	■	Leading effective teams	4	9	25	L/600/5389
QBIT4/003	■	Carrying out project management activities	4	10	28	H/600/5396
QBIT4/004	■	Leading workplace organisation activities	4	10	25	F/600/5406
QBIT4/005	■	Leading continuous improvement (Kaizen) activities	4	14	32	M/600/5420
QBIT4/006	■	Leading the development of visual management systems	4	9	25	M/600/5434

Optional assessment routes: plus **one** of the following:

QBIT4/007	■	Leading the creation of flexible production and manpower systems	4	7	25	K/600/5447
QBIT4/008	■	Leading problem solving activities	4	8	25	T/600/5466

Optional assessment routes: choose **five** more assessment routes of which **three** may be chosen from the Quality Improvement pathway.

Note: whichever assessment route is chosen from above (i.e. QBIT4/007 or QBIT4/008), it cannot then be chosen again as one of the optional assessment routes below.

QBIT4/007	■	Leading the creation of flexible production and manpower systems	4	7	25	K/600/5447
QBIT4/008	■	Leading problem solving activities	4	8	25	T/600/5466

QBIT4/009	■	Leading an analysis and selection of parts for improvement	4	14	32	T/600/5483
QBIT4/010	■	Leading lead time analysis activities	4	9	25	K/600/5528
QBIT4/011	■	Leading value stream mapping (VSM) activities	4	13	32	M/600/5563
QBIT4/012	■	Leading set-up reduction activities	4	14	32	T/600/5614
QBIT4/013	■	Leading total productive maintenance (TPM) activities	4	11	32	H/600/5639
QBIT4/014	■	Leading the carrying out of statistical process control (SPC) procedures	4	8	25	J/600/5665
QBIT4/015	■	Leading flow process analysis activities	4	14	32	R/600/5684
QBIT4/016	■	Leading policy deployment (Hoshin Kanri) activities	4	9	25	R/600/5698
QBIT4/017	■	Leading value management (value engineering and value analysis) activities	4	11	32	A/600/5713
QBIT4/018	■	Leading potential failure modes and effects analysis (FMEA) activities	4	9	25	L/600/5733
QBIT4/019	■	Leading measurement system analysis (MSA) activities	4	9	25	R/600/5748
QBIT4/020	■	Carrying out design of experiments (DOE)	4	9	25	L/600/5862
QBIT4/021	■	Leading mistake/error proofing (POKA YOKE) activities	4	9	25	K/600/5867
QBIT4/022	■	Applying quality function deployment (QFD)	4	9	25	J/600/5875
QBIT4/023	■	Leading the creation of standard operating procedures	4	8	25	F/600/5888

EAL Level 4 NVQ Diploma in Business-Improvement Techniques

Pathway: Quality Improvement - NVQ Number: 600/0297/9QUA

The learner is required to complete the **eight** mandatory assessment routes plus **three** optional assessment routes where **two** of these could come from the Process Improvement pathway plus **two** more optional assessment routes where **one** of these could come from the Process Improvement pathway.

Mandatory assessment routes: **all** must be completed

EAL code		Assessment route title	Level	CV	GLH	Ofqual code
QBIT2/001	■	Complying with statutory regulations and organisational safety requirements	2	5	35	A/601/5031
QBIT4/002	■	Leading effective teams	4	9	25	L/600/5389
QBIT4/003	■	Carrying out project management activities	4	10	28	H/600/5396
QBIT4/014	■	Leading the carrying out of statistical process control (SPC) procedures	4	8	25	J/600/5665
QBIT4/018	■	Leading potential failure modes and effects analysis (FMEA) activities	4	9	25	L/600/5733
QBIT4/024	■	Leading the application of Six Sigma methodology to a project	4	14	32	D/600/5896
QBIT4/025	■	Leading Six Sigma process mapping activities	4	14	32	T/600/5905
QBIT4/026	■	Leading the carrying out of basic statistical analysis	4	10	25	T/600/5919

Optional assessment routes: choose **three** assessment routes of which **two** may be chosen from the Process Improvement pathway.

QBIT4/019	■	Leading measurement system analysis (MSA) activities	4	9	25	R/600/5748
QBIT4/020	■	Carrying out design of experiments (DOE)	4	9	25	L/600/5862
QBIT4/021	■	Leading mistake/error proofing (POKA YOKE) activities	4	9	25	K/600/5867
QBIT4/027	■	Leading the application of Six Sigma metrics to a project	4	9	25	Y/600/5931
QBIT4/028	■	Leading the production of a characteristic selection matrix	4	9	25	R/600/5944
QBIT4/029	■	Leading the carrying out of capability studies	4	14	32	L/600/5957
QBIT4/030	■	Leading the production of multi variance charts	4	9	25	A/600/5971
QBIT4/031	■	Leading hypothesis testing activities	4	9	25	K/600/5982

Optional assessment routes: choose **two** more assessment routes of which **one** may be chosen from the Process Improvement pathway.

QBIT4/022	■	Applying quality function deployment (QFD)	4	9	25	J/600/5875
QBIT4/032	■	Carrying out evolutionary operations (EVOP)	4	9	25	R/600/5989
QBIT4/033	■	Applying central limit theorem and confidence intervals	4	9	25	K/600/6002
QBIT4/034	■	Producing Taguchi linear graphs	4	9	25	H/600/6029
QBIT4/035	■	Applying response surface methodology	4	9	25	A/600/6036

5.0 Assessment strategy

Please refer to your EAL centre guidance alongside this section.

5.1 Learners

If applicable – learners undertaking qualifications must meet any applicable entry requirements including, entry qualifications, legal requirements of the process or the environment, or any other specific restrictions. Where these exist, assessment will be open to any learner who has met entry requirements) and has the potential to achieve the assessment criteria set out in the assessment routes.

Aids or appliances, which are designed to alleviate disability, may be used during assessment, providing they do not compromise the standard required.

5.2 Assessors

Assessment must be carried out by competent assessors that as a minimum must hold the Level 3 Award in Assessing Competence in the Work Environment. Current and operational assessors that hold units D32 and/or D33 or A1 and/or A2 as appropriate to the assessment being carried out, will not be required to achieve the Level 3 Award as they are still appropriate for the assessment requirements set out in the qualification's unit assessment strategy. However, they will be expected to regularly review their skills, knowledge and understanding and where applicable undertake continuing professional development to ensure that they are carrying out workplace assessment to the most up to date national occupational standards.

Assessor technical requirements

Assessors must be able to demonstrate that they have verifiable, relevant and sufficient technical competence to evaluate and judge performance and knowledge evidence requirements as set out in the B-IT assessment route learning outcomes and associated assessment criteria. This will be demonstrated either by holding a relevant technical qualification or by proven industrial experience of the technical areas to be assessed. The assessor's competence must, at the very least, be at the same level as that required of the learner(s) in the assessment routes being assessed.

See the table in Section 5.5 which shows the technical competence for assessors, internal verifiers, and external verifiers.

Assessors must also be:

Fully conversant with EAL's assessment recording documentation used for the Business-Improvement Techniques NVQ assessment routes against which the assessments and verification are to be carried out and with other relevant documentation and system and procedures to support the quality assurance process.

5.3 Internal verifier role and requirements

Internal quality assurance (internal verification) must be carried out by competent persons that as a minimum must hold the Level 4 Award in the Internal Quality Assurance of Assessment Processes and Practices. Current and operational Internal Verifiers that hold internal verification units V1 or D34 will not be required to achieve the Level 4 Award as they are still appropriate for the verification requirements set out in the qualification's unit assessment strategy. Verifiers must be familiar with, and preferably hold, one of the recognised assessor units as detailed above in Section 5.2.

Persons carrying out the role of internal quality assurance will be expected to regularly review their skills, knowledge and understanding and where applicable undertake continuing professional development to ensure that they are carrying out workplace quality assurance (verification) of assessment processes and practices to the most up to date national occupational standards.

Persons carrying out the role of internal quality assurance, will also be expected to be fully conversant with the terminology used in the NVQ assessment routes against which the assessments and verification are to be carried out, the appropriate Regulatory Body's systems and procedures and EAL's documentation, systems and procedures within which the assessment and verification is taking place.

Specific technical requirements for persons undertaking the role of internal quality assurance

Persons undertaking the role of internal quality assurance of the Business-Improvement Techniques NVQ qualification or individual assessment routes must be able to demonstrate that they have verifiable, sufficient and relevant business experience in the occupational area, and must have a working knowledge of the processes, techniques and procedures that are being used where the business improvement has been implemented.

See the table in Section 5.5 which shows the technical competence for assessors, internal verifiers, and external verifiers.

5.4 External verifier role and requirements

External quality assurance (external verification) must be carried out by competent persons that as a minimum must hold the Level 4 Award in the External Quality Assurance of Assessment Processes and Practices. Current and operational External Verifiers that hold external verification units V2 or D35 will not be required to achieve the Level 4 Award as they are still appropriate for the verification requirements set out in the qualification's unit assessment strategy. Verifiers must be familiar with, and preferably hold, one of the recognised assessor units as detailed above in Section 5.2.

Persons carrying out the role of external quality assurance will be expected to regularly review their skills, knowledge and understanding and where applicable undertake continuing professional development to ensure that they are carrying out workplace quality assurance (verification) of assessment processes and practices to the most up to date national occupational standards.

Persons carrying out the role of external quality assurance, will also be expected to be fully conversant with the terminology used in the NVQ assessment routes against which the assessments and verification are to be carried out, the appropriate Regulatory Body's systems and procedures and EAL's documentation, systems and procedures within which the assessment and verification is taking place.

Specific technical requirements for persons undertaking the role of external quality assurance

Persons undertaking the role of external quality assurance of the Business-Improvement Techniques NVQ qualification or individual assessment routes must be able to demonstrate that they have verifiable, sufficient and relevant business experience in the occupational area, and must have a working knowledge of the processes, techniques and procedures that are being used where the business improvement has been implemented.

See the table in Section 5.5 which shows the technical competence for assessors, internal verifiers, and external verifiers.

5.5 Technical requirements for assessors, internal and external verifiers

Role	Prime activity requirements	Support activity requirements	Technical requirements (see notes)
Assessment	Assessment of occupational competence	Quality assurance systems	Technical competence of the areas covered by the qualifications
Internal quality assurance	Quality assurance	Assessment knowledge	Technical understanding of the areas covered by the qualifications
External quality assurance	Quality assurance	Assessment Understanding	Technical awareness of the areas covered by the qualifications

Notes:

1. Technical **competence** is defined here as a combination of practical skills, knowledge, and the ability to apply both of these, in familiar and new situations, within a real working environment.
2. Technical **understanding** is defined here as having a good understanding of the technical activities being assessed, together with knowledge of relevant health & safety implications and requirements of the assessments.
3. Technical **awareness** is defined here as a general overview of the subject area, sufficient to ensure that assessment and portfolio evidence are reliable, and that relevant health and safety requirements have been complied with.
4. The competence required by persons undertaking assessment, internal and external quality assurance, in the occupational area being assessed, is likely to exist at three levels as indicated by the shaded zones in the following table:

Technical Competence:	An ability to discuss the general principles of the competences being assessed	An ability to describe the practical aspects of the competence being assessed	An ability to demonstrate the practical competences being assessed
Job Role:			
Assessment			
Internal quality assurance			
External quality assurance			

5.6 Assessment environment

The evidence put forward by the learner for the Business-Improvement Techniques NVQ assessment routes can only be regarded as valid, reliable, sufficient and authentic if demonstrated in a real working environment, where work activities or work outcomes assessed are the learners own work/contribution and provides evidence of improvements to the business e.g. quality, cost and delivery, etc. As with all aspects of assessment, assessors must obtain agreement with internal and/or external verifiers before assessing any learners and determine what constitutes acceptable performance evidence.

Assessment using simulation or replication of the working environment is only acceptable in:

Assessment route: QBIT2/001: Complying with statutory regulations and organisational safety requirements:

Performance Statement 5 in relation to:

- following organisational procedures in the event of fire.
- following organisational procedures for the evacuation of premises.
- identifying procedures to be followed in the event of dangerous occurrences or hazardous malfunctions

Performance Statement 8 in relation to:

- use correct manual lifting and carrying techniques

Performance evidence must be the main form of evidence gathered to prove learner competence. It **MUST** come from the working environment.

Simulation of any form will **ONLY** be regarded as a means of providing underpinning knowledge for this qualification apart for the areas identified above.

Access to assessment

There are no entry qualifications or age limits required by learners to undertake the Business-Improvement Techniques NVQ unless this is a legal requirement of the process or the environment. Assessment is open to any learner who has the potential to achieve the assessment criteria set out in the assessment routes.

Aids or appliances, which are designed to alleviate disability, may be used during assessment, providing they do not compromise the standard required.

5.7 Planning and carrying out the assessment

The Business-Improvement Techniques NVQ assessment routes were specifically developed to cover a range of activities. The evidence produced will, therefore, depend on the learner's choice of 'bulleted expanded assessment requirements' (scope items) listed in the assessment route criteria. Where the assessment criteria gives a choice of bulleted items (for example 'any three from five'), assessors should note that learners do not need to provide evidence of the other items (in this example, two), particularly where these additional items may relate to other activities or methods that are not part of the learners normal workplace activity or area of expertise.

Assessment of individual assessment routes

It should be noted that whilst individual assessment route certification is acceptable it is unlikely that the achievement of individual assessment routes will lead to the implementation of sustainable business improvements in quality, cost and delivery targets.

Semta, the employer led skills organisation responsible for the development of the national occupational standards on which this qualification is based, strongly recommends that the majority of assessment evidence for the mandatory assessment routes is gathered during the performance of the optional assessment routes. Evidence should be obtained as a whole, where practically possible, since competent performance in the optional assessment routes is often dependent on competence in the mandatory assessment routes. Although it is possible to achieve this qualification with the minimum number of optional assessment routes, organisations may wish their learners to be assessed for more than this.

5.8 Witness testimony

Where observation is used to obtain performance evidence, this must be carried out against the assessment route criteria. Best practice would require that such observation is carried out by a qualified assessor. If this is not practicable, then alternative sources of evidence may be used.

For example, the observation may be carried out against the assessment criteria by someone else that is in close contact with the learner. This could be a team leader, supervisor, mentor or line manager who may be regarded as a suitable witness to the learner's competency. However, the witness must be technically competent in the process or skills that they are providing testimony for, to at least the same level of expertise as that required of the learner.

It will be the responsibility of the assessor to make sure that any witness testimonies accepted as evidence of the learner's competency are reliable, auditable and technically valid.

5.9 Assessment evidence requirements

5.9.1 Performance evidence

Minimum performance evidence requirements.

Performance evidence must be the main form of evidence gathered.

In order to demonstrate consistent, competent performance for an assessment route, a minimum of **three** different examples of performance must be provided, and must be sufficient to show that the performance requirements of the assessment route have been carried out to the prescribed standards. The minimum number of items specified in each of the scope statements for an assessment route (e.g., four from a choice of six) must **all** be covered, and appropriate evidence provided. It is possible that some of the scope items may be covered more than once. If, however, the three examples of performance evidence are not sufficient to cover all the specified scope items, then further examples of performance evidence will be required to ensure this coverage is achieved.

The most effective way of assessing competence, especially for the performance statements in relation to scope items, is through direct observation of the candidate. Assessors must make sure that the evidence provided reflects the learner's competence and not just the achievement of a training programme.

Evidence that has been produced from team activities (e.g. maintenance and installation) is only valid when it clearly relates to a learner's specific and **individual** contribution to the activity, and not to the general outcome(s).

Items of performance evidence often contain features that apply to more than one assessment route, and can be used as evidence in any assessment route where appropriate.

Performance evidence must be:

Products of the learners' work, such as items that have been produced or worked on, plans, charts, reports, standard operating procedures, documents produced as part of a work activity, records or photographs of the completed activity.

Together with:

Evidence of the way the learners carried out the activities, such as witness testimonies, assessor observations or authenticated learner reports of the activity undertaken.

Competent performance is more than just carrying out a series of individual set tasks. Many of the assessment routes contain statements that require the learner to provide evidence that proves they are capable of combining various features and techniques; these are scope items and have evidence requirements. Where this is the case, separate fragments of evidence would not provide this combination of various features and techniques and, therefore, will not be acceptable as demonstrating competent performance.

If there is any doubt as to what constitutes suitable evidence the person responsible for internal and/or external quality assurance should be consulted.

5.9.2 Knowledge and understanding

Knowledge and understanding are key components of competent performance, but it is unlikely that performance evidence alone will provide enough evidence in this area. Where the learner's knowledge and understanding (and the handling of contingency situations) is not apparent from performance evidence, it must be assessed by other means and be supported by suitable evidence.

Knowledge and understanding can be demonstrated in a number of different ways. It is expected that oral questioning and practical demonstrations will be used, as these are considered the most appropriate for this qualification. Assessors should ask enough questions to make sure that the learner has an appropriate level of knowledge and understanding, as required by the assessment route.

Other methods may be used but where this is the case a suitable rationale must be provided.

6.0 About the NVQ assessment routes

This qualification is made up of a number of nationally recognised units which EAL has converted into assessment material called 'assessment routes'. These documents allow both the learner and the assessor to record the progress through the qualification. The units contain the performance to be assessed, the knowledge to be assessed and the evidence required from the learner to demonstrate their competence.

All units in this qualification contain the following information:

- qualification and unit title
- unit level
- credit value
- guided learning hours (GLH)
- unit summary
- performance to be assessed and evidenced (assessment criteria)
- knowledge to be assessed and evidenced (knowledge requirements)

6.1 Learner's portfolio building and referencing

For guidance to assessment and exemplars on completing documentation including completed assessment routes, and assessment planning documentation refer to EAL centre guidance.

For further information please contact:

EAL Customer Services

Tel: +44 (0)1923 652 400

Email: customercare@eal.org.uk



Appendix 1: Learner registration and certification

Learners must be registered on a specific pathway within Business-Improvement Techniques. There are different codes for the two pathways; this means each pathway has a unique code. Using this code will ensure that you receive the correct materials for the learner.

The registration codes are as follows:

Qualification Title	NVQ Number
EAL Level 4 NVQ Diploma in Business-Improvement Techniques: Process Improvement Pathway	600/0297/9PRO
Quality Improvement Pathway	600/0297/9QUA

