



# **GQA PAA\VQSET LEVEL 2 NVQ DIPLOMA IN SIGNMAKING**

**600\0080\6**

## **Centre Qualification Handbook**

**Competence-based Qualifications**

**AUGUST 2021 V1**



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## **INTRODUCTION TO THE HANDBOOK**

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This qualification sits within the Regulated Qualifications Framework (RQF).

This Qualification Handbook has been developed to ensure that GQA Centres understand the requirements of the qualification. The Handbook contains the following information:

- Qualification Structure
- Assessment Requirements
- Assessment Methods
- Glossary
- Qualification Units

This Qualification Handbook has been developed to provide support in the implementation of the qualification as well as giving information to ensure that the assessment and quality assurance is consistent, robust and reliable within each centre and nationally. The handbook also contains details of the skills and/or knowledge the learner must obtain to achieve the units and qualification.

### Qualification Structure

This section of the handbook summarises the content of the qualification and the skills and/or knowledge learners that achieve it can be expected to gain. It also outlines the units required to achieve the qualification and will give the learner an idea of how long the qualification will take to achieve through the Total Qualification Time (TQT) and how much contact time they can expect through the Guided Learning Hours (GLH). It also provides information about possible progression opportunities once the qualification has been achieved.

### Assessment Requirements

The assessment requirements for the qualification will cover any specific information about how the qualification may be assessed, such as whether assessors require specific qualifications or occupational competence and whether simulation is permitted in the achievement process.

### Assessment Methods

This section summarises the different assessment methods and types of evidence that support assessment; these may be used to demonstrate competence or the achievement of knowledge and understanding.

### Qualification Units

The unit overview summarises the content of the unit and the skills and/or knowledge the learner will have gained on achievement of the unit. The units may also contain additional information in the assessment context which will describe the areas to be covered and any appropriate assessment guidance and evidence requirements which will outline additional assessment requirements and should be built into assessment plans and included on assessment records. The unit detail will also confirm whether simulation is permitted for that particular unit.

### Qualification Assessment and Support Materials

Centres will be sent the following qualification assessment and support materials:

- Assessment Forms - it is not mandatory to use these forms. Centres may wish to use their own assessment documentation - these should be approved by the External Verifier prior to use.
- Learner Guide
- Qualification Handbook
- Registration Spreadsheet & Certification Claim Forms

## LEVEL 2 NVQ DIPLOMA IN SIGNMAKING

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### Qualification Summary

This qualification will provide recognition of the skills and knowledge of individuals working in the Signmaking industry. It covers maintaining the work environment to meet health, safety and environmental requirements; developing and maintaining effective working relationships; providing information about sign products and maintaining the quality of sign production.

### Total Qualification Time (TQT) and Guided Learning Hours (GLH)

#### Guided Learning Hours (GLH)

Guided Learning Hours are the time the learner is under the immediate supervision or guidance of a lecturer, supervisor, tutor or other appropriate provider or education or training.

The GLH for this qualification is 270

#### Total Qualification Time (TQT)

Total Qualification Time is comprised of 2 elements:

1. GLH  
plus
2. an estimate of the number of hours a learner will reasonably be likely to spend in preparation, study or any other form of participation in education or training, including assessment, which takes place as directed by (but not under the immediate supervision of) a lecturer, supervisor, tutor or other appropriate provider or education or training

The TQT for this qualification is 380

### Achieving the Qualification

**7 Units must be achieved.**

Mandatory Units: 4 Mandatory Units must be achieved.

Optional Units Group A: Learners must achieve 2 units.

Optional Units Group B: Learners must achieve 1 unit.

### Mandatory Units

Unit No.	Unit Name	Credit Value
1	Maintain the Work Environment to meet Health, Safety and Environmental Requirements in a Signmaking Environment	7
2	Develop and Maintain Effective Working Relationships in a Signmaking Environment	3
3	Provide Information about Sign Products in a Signmaking Environment	5
4	Maintain the Quality of Sign Production in a Signmaking Environment	4

### **Optional Units - Group A**

Learners must achieve 2 units.

Unit No.	Unit Name	Credit Value
5	Prepare for Sign Operations in a Signmaking Environment	6
6	Prevent Damage during Transportation and Storage of Sign Products in a Signmaking Environment	7
7	Finish and Complete Signage Operations in a Signmaking Environment	9

### **Optional Units - Group B**

Learners must achieve 1 unit.

Unit No.	Unit Name	Credit Value
8	Carry out Wide Format Digital Print Operations in a Signmaking Environment	6
9	Carry out Shaping Operations in a Signmaking Environment	6
10	Carry out Joining Operations in a Signmaking Environment	6
11	Carry out Engraving Operations in a Signmaking Environment	6
12	Carry out Etching Operations in a Signmaking Environment	6
13	Carry out Hand Finishing Operations in a Signmaking Environment	10
14	Carry out Spray Paint Operations in a Signmaking Environment	10
15	Carry out Screen Print Operations in a Signmaking Environment	6
16	Carry out Forming Operations in a Signmaking Environment	6
17	Carry out Self-Adhesive Operations in a Signmaking Environment	6
18	Manipulate the Sign Layout and Produce Graphical Image for Road Traffic Signs	6
19	Create a Sign Layout and Produce a Graphical Image for Commercial Signs	12
20	Determine and Carry Out Maintenance of Sign Products in a Signmaking Environment	10
21	Carry Out the Installation Operation for Commercial Signage Operations	12
22	Carry Out Basic Installation Operations for Road Traffic Signage Operations	10

### **Progression**

This Diploma is part of a suite of qualifications developed from the Signmaking National Occupational Standards (NOS) at Levels 2 and 3.

Further information can be found on the GQA website [www.gqaqualifications.com](http://www.gqaqualifications.com) or on the Register of Regulated Qualifications website <http://register.ofqual.gov.uk>

## ASSESSMENT REQUIREMENTS

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Assessors must ensure that, when assessing the skills, knowledge and/or understanding, the evidence produced by learners is:

- Valid - does evidence meet the requirements described in the unit?
- Authentic - has the learner produced the evidence?
- Current - has the evidence been produced recently and does it demonstrate current competence?
- Sufficient - is there enough evidence to demonstrate competence?

to enable reliable and consistent judgements to be made about the achievement of all the requirements of the unit(s) and qualification.

GQA Centres must ensure that people involved in the assessment process have the appropriate expertise and are adequately informed and supported to fulfil their responsibilities.

### ASSESSMENT STRATEGY

Below is the information to support the assessment requirements of the qualification:

- Mandatory use of evidence from workplace performance
- Use of Simulation
- Occupational competence of assessors and verifiers

#### ***Mandatory use of evidence from workplace performance***

- a. Unless the use of simulation is expressly permitted within the qualification or unit specific evidence requirements, evidence must demonstrate the learner's competence in a real or realistic environment.
- b. Knowledge and Understanding will be assessed via (pre-set and/or free form) questions, or by inference from performance, which cover three primary types of knowledge:
  - Knowledge of facts and procedures
  - Understanding of principles, concepts and underpinning procedures
  - How to apply principles and procedures in specific contexts

All questions must be asked by the assessor at appropriate moments throughout the assessment process, preferably linked to observed activity and/or review of documentary evidence. The questions asked of, and answers provided by, the learner must be recorded.

#### ***Use of Simulation***

- c. The qualification or unit specific assessment requirements will define where evidence from simulation is acceptable, and in which contexts.

Simulation should be used only where direct evidence of learner performance cannot be obtained. Under these circumstances simulation may be used for summative assessment. Reasons for the use of simulation should be made clear to and agreed by the external verifier and should include the following details:

- which competence (and standards) the simulation was designed to assess;
- the kind of equipment, facilities and physical environment proposed for the simulation of performance. It is unlikely that the External Verifier will approve a simulation if it does not involve real plant and equipment;
- how the simulated activity relates to the learner's normal work context in terms of the pressures of time, access to resources and access to information, and the communication media; and

- how the simulation was set up and conducted, preferably supported by physical evidence such as photographs or inspection of a test rig.

Assessors, internal verifiers and external verifiers should monitor the proportion of evidence generated via simulations to ensure that it is not the primary source of a learner's claim to competence.

- d. Under these circumstances simulations are reserved for aspects of competence illustrated by the following contexts:
- where demonstration of emergency shutdown and related safety procedures would be; **dangerous and/or disruptive** to plant/environment/individuals; **too costly** such as total plant shutdown or dealing with spillage of dangerous substances; where **issues of confidentiality** restrict access to real work opportunities;
  - demonstrating specific aspects of the operation which rarely or never occur due to effective quality assurance systems;
  - the capacity to integrate disparate knowledge to cope with unforeseen events and to solve problems; or
  - aspects of working relationships and communications for which no opportunity has presented for the use of naturally occurring workplace evidence of learner performance.
- e. Simulation must enable the individual to demonstrate competence in a real or realistic work environment. In this context this means in specialist centres which replicate the workplace in terms of equipment and environment, reflect normal working situations and use relevant industrial or commercial standards and procedures. Short work placements or non-realistic work environments which do not replicate the pressures and requirements of normal commercial or industrial activities will not be acceptable. The bulk of the learner's evidence should be drawn from their normal working activity and not consist of artificially contrived opportunities for one-off demonstration of competence. Similarly equipment must be that used in current commercial and industrial contexts. Procedures and standards used should be those which are nationally or internationally recognised or devised by specific companies as standard operating procedure.
- f. Simulation must enable the individual to acquire his/her skills and knowledge in a realistic work environment. In this context this means in specialist centres which replicate the workplace in terms of equipment and environment, it reflects normal working situations and uses relevant industrial or commercial standards and procedures. Where possible providers should attempt to replicate the pressures and requirements of normal commercial or industrial activities. Equipment must be that used in current commercial and industrial contexts. Procedures and standards used should be those which are nationally or internationally recognised or devised by specific companies as standard operating procedure.
- g. Circumstances outside of those listed in Section D above may also be considered suitable for the use of simulation with the agreement of the External Verifier and GQA. Under these circumstances simulation may be used for formative assessment only.

### ***Occupational competence of Assessor and Verifiers***

h. Assessors:

- must be competent in the units they are assessing. This is shown through the assessor having achieved the award they are assessing OR providing quality evidence to the external verifier that they are able to make valid judgements of the competence of learners. This could be done through a combination of a) personal interview, b) review of employment histories and/or c) examination of the assessor's judgement during assessments.
- must have a working knowledge of awards and a full understanding of that part of the award for which they have responsibility.
- should hold or be working towards suitable qualifications for assessment, as defined by GQA.

i. Internal verifiers:

- must be either working in the appropriate sector itself OR they must be able to demonstrate they possess practical and up-to-date knowledge of current working practices appropriate to the sector in which they are carrying out verification practices; and
- must be appointed by a GQA recognised centre
- must have a working knowledge of the awards they are internally verifying
- should hold or be working towards suitable qualifications for verification, as defined by PAA\VQ-SET.

## ASSESSMENT METHODS AND TYPES OF EVIDENCE

The following section gives information on the different assessment methods/types of evidence that support assessment. The following assessment methods/types of evidence may be used to demonstrate competence or that the learner has achieved the required level of knowledge and understanding.

### *Observation of Performance*

Observation allows the assessor to see learners carrying out their work activities. It will take place primarily in the workplace but can also be undertaken in a training scheme. Natural discussion should take place where possible during observation, allowing the assessor to ask questions relating to what they are observing at the time. Assessors must capture their observations either by a written report and/or other methods (e.g. video, audio recording).

### *Questioning*

This method of assessment can be used to ensure that the learner has knowledge and understanding to support their skills. Questions can be used to check knowledge - these questions can either be verbal during or at the end of an observation, or they can be set in a written format in formal or informal conditions. As some units may focus entirely on learners' knowledge, assessors may encourage a variety of evidence to meet the requirements of the unit - use of verbal and/or written questions, learner statements and professional discussion (see below). Verbal questioning or professional discussion should be captured, either by written notes or audio recording.

### *Products*

Work product evidence may be generated as a result of work activities undertaken by learners, and could include reports, letters, or records of work carried out.

### *Witness Statement or Testimony*

A Witness Statement or Testimony is confirmation by others that the learner carried out an activity or series of activities relevant to the requirements of the unit. It could be written by the learner and signed by the witness to confirm that it did take place, or the witness may write the statement. Alternatively, the assessor could speak to the witness and record the discussion. The statement can then be used as evidence within an assessment.

There may be occasions when an Expert Witness may be required to contribute to the assessment process. GQA's definition of an Expert Witness is 'an experienced employee who works in partnership with the assessor, by observing the learner carrying out their duties and recording their observations in line with the assessment procedures'. It should be noted that while the Expert Witness makes a valued contribution to the assessment process, it is the assessor who makes the assessment decision.

### *Simulation*

Simulations are a source of performance evidence showing how an activity is carried out. Simulations require careful planning to ensure that they reflect as near as possible "real life" conditions and the requirements of the qualification(s). As a result of this the costs to set up a simulation may be considerable. Simulations are likely to be used in the following situations:

- they occur infrequently (e.g. dealing with emergencies)
- they involve unusual working conditions (e.g. working in isolation, outside the workplace)
- the work is hazardous
- it is not cost effective

Any use of simulation should be discussed and agreed with the GQA External Verifier and approved prior to implementation.

### ***Recognition of Prior Learning (RPL)***

This is the process whereby credit is given to experienced individuals for their previous achievements. It requires careful mapping of the individual's experience to the unit(s) to ensure that it meets the requirements. This exercise must be referred to the External Verifier to ensure that all the evidence presented is acceptable.

### ***Professional Discussion***

A Professional Discussion gives the learner the opportunity to tell their assessor what they are doing and why they are doing it in a particular way. The discussion should be supported by appropriate evidence - an observation report, work product or witness testimony. Professional Discussions should be planned to give the learner the chance to prepare, and should be recorded.

### ***Learner Statements***

A Learner Statement is an account of an activity that took place, described by the learner. A detailed statement could demonstrate skill, and also provides evidence of knowledge and understanding. Learner statements should be authenticated by an appropriate person.

### ***Photographs and use of other media***

Photographs and use of other media, e.g. video and audio, can provide detail of work activities carried out and questioning. Photographs are more effective when used with supporting statements. Video and audio evidence should be effectively referenced to allow specific activities or questioning to be found easily. It is important to note that if photographs and other media are to be used, the learner and assessor should ensure that permission is gained from all people who may be involved.

## GLOSSARY

Term	Definition
<b>Access Arrangements</b>	Arrangements that are approved in advance of an examination or assessment to allow achievement to be demonstrated by learners with a disability, special learning needs (including where the learner's first language is not English, Welsh or Irish) or to avoid unlawful discrimination
<b>Appeal</b>	The process through which an awarding organisation may be challenged on the outcome of an enquiry about results or, where appropriate, other procedural decisions affecting a centre or an individual learner
<b>Assessment</b>	The process of making judgements about the extent to which a learner's work meets the requirements of a unit, or any additional assessment requirements of a qualification
<b>Assessor</b>	A person who assesses a learner's work
<b>Award of Qualifications</b>	A certificate (electronic or paper-based) issued to an individual that recognises their achievement
<b>Award</b>	A qualification with a TQT value between 10 and 129
<b>Awarding Organisation</b>	A body recognised by the qualifications regulators to award qualifications
<b>Centre</b>	An organisation accountable to an awarding organisation for assessment arrangements leading to the award of qualifications
<b>Centre Recognition</b>	A process through which a centre wishing to offer an award or awards is confirmed as being able to maintain the required quality and consistency of assessment, and comply with other requirements of the awarding organisation
<b>Certificate (1) for a Unit or Qualification</b>	A record of attainment of a qualification issued by an awarding organisation
<b>Certificate (2)</b>	A qualification with a TQT value between 130 and 369
<b>Credit</b>	An award that may be made to a learner in recognition of the achievement of a unit or qualification
<b>Credit Value</b>	The number of credits that may be awarded to a learner for the successful achievement of a unit or qualification
<b>Diploma</b>	A qualification with a TQT value of 370 or above
<b>Guided Learning Hours</b>	The number of hours of teacher-supervised or directed study time required to teach a qualification or unit of a qualification
<b>Learning Time</b>	The amount of time a learner at the level of the unit is expected to take, on average, to complete the unit to the standard required
<b>Level</b>	An indication of the relative demand, complexity and/or depth of achievement, and/or the autonomy of the learner in demonstrating that achievement

<b>Term</b>	<b>Definition</b>
<b>Mandatory Units</b>	Units that must be achieved for the qualification to be awarded
<b>National Occupational Standards (NOS)</b>	Describe what a person needs to do, know and understand in a job to carry out the role in a consistent and competent way
<b>Optional Unit</b>	A unit that a learner may choose to complete to achieve the required number of units for award of the qualification
<b>Pathway</b>	A route to the achievement of a qualification that requires particular units to be achieved and is identified by an endorsement to a qualification title
<b>Qualification</b>	An award made to a Learner for the achievement of the required units or other components for that qualification
<b>Qualification Level</b>	An indication of the relative demand, complexity and/or depth of achievement, and/or the autonomy of the learner, represented by a qualification
<b>Qualifications Regulators</b>	Government-designated statutory organisations required to establish national standards for qualifications and secure consistent compliance with them
<b>Recognition of Prior Learning (RPL)</b>	A method of assessment that considers whether a learner can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills they already possess and do not need to develop through a course of learning
<b>Sector Skills Council</b>	A body responsible for formulating and reviewing occupational standards for a specific sector across the UK, and for supporting the development of units and qualifications based on these standards. Each SSC is an employer-led, independent organisation and is licensed by government
<b>Standardisation Of Assessment</b>	A process to ensure that assessment leading to the award of qualifications is applied consistently by individuals, centres and awarding organisations
<b>Unique Learner Number (ULN)</b>	The unique number that is used to identify an individual learner
<b>Unit</b>	A component of a qualification

## LEVEL 2 NVQ DIPLOMA IN SIGMAKING

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### CONTENT OF THE QUALIFICATION

#### MANDATORY UNITS

<b>UNIT 1</b>	<b>MAINTAIN THE WORK ENVIRONMENT TO MEET HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS IN A SIGMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	7
GUIDED LEARNING HOURS	57

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#### Unit Overview

This unit addresses the skills and knowledge required to maintain the work environment to meet health, safety and environmental requirements in a signmaking environment.

#### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show different examples of the learner's competence over a period of time (approximately 3 months) in activities relating to this unit.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

#### **Assessment Guidance**

- The use of simulation is acceptable in the assessment of this unit.
- The assumption is made that the learner undertaking this unit will have essential and current organisational Health and Safety knowledge.

#### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health, safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Personal Protective Equipment**

To include eye protection, hearing protection, safety gloves, safety footwear, hard hats and respirators/masks when appropriate

**Conduct**

To include behaving safely when working alone and as a member of a team

**Relevant Person**

Line manager, supervisor, team leader, responsible person, etc.

**Environment**

This is a broad term which refers to the global environment with which we all interact

**Hazards**

The Health and Safety Executive (HSE) definition is “a hazard is something with potential to cause harm”

**Risk/s**

The Health and Safety Executive definition is “a risk is the likelihood of a hazard’s potential being realised”. In this unit these definitions apply equally to environmental hazards and risks. Risks to the environment covered by this unit are arising from:

- The use of materials and substances hazardous to the environment
- The disposal of waste, materials and substances hazardous to the environment
- Emission of gases, fumes or dust

**Workplace**

This is the single or multiple areas in which work is carried out. This may be a shop, office, a manufacturing plant, outdoors, or an educational establishment

**Storage**

Storage places could be local and central

**Workplace policies**

This covers documentation prepared by the employer on the procedures to be followed regarding safety, health and environmental matters. It could be the employer’s environmental policy statement, or guidance covering aspects of the working practices or workplace that should be drawn to the employees’ (and “other persons”) attention

**Workplace environmental procedures**

These contain the specific instructions or details for people at work to follow for an environmentally friendly working environment. They will contain the instructions, for example, on disposal of materials hazardous to the environment. Legal and workplace environmental procedures covered by this unit are:

- Waste minimisation
- The use of environmentally safe working methods and equipment
- The use of personal protective equipment
- What to do in the event of an emergency involving environmental hazards
- Authorisation for handling, storing, using or disposing hazardous materials, products or equipment

**Reporting procedures**

Reporting procedures covered by this unit are:

- Oral reports
- Written reports

**Learning Outcome and Assessment Criteria**

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Know how to select, use and maintain tools and equipment	1.1. Identify when and why it is necessary to wear personal protective equipment (PPE) 1.2. Explain how to obtain and select appropriate personal protective equipment (PPE) 1.3. Identify the tools and equipment that are own responsibility 1.4. State how to use tools and equipment that are own responsibility 1.5. State the importance of the correct storage of equipment and materials 1.6. State the different methods for maintaining tools and equipment 1.7. Identify appropriate storage places for equipment 1.8. Identify the problems that may occur when storing tools and equipment
2. Know how to respond to tool and equipment faults	2.1. Describe actions that cause damage to other tools, equipment or products in the work area during maintenance 2.2. Describe the faults that can occur in tools and equipment 2.3. Explain how to identify the tools and equipment that can be repaired and how to deal with those that cannot be repaired 2.4. Explain how to replace and repair defective parts
3. Know how to minimise and deal with hazards	3.1. Identify the substances and processes that might be categorised as hazardous to the environment 3.2. Describe the procedures for the correct disposal of hazardous materials 3.3. Describe the hazards associated with own working environment and the risks they pose 3.4. Explain when it may be necessary to undertake a risk assessment
4. Know how to respond to emergencies	4.1. Explain the actions to take in an emergency 4.2. Identify the alarm systems that are used and when to use them 4.3. Describe the action to take on hearing an alarm
5. Know how to maintain the required documentation	5.1. Explain why it is important to keep the work instructions safe and accessible 5.2. Identify the acceptable recording formats and when and how to use them 5.3. Identify when documentation should be completed and why it must be completed accurately

<p>6. Know how to work to organisational and operational procedures</p>	<p>6.1. State the procedures for reporting accidents, incidents, hazards and breaches of safety standards</p> <p>6.2. Identify the relevant authorisation procedures and explain how to follow them</p> <p>6.3. Identify the relevant personnel that problems should be reported to</p> <p>6.4. Identify the Health and Safety and environmental requirements and how to follow them</p> <p>6.5. Explain why it is important to comply with the organisational and operational requirements</p> <p>6.6. Explain the consequences of not complying with the organisational and operational requirements</p> <p>6.7. Explain how to minimise the production of waste in the operations</p> <p>6.8. Explain the importance of keeping the work area clean</p>
<p>7. Be able to use and maintain tools and equipment</p>	<p>7.1. Demonstrate the equipment being used is fit for operation</p> <p>7.2. Operate equipment according to manufacturers' instructions</p> <p>7.3. Maintain the equipment according to manufacturers' instructions and company policy</p> <p>7.4. Store tools and equipment and materials following manufacturers' instructions and company policy</p> <p>7.5. Follow the procedures for reporting defective tools, equipment and materials according to company policy</p>
<p>8. Be able to work in a safe manner</p>	<p>8.1. Ensure conduct around the workplace does not endanger the health and safety of self, other people or the environment</p> <p>8.2. Maintain work area in a safe, clean and tidy condition</p> <p>8.3. Inform the relevant personnel of any problems that cannot be solved personally</p>
<p>9. Be able to deal with hazards</p>	<p>9.1. Report any potential hazards in own work area within the agreed timescale to the relevant person</p> <p>9.2. Report accidents and hazardous incidents promptly to the relevant person</p>
<p>10. Be able to work to organisational and operational procedures</p>	<p>10.1. Carry out work in line with legal requirements, workplace policies, manufacturers' instructions, work instructions, Health and Safety and environmental requirements</p>

<b>UNIT 2</b>	<b>DEVELOP AND MAINTAIN EFFECTIVE WORKING RELATIONSHIPS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	3
GUIDED LEARNING HOURS	22

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### Unit Overview

This unit addresses the skills and knowledge required to develop and maintain effective working relationships in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show different examples of the learner's competence over a period of time (approximately 3 months) in activities relating to this unit.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Relevant Personnel**

Colleagues in the same work group, colleagues in other work groups, immediate supervisors, those for whom the learner has responsibility, personnel in other departments, external contacts, clients, customers, suppliers

#### **Identified Needs**

By self, by others

#### **Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of Health and Safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Learning Outcome and Assessment Criteria**

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Know how to establish effective working relationships	1.1. Identify ways that constructive relationships can be established 1.2. Identify colleagues' work roles and responsibilities 1.3. Identify the types of problems that may occur with working relationships
2. Know how to communicate to develop and maintain effective working relationships	2.1. Explain why it may be necessary to use different styles of approach when interacting with colleagues in different situations 2.2. Identify ways of seeking and exchanging information, advice and support 2.3. Identify the relevant personnel that information should be passed to
3. Know how to work to organisational and operational procedures	3.1. Explain how to deal with confidential information 3.2. Explain why it is important to keep the work instructions safe and accessible
4. Be able to establish effective working relationships	4.1. Treat relevant personnel in a manner which promotes and maintains goodwill 4.2. Support and offer help to relevant personnel when requested 4.3. Promptly and willingly meet reasonable requests from relevant personnel
5. Be able to communicate to maintain effective working relationships	5.1. Communicate all relevant information to the relevant person using the appropriate method of communication 5.2. Provide clear, accurate and prompt information regarding identified needs to relevant personnel
6. Be able to deal with confidential information	6.1. Maintain confidentiality according to organisational requirements at all times

<b>UNIT 3</b>	<b>PROVIDE INFORMATION ABOUT SIGN PRODUCTS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	5
GUIDED LEARNING HOURS	43

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### Unit Overview

This unit addresses the skills and knowledge required to provide information about sign products in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Customer**

Internal/external contacts including clients, another department, line managers, colleagues, etc.

#### **Sources of Information**

Internal, external

#### **Methods of Obtaining Information**

Verbal, written

**Types of Information**

Numeric, text, images from customers, line manager, colleagues

**Relevant Personnel**

Line manager, supervisor, team leader, etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of Health and Safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Understand the importance of good relationships with customers	1.1. Explain who is regarded as a customer and why 1.2. Explain why and how to maintain and develop relationships with customers
2. Know who can have information about sign products	2.1. Identify authorised and unauthorised personnel who may ask for information 2.2. Explain how to handle requests for information from authorised and unauthorised personnel
3. Know how to obtain the necessary information about sign products to meet the customer's needs	3.1. Explain how to identify and agree customer needs 3.2. Identify the different types of acceptable information and the methods of obtaining them 3.3. Determine the information that should be used for particular needs 3.4. Explain how to access and obtain technical information on equipment condition and materials 3.5. Explain how to access and obtain non-technical information on the Signmaking environment and production issues 3.6. Identify the consequences of spending excessive time on collecting information
4. Know how to present information to a customer about sign products	4.1. Identify the different methods and explain the most appropriate one for providing information 4.2. Explain why it is important to provide sufficient information to meet the customer's expectations 4.3. Describe how to provide advice when requested within the limits of own authority 4.4. Explain the consequences of not meeting an agreed timescale or informing the relevant personnel promptly
5. Know how to record the details of information obtained for a customer about sign products	5.1. Describe how to record information which is complete and accurate 5.2. Identify the importance of using recording methods and storage places appropriate to the information supplied

<p>6. Know how to maintain the security of information about sign products</p>	<p>6.1. Explain the consequences for the individual and the organisation of not maintaining security and confidentiality in line with relevant legislation</p> <p>6.2. Explain the consequences of using sources and methods of obtaining information which are outside own authority without getting agreement from the relevant personnel</p>
<p>7. Be able to identify the needs of a customer</p>	<p>7.1. Identify customer needs within the company's agreed timelines</p> <p>7.2. Identify information that is accurate, relevant and sufficient to meet agreed requirements</p>
<p>8. Be able to obtain the necessary information about sign products to meet the customer's needs</p>	<p>8.1. Obtain information that is accurate, relevant and sufficient to meet agreed requirements</p> <p>8.2. Obtain information that is required by others within the company's agreed timelines</p>
<p>9. Be able to present information to a customer about sign products</p>	<p>9.1. Present information in a format which is appropriate to the customer's needs</p> <p>9.2. Ensure that the information provided is relevant, current, accurate</p> <p>9.3. Provide sufficient information to meet requirements within the agreed timescale</p> <p>9.4. Provide information about sign making products and services following data protection legislation</p>
<p>10. Be able to record the details of information obtained for a customer about sign products</p>	<p>10.1. Record information accurately, legibly and completely</p> <p>10.2. Ensure that all records of information are complete, current, accurate and legible</p> <p>10.3. Store information to meet security and confidentiality requirements</p>
<p>11. Be able to deal with problems when dealing with information about sign products</p>	<p>11.1. Identify any problems in providing the appropriate information and inform the relevant personnel</p> <p>11.2. Inform the relevant personnel promptly when the information required cannot be obtained within the agreed timescales</p>

<b>UNIT 4</b>	<b>MAINTAIN THE QUALITY OF SIGN PRODUCTION IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	4
GUIDED LEARNING HOURS	26

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### Unit Overview

This unit addresses the skills and knowledge required to maintain the quality of sign products in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Inspection and Testing Activities**

Visual, use of equipment - precision, non-precision, portable, fixed, routine, non-routine, and use of instruments, on-line, off-line

#### **Recording Formats**

Pre-specified, non-pre-specified

#### **Relevant Person**

Line manager, supervisor, team leader, etc.

### Relevant Health and Safety and Environmental Requirements

Responsibilities in respect of Health and Safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

### Learning Outcome and Assessment Criteria

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to measure the quality of a product against the specification in their organisation	1.1. Explain the defined quality control procedures 1.2. State acceptable specifications and parameters for different sign products 1.3. Identify the different types of routine and non-routine variations that are associated with specific processes and materials
2. Know how to check for conformity in sign materials and products in their organisation	2.1. Explain how to obtain and follow the correct quality control specification 2.2. Explain why it is important to compare work instructions to the finished product 2.3. Identify which monitoring methods, tests and equipment are suitable for testing the different variations 2.4. Identify which recording methods, formats and storage places to use
3. Know how to take the appropriate action in dealing with inspection results in their organisation	3.1. Explain how to compare types of faults with potential causes and solutions 3.2. Identify the different diagnosis techniques and methods that can be used
4. Know how to store products safely	4.1. Identify the acceptable designated storage areas for the different products 4.2. Explain how to determine the suitability of different storage racking and materials for the products to be stored 4.3. Identify the different factors which could cause damage during handling and storage of sign products 4.4. Explain the consequences of not taking these different factors into account 4.5. Describe the methods of storing and labelling that are used 4.6. Explain how to identify and maintain the protective capabilities of materials
5. Know how to repair a product	5.1. Explain the different methods and techniques that are used to repair products
6. Know how to deal with problems	6.1. Identify the types of problems that may occur 6.2. Identify the appropriate action to take if there are problems 6.3. Identify the different types of equipment problems that can occur and how to deal with them

<p>7. Be able to check for conformity in sign materials and products</p>	<p>7.1. Check that the equipment to be used is clean, safe and in a functional condition according to company procedures</p> <p>7.2. Prepare samples for inspection and testing according to company procedures</p> <p>7.3. Carry out inspection and testing activities according to inspection specification and operating procedures</p> <p>7.4. Identify and report any variations in materials and products specification to the relevant person</p>
<p>8. Be able to work to organisational and operational procedures</p>	<p>8.1. Carry out the work to quality control specification in accordance with company procedures and within the required time</p> <p>8.2. Record information accurately, legibly and completely</p>

## **OPTIONAL UNITS - GROUP A**

<b>UNIT 5</b>	<b>PREPARE FOR SIGN OPERATIONS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	6
GUIDED LEARNING HOURS	44

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### **Unit Overview**

This unit addresses the skills and knowledge required to prepare for sign operations in a signmaking environment.

### **Assessment Guidance and Evidence Requirements**

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### **Information on use of Assessment Context**

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Production Requirements**

Processes, products, transportation, power source, volume, quality

#### **Work Instructions**

Job instructions, verbal, written text, numeric text

#### **Resource Requirements**

Materials, personnel, plant, equipment, time, tools, etc.

**Relevant Personnel**

Line manager, supervisor, team leader, etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Work Area**

Personal area, storage area

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to access and interpret the work instructions	1.1. Identify the correct work instructions for the current job 1.2. Explain how to interpret sign operation and production requirements from the work instructions 1.3. Identify the work operations and products that are within individual's own responsibility 1.4. Explain how to compare own responsibilities with work instructions 1.5. Identify the work environment and the resources which will be required from the work instructions 1.6. Explain why it is important that work instructions are stored appropriately
2. Know how to gather the resources needed for production	2.1. Identify the resources that are obtainable from the work instructions within personal responsibility 2.2. Explain when to complete documentation and why it must be completed accurately
3. Know how to prepare the work environment safely for production	3.1. Explain how to determine the optimum work area layout for the specified operations 3.2. Explain how to dispose of waste safely 3.3. Identify the hazards associated with own working environment and the risks they pose 3.4. Explain how to check that the equipment is functioning effectively and is fit for purpose 3.5. Explain the acceptable handling and storage methods and places including temporary storage areas
4. Know how to start up production when this is required	4.1. Identify when and how to carry out the startup procedures safely as defined in organisational procedures
5. Know how to deal with problems	5.1. Identify the problems that may occur when preparing for sign operations 5.2. Explain what action to take if there are problems 5.3. Identify problems that are outside own responsibility

<p>6. Be able to ensure that resources meet production requirements</p>	<p>6.1. Ensure that the quality and quantity of materials selected is sufficient to meet work instructions and make the specified sign product</p> <p>6.2. Select appropriate resources to meet the work instructions and make the specified sign products</p> <p>6.3. Ensure that any required resources are available at the start of the operation</p> <p>6.4. Gain authorisation from relevant personnel for any required resources which are outside own responsibility and/or do not match the work instructions</p>
<p>7. Be able to prepare the work area for production</p>	<p>7.1. Prepare the work area and resources to optimise the sign operation</p> <p>7.2. Maintain a safe and organised work area at all times</p> <p>7.3. Dispose of any waste safely according to prescribed procedures</p> <p>7.4. Obtain and store work instructions appropriately, ensuring they are accessible if required</p> <p>7.5. Clarify with an appropriate person any unclear and/or ambiguous work instructions</p>
<p>8. Be able to prepare the equipment needed to meet production requirements</p>	<p>8.1. Ensure that any equipment selected functions effectively, and is fit for purpose</p> <p>8.2. Set up equipment safely according to manufacturers' instructions, when this is required</p> <p>8.3. Identify any equipment and machine faults which occur during start up procedures and take the appropriate action</p>
<p>9. Be able to start up production safely</p>	<p>9.1. Carry out start up procedures for machines/equipment following manufacturers' instructions and organisational procedures</p>
<p>10. Be able to deal with problems</p>	<p>10.1. Report any problems which are outside own responsibility immediately to the relevant personnel</p>

<b>UNIT 6</b>	<b>PREVENT DAMAGE DURING TRANSPORTATION AND STORAGE OF SIGN PRODUCTS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	7
GUIDED LEARNING HOURS	56

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### **Unit Overview**

This unit addresses the skills and knowledge required to prevent damage during transportation and storage of sign products in a signmaking environment.

### **Assessment Guidance and Evidence Requirements**

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### **Information on use of Assessment Context**

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Factors that may cause damage to products**

People, moving equipment, moving machinery, moving materials, the environment

#### **Method of Transportation**

Manual, automated

#### **Protective Materials**

Organic, non-organic

#### **Protection Methods**

Warning signs, coverings, buffers, paddings

**Relevant Personnel**

Line manager, supervisor, team leader etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to protect products during transportation and storage	1.1. Identify the characteristics of protective materials and how to handle them without causing them damage  1.2. Explain how to select the appropriate protective materials for a product  1.3. Explain how to position and secure different protective materials  1.4. Identify the implications of not using protective materials  1.5. Identify the cost associated with using different protective materials  1.6. Identify the consequences of not considering factors which could cause damage to products
2. Know how to transport sign products	2.1. Identify the characteristics of the sign product and the likelihood of damage occurring during transportation  2.2. Explain how to identify and select the most suitable method of transportation for specific products  2.3. Explain how to identify products which need extra care during transportation  2.4. Identify what could cause damage to a specific product during transportation on particular routes
3. Know how to protect products during storage	3.1. Identify what different seating protection methods and materials there are and which to use in different circumstances  3.2. Identify the acceptable designated storage areas for different products including marked and unmarked areas and those within and away from the personal work area  3.3. Explain how to check the suitability of different storage racking and materials for the products to be stored
4. Know how to deal with problems	4.1. Identify the types of problems that may occur  4.2. Identify the appropriate action to take if there are problems

<p>5. Know how to complete the documentation</p>	<p>5.1. Explain when to complete the documentation</p> <p>5.2. Explain why the documentation must be completed accurately</p>
<p>6. Be able to safely protect products during transportation and storage</p>	<p>6.1. Identify and select suitable protection methods and materials</p> <p>6.2. Ensure that the protective capabilities of materials will be maintained during storage</p> <p>6.3. Position and secure protective materials accurately and correctly to prevent damage to the finished sign product(s)</p>
<p>7. Be able to transport sign products</p>	<p>7.1. Choose the correct equipment to move the sign product(s)</p> <p>7.2. Ensure that sign product(s) which are ready for transportation are stored within the designated area</p> <p>7.3. Check that the sign product(s) to be moved are correct, safely loaded and secure</p>
<p>8. Be able to store products</p>	<p>8.1. Use the appropriate seating and separation methods to ensure safe storage for the product</p> <p>8.2. Check that finished products are stored within the designated area</p>
<p>9. Be able to deal with problems</p>	<p>9.1. Report any problems with the protective materials, sign product(s) and/or equipment immediately to the relevant personnel</p> <p>9.2. Report any problems that cannot personally be solved, and/or are outside personal responsibility, to the relevant personnel</p>
<p>10. Be able to complete the documentation</p>	<p>10.1. Record information accurately using the documentation appropriate for the activity</p>

<b>UNIT 7</b>	<b>FINISH AND COMPLETE SIGNAGE OPERATIONS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	9
GUIDED LEARNING HOURS	46

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### Unit Overview

This unit addresses the skills and knowledge required to finish and complete signage operations in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Contamination and damage**

Could be caused by people, moving equipment, moving machinery, moving materials, the environment

#### **Equipment**

Manual, automated, electronic

**Materials**

Metal, wood, plastics, vinyl, polystyrene, composite boards

**Tools**

Cutting blades, knives, bits, brush, etc.

**Finishing Methods**

Hand finishing, manually/fully automated, machine finishing, polishing, shaping, reducing

**Positioning, Fixing and Fastening Methods**

Jigs, clamps, fixing materials

**Relevant Personnel**

Line manager, supervisor, team leader, etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Transportation**

Manual, automated

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to access and interpret the work instructions	1.1. Identify how to obtain and follow work instructions, relevant finishing procedures and quality specification to establish requirements
2. Know how to minimise waste and prevent contamination	2.1. Explain how to prevent contamination and damage 2.2. Explain the consequences of materials becoming contaminated 2.3. Explain how to minimise waste 2.4. Identify what is regarded as waste and how to remove it safely following approved procedures
3. Know how to utilise the resources needed to finish and complete sign operations	3.1. Identify the range of resources that are required within the finishing operation and explain how to use them 3.2. Identify the materials, tools and equipment that should be checked for defects 3.3. Explain how to check tools and equipment for defects 3.4. Identify the minor defects that are within personal permitted authority and how to rectify them 3.5. Identify the equipment that needs to be shut down 3.6. Explain how to shut down equipment safely following approved procedures
4. Know how to finish and complete sign operations	4.1. Explain the different finishing methods techniques and how to perform them 4.2. Identify the specified requirements and tolerances and why these are important 4.3. Explain how to complete the finishing operation and maintain the correct order, sequence, dimensions and positioning of joined and assembled materials 4.4. Identify products that need to be bundled, batched and stored and how to carry this out
5. Know how to protect finished products during transportation	5.1. Explain how to identify and select methods of transportation 5.2. Identify how to select the most suitable method of transport to avoid damage when handling materials and sign products and during transportation 5.3. Identify the different protective materials and when to use them 5.4. Explain which positioning and securing positions and methods are appropriate for the different protective materials 5.5. Identify the different seating protection methods and materials that are available and which to use in different circumstances
6. Know how to utilise storage facilities	6.1. Identify acceptable storage locations, including local and central storage 6.2. Explain how to secure storage areas and why this is necessary
7. Know how to deal with problems	7.1. Identify the problems that may occur when finishing sign operations 7.2. Explain what action to take if there are problems

	7.3. Identify the hazards associated with own working environment and the risks they pose
8. Know how to complete the documentation	8.1. Identify the types of documentation that could be used when finishing products 8.2. Explain why the documentation must be completed accurately
9. Be able to minimise waste	9.1. Minimise waste production 9.2. Remove and dispose of waste materials safely using an approved method
10. Be able to utilise the resources needed for finishing operations	10.1. Identify and select resources appropriate for the finishing operation being performed 10.2. Check resources for defects and potential defects before transporting to appropriate storage location 10.3. Identify and rectify any defects using the approved method prior to their return to storage 10.4. Ensure that resources are safely transported and stored in their correct place using an accepted transportation method
11. Be able to finish and complete sign operations	11.1. Follow the correct sequence of events in the finishing operation 11.2. Ensure that the positioning of joined and assembled materials is maintained within the specified tolerances 11.3. Ensure that finished surfaces are completed to timescale and are clean, free from marks, scratches, chips and dust, within specified tolerances 11.4. Shut down equipment safely according to manufacturers' instructions
12. Be able to protect finished products during transportation	12.1. Handle and prepare the materials for transfer to avoid damage 12.2. Load, unload and transfer materials according to specification 12.3. Remove the finished product from the processing area according to specification 12.4. Label and store finished product accurately within the designated area 12.5. Ensure that waste is minimised and dispose of waste according to policy guidelines 12.6. Transfer unused materials to designated area
13. Be able to utilise storage facilