The LEIA Competency Plan (Interim)

Prepared jointly by the LEIA Safety and Environment and the LEIA Education and Training Committees

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Contents

EXECUTIVE SUMMARY

The LEIA Competency Plan (LCP) was devised by a group of employer members of LEIA to demonstrate a systematic means of recording the competence of operatives in the lift and escalator industry. The LCP is based upon the premise that all operatives should be competent to undertake the work that they are given.

The UK National Vocational Qualifications (NVQ) are currently recognised as the de facto qualification showing evidence of competence, requiring as they do, an assessment by an independent assessor, of demonstrable competence whilst at work. For this reason, the NVQ has been taken as the benchmark to which all operatives should aspire.

New starters to the industry and those looking to improve their position are covered by this Interim Plan.

Other qualifications gained before the NVQ was created will still be recognised as valid.

The LCP requires that all new starters and improvers, with the exception of those employed only as mates, and who are expected to remain as mates, should be registered on an NVQ within 2 years and should work towards achieving a Level 2 (Stairlift, Lifting Platform, Service Lift) or Level 3 (Lift, Escalator) NVQ within 5 years of starting.

All new starters and improvers (including mates) are expected to register on and complete the basic safety qualification EOR'N' in an appropriate discipline within 1 year of starting.

The LCP is not intended to disenfranchise those older operatives, without a qualification, who may have demonstrated their competence to their employer. Further development of this Plan will cover those operatives.

PREAMBLE

The LEIA Competency Plan (LCP) is designed to provide a recognised baseline of competence in maintenance, repair, installation, dismantling and removal of lifts, escalators, stair lifts, lifting platforms and service lifts and the major and minor components and equipment associations with those machines.

INTRODUCTION

The LCP was devised by a group of employer members of the Association to develop a systematic means of creating target qualifications that could be applied to the Lift and Escalator industry to demonstrate to clients and other organisations that clear guidelines were in place for the recording of competence in the workplace.

The LCP defines minimum accredited and non-accredited qualifications that, once held by an operative, can give an employer or client confidence that a minimum standard of competence has been assessed in order for those qualification to be achieved and that work undertaken will be done safely and competently.

The LCP is not and cannot be a substitute for good judgement of an operative by the employer or client and appropriate investigation and research must be done to fully determine competence.

LEIA COMPETENCY PLAN

The UK National Vocational Qualifications (NVQ) are currently recognised as the de facto qualification showing evidence of competence, requiring as they do, an assessment by an independent assessor, of demonstrable competence whilst at work. NVQ for the lift industry are based upon recognised National Occupational Standards for competence, derived by the industry and for this reason, the NVQ has been taken as the benchmark to which all operatives should aspire.

The timeline (Figure 1 and Appendix A) lists the evidence of demonstrable competence required for each operative within the lift and escalator industry.

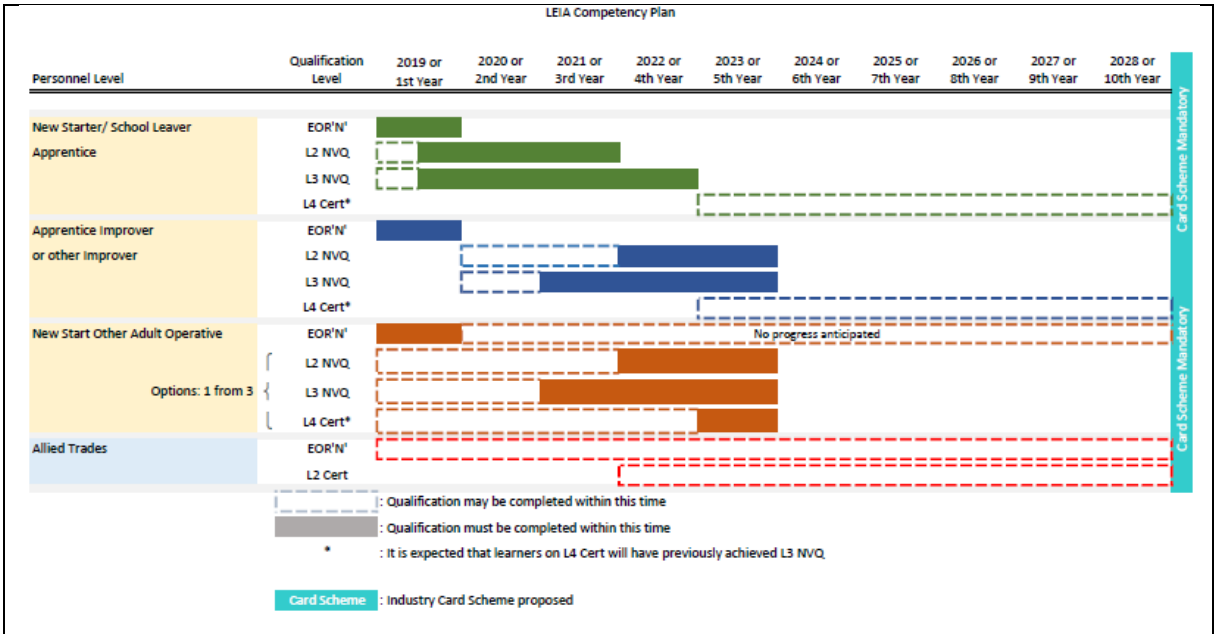


Figure 1 LEIA Competency Plan Timeline

New Starters and School Leavers

All new starters in the industry (except Other Adult Operatives – see below) and starters direct from school will be expected to register on a Level 2 or 3 NVQ in an appropriate discipline by the second

year after starting. This allows for a probationary period before committing to the NVQ. Registration may be done earlier if required.

They may follow a Trailblazer Apprentice route to competence which offers government funding for training.

They are expected to obtain the basic safety qualifications colloquially known as the 'EORN'. This qualification is an assessed qualification and covers basic safety requirements for particular machinery appropriate to the work undertaken. The qualification must be achieved within the first year of starting.

Improvers

Improvers is a title used to describe those who have been working in the industry and are now looking to 'improve' their position by gaining additional experience. Employers are entitled to register improvers on a Trailblazer Apprenticeship programme for government assistance with funding. Improvers should already have the EORN or complete it within one year of starting the Improver programme. At minimum, Improvers are expected to register on an NVQ within 2 years and should work towards achieving a Level 2 (Stairlift, Lifting Platform, Service Lift) or Level 3 (Lift, Escalator) NVQ within 5 years after commencing their 'improvements', whether on a L2 or a L3 NVQ. Registration may be done earlier if required, and they may be registered on an Apprentice programme.

New Starters Other Adult Operative

This title encompasses those experienced in some elements of work but have not the full range of competencies, perhaps having moved from other industries, and also encompasses those new start operatives employed as 'mates' who are not expected to progress beyond that level. As with other new starters they will be expected to complete the EORN basic safety qualification within 1 year of starting and, if appropriate, to register on the L2 or L3 NVQ within 2 years of starting their programme, with completion within 5 years of starting. Registering as a Trailblazer Apprentice will attract government funding.

Current Other Adult Operative

There exists in the lift and escalator industry many highly skilled, competent operatives, who for various reasons have never been able to obtain a recognised qualification evidencing their competence. Whilst not intending to denigrate their competence, it must be accepted that clients and main contractors require evidence of competence obtained from an accredited organisation. Employers will need to consider this when allocating work to their operatives.

The LCP is not intended to disenfranchise those Current Other Adult Operatives active in the industry. Further development of this Plan will cover the competence evidence for those operatives.

Allied Trades

Allied Trades consists of those operatives employed by specialist sub-contractors who may only undertake one or two specialist operations, consequently they do not demonstrate the full range of competencies required for an NVQ.

Allied Trades will be expected to gain the EORN, basic safety qualifications for the machinery they work on and a Level 2 Certificate in Lift and Escalator Specialist Engineering, currently under development. Further development of this Plan will cover the competence evidence for those operatives.

QUALIFICATION HISTORY

Traditionally in the lift and escalator industry, competence was determined by an employer observing the activity of his employees at work. This allowed the employer to gauge competence and to offer information, instruction and training.

J Modules

In the 1960's the Engineering Industry Training Board (EITB) was set up and produced packages in what became colloquially known as the 'J Modules'. For the lift industry these consisted of

- J5 Lift Practice for Engineering Craftsmen
- J25 Lift Servicing and Maintenance for Engineering Craftsmen
- J26 Lift Erection for Engineering Craftsmen

These were taught in-house by experienced engineers and technicians. They are still recognised as valid qualifications and accepted as evidence of demonstrable competence. The J Modules were superseded in 1990s by 'J-Segments'.

J Segments

The J-Segment training was prepared by National Association of Lift Makers (NALM) under the auspices of the new Engineering Training Authorities (EnTra) who were the successor to EITB. The J. Segments for the escalator industry consisted of two routes: Apprentice (School Leaver) and Improver as shown in Figure 3 Appendix B.

Completion of The J Segments resulted in an NVQ certification by EITB/ EnTra which is still accepted as evidence of demonstrable competence.

NVQ's were first developed in the late 1980's. The J. Segments were developed following the setting up for the National Council of Vocational Qualifications which oversaw the framework of the qualification. NVQ's were awarded by EITB/ EnTra.

A Summary of the equivalence of older qualifications and current is given in Figure 2.

J Modules

J5	Lift Practice for Engineering Craftsmen
J25	Lift Servicing and Maintenance for Engineering Craftsmen
J26	Lift Erection for Engineering Craftsmen

TWO Modules Equivalent to a Level 3 NVQ

J Segments

J501	Common Core Skills
J502	Mechanical Drives & Mechanisms
J503	Electrical and Electronic Techniques
J524	Electrical Rotating Machines & Control Gear
J570	Basic Lifts
J571	Basic Mechanical Skills (Lifts)
J572	Basic Electrical Skills (Lifts)
J573	Lift Installation (Mechanical)
J574	Lift Installation (Electrical)
J575	Dismantling Lift Installations
J576	Lift Inspection and Servicing
J577	Installation of Hydraulic Lift Components
J578	Service & Maintenance of Hydraulic Lift Components

SIX Segments Equivalent to a Level 3 NVQ (Combinations Apply)

: Mandatory Units

: Optional Units

Figure 2 Equivalence of Older and Current Qualifications

NVQ First Series

NVQ as distinct qualifications were developed in the mid 1990s to provide a more consistent national and sector-specific approach (See Figure 4 Appendix B).

'Q' NVQs

Changes and improvements were recommended to all NVQ by the Beaumont Report in 1996.

The lift and escalator industry NVQ was revised following this report, now based upon various units of study (see Figure 4 Appendix B).

This resulted in expansion and agglomeration of similar engineering processes into single NVQ. These can be recognised by the 'Q' prefix to the qualification numbering system and the 'ENR' prefix to the majority of units. This is where the well-known 'EOR202' originated.

'EORN' Qualification

The basic safety qualifications colloquially known as the 'EORN' is an assessed qualification and covers basic safety requirements for particular machinery appropriate to the work undertaken.

Performing Engineering Operations: Working safely in an engineering environment

- EOR/202N Basic Lift Safety
- EOR/203N Basic Stairlift Safety
- EOR/204N Basic Escalator Safety
- EOR/205N Basic Service Lift Safety
- EOR/206N Basic Lifting Platform Safety

Frameworks NVQ

The NVQ was revised again in 2001 to the new 'framework' style of delivery with previous units broken down in to smaller ones with defined assessment processes, similar to the assessment processes used for modern NVQ programmes. Figure 5 Appendix B gives a flavour of the units required for particular NVQ. The list is not exhaustive and reference should be made to the LEIA Training Office for full details.

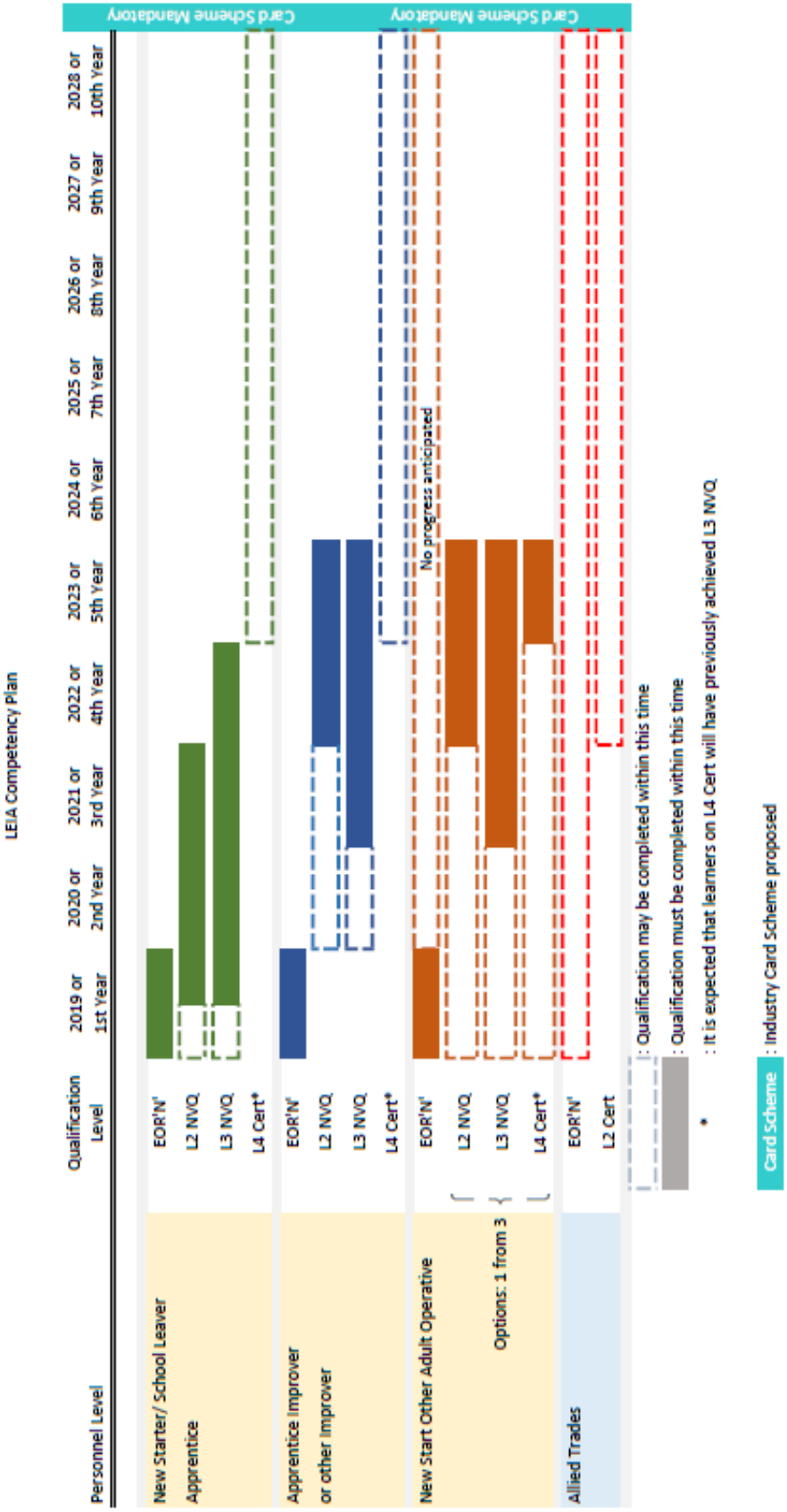
In their latest iteration, the units have been prefixed 'Q' to denote their use in the Qualifications Credit Framework (QCF) style of qualifications. QCF will be superseded by the Regulated Qualifications Framework which has already been introduced for some disciplines.

NATIONAL OCCUPATIONAL STANDARDS

National Occupational Standards (NOS) are produced by Sector Skills Councils with the assistance of the industry to which they refer, for every element of every occupation in the UK. They are used to form NVQ Units by Awarding Organisations which are then combined into a qualification. NOS used in the lift and escalator industry are given in Appendix C.

APPENDICES

Appendix A Timeline of LEIA Competency Plan



Appendix B Further Qualifications

Engineering Council

Eng Tech professional accreditation obtained through membership of a Professional Institution:

- CiBSE Membership level Licentiate Grade LCiBSE https://www.cibse.org/
- IET Membership level Technician Member TMIET https://www.theiet.org/
- SOE Membership level Apprentice or Graduate Membership https://soe.org.uk/
- IMechE Membership level Apprentice Affiliate or EngTech Member https://www.imeche.org/

The Level 3 NVQ Diploma can be used to apply for membership of the above Institutions and from there, application to the Engineering Council for the grade of EngTech.

University of Northampton

Lift Engineering HNC or Lift Engineering FdSc

https://www.northampton.ac.uk/courses/lift-engineering-hnc/

https://www.northampton.ac.uk/courses/lift-engineering-fdsc/

These courses employ the LEIA Distance Learning Course Units and other units from UoN. If a learner has completed LEIA Distance Learning Units as part of their apprenticeship or other training, they may be used towards the HNC or Foundation Degree at the University of Northampton.

Lift Engineering MSc

https://www.northampton.ac.uk/courses/lift-engineering-msc/

Construction Skills Certification Scheme (CSCS)

CSCS Apprentice and Trainee cards can be obtained once registration is made on to a recognised NVQ Diploma (Level 2 or Level 3). Completion of the NVQ Diploma leads to a blue Skilled Worker card (Level 2 NVQ) or a gold Advanced Craft card (Level 3 NVQ).

The above qualifications are given as suggested further training. They are not intended to be mandatory.

Appendix C Qualification History

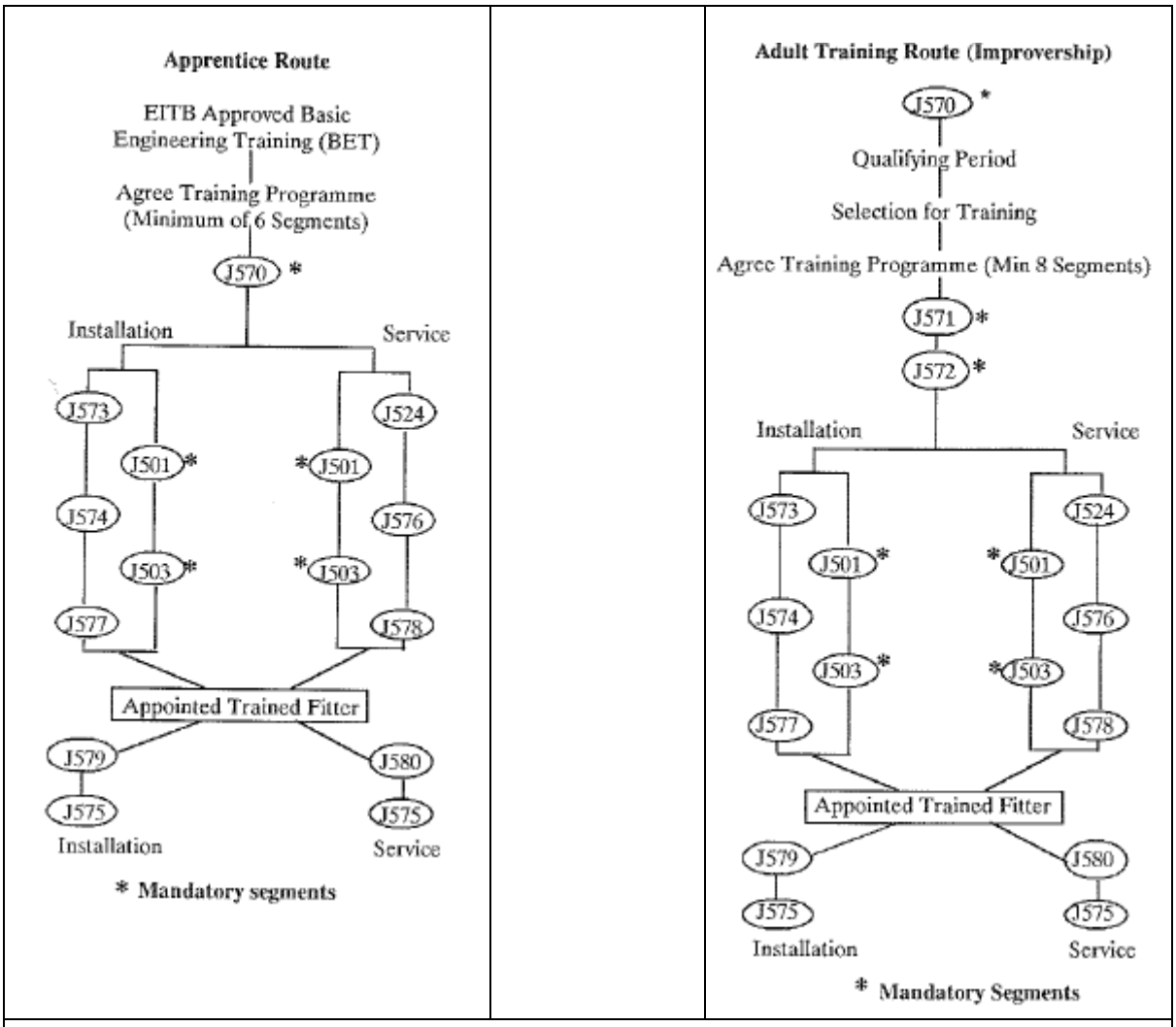


Figure 3 J Segments Programmes

'X' Common Core Units	
X1	General Health and Safety
X2	Locating and Diagnosing Faults
X3	Providing and Using Information at Work
X4	Working With People
'F' Common Units Lifts & Escalators	
F1	Site Planning and Organising Installation Work
F2	Site Planning and Organising Maintenance Work
F3	Site Planning and Organising Repair Work
'G' Lift Specific Units	
G1	Measuring and Setting Out Lift Installations
G2	Installing Lift Well and Ancillary Equipment
G3	Installing Lift Machine Room Equipment
G4	Installing Hydraulic Lift Equipment
G5	Installing Lift Ropes and Chains
G6	Installing Lift Doors and Frames
G7	Checking and Setting Lift Installations
G8	Inspecting and Servicing Lift Installations
G9	Rectifying Faults in Lifts
G10	Replacing/ Repairing Lift Doors and Gates
'H' Escalator Specific Units	
H1	Measuring and Setting Out Escalator Installations
H2	Assembling and Installing Escalator Equipment
H3	Adjusting Escalator Installations
H4	Testing and Commissioning Escalator Installations
H5	Inspecting and Servicing Escalators
H6	Rectifying Faults in Escalators
H7	Testing and Reinstating Escalator Installations
H8	Replacing Escalator Steps and Chains

Figure 4 NVQ (first series) (until approx. 2000)

Q1027610 NVQ Engineering Maintenance	
ENR 103	Communicating and self development
ENR 106	Diagnosing faults in equipment
ENR 107	Returning equipment to service by replacing components
ENR 145	Reinstating the work area
ENR 211	Setting up safe access to work locations
ENR 216	Preparing resources for complex engineering activities
ENR 298	Re-assembling lift or escalator equipment under complex conditions
ENR299	Re-assembling lift-escalator equipment under complex conditions
ENR300	Maintaining the condition of lift or escalator equipment under complex conditions
ENR302	Checking lift or escalator function
Q1050075 NVQ Installation and Commissioning	
ENR 103	Communicating and self development
ENR 104	Organising and leading
ENR 106	Diagnosing faults in equipment
ENR 145	Reinstating the work area
ENR 209	Moving standard loads
ENR 211	Setting up safe access to work locations
ENR 216	Preparing resources for complex engineering activities
ENR302	Checking lift or escalator function
ENR 405	Installing lift/ escalator equipment under complex conditions

Figure 5 Level 3 NVQ units at first development

100/3157/1 Level 3 Engineering Maintenance (Lift Servicing)	
ENM3/001	Complying with Statutory Regulations and Organisational Safety Requirements
ENM3/002	Using Engineering Drawings and Documents in Maintenance Activities
ENM3/003	Working Efficiently and Effectively in Engineering
ENM3/004	Handing Over and Completion of Maintenance Activities
ENM3/044	Carrying Out Fault Diagnosis on Lifts
ENM3/045	Inspecting and Servicing Lift Equipment
ENM3/046	Checking Lift Function
ENM3/047	Rectifying Faults in Lifts
100/4152/7 Level 3 Installation and Commissioning (Traction Lift Installation)	
ICM3/001	Complying with Statutory Regulations and Organisational Safety Requirements
ICM3/002	Using Engineering Drawings and Documents in Installation or Commissioning Activities
ICM3/003	Working Efficiently and Effectively in Engineering
ICM3/004	Handing Over and Confirming Completion of Installation and Commissioning Activities
ICM3/035	Carrying Out Fault Diagnosis on Lift Installations
ICM3/036	Measuring and Setting Out Lift Installations
ICM3/037	Installing Lift Well and Ancillary Equipment
ICM3/038	Installing Traction Lift Equipment
ICM3/039	Installing Lift Ropes and Chains
ICM3/040	Installing Lift Doors, Frames and Ancillary Components
ICM3/041	Checking and Setting Lift Installations

Figure 6 Level 3 Lift NVQ units at second development

Appendix D National Occupational Standards

National Occupational Standards used to prepare NVQ Assessment Routes and Units

NOS No	Title	EAL NVQ Assessment Route No	
SEMEM3-01	Complying with statutory regulations and organisational safety requirements	QENM2/001	Level 3 Engineering Maintenance
SEMEM3-02	Using engineering drawings and documents in maintenance activities	QENM2/002	
SEMMAN3-03	Working efficiently and effectively in engineering	QENM3/003	
SEMEM3-04	Handing over and confirming completion of maintenance activities	QENM3/004	
SEMEM3-44	Carrying out fault diagnosis on lifts	QENM3/044	
SEMEM3-45	Inspecting and servicing lift equipment	QENM3/045	
SEMEM3-46	Checking lift function	QENM3/046	
SEMEM3-47	Rectifying faults in lifts	QENM3/047	
SEMEM3-48	Repairing/replacing lift doors, chains, ropes and equipment	QENM3/048	
SEMEM3-49	Carrying out fault diagnosis on escalators	QENM3/049	
SEMEM3-50	Rectifying faults in escalators	QENM3/050	
SEMEM3-51	Inspecting and servicing escalators	QENM3/051	
SEMEM3-52	Testing and reinstating escalator installations	QENM3/052	
SEMEM3-01	Complying with statutory regulations and organisational safety requirements	QICM2/001	Level 3 Installation and Commissioning
SEMIC02	Using engineering drawings and documents in installation and commissioning activities	QICM2/002	
SEMMAN3-03	Working efficiently and effectively in engineering	QICM3/003	
SEMIC04	Handing over and confirming completion of installation or commissioning activities	QICM3/004	
SEMIC35	Carrying out fault diagnosis on lift installations	QICM3/035	
SEMIC36	Measuring and setting out lift installations	QICM3/036	
SEMIC37	Installing lift well and ancillary equipment	QICM3/037	
SEMIC38	Installing traction lift equipment	QICM3/038	
SEMIC39	Installing lift ropes and chains	QICM3/039	
SEMIC40	Installing lift doors, frames and ancillary components	QICM3/040	
SEMIC41	Checking and setting lift installations	QICM3/041	
SEMIC42	Installing hydraulic lift equipment	QICM3/042	
SEMIC43	Carrying out fault diagnosis on escalator installations	QICM3/043	
SEMIC44	Installing escalator equipment	QICM3/044	
SEMIC45	Commissioning escalator installations	QICM3/045	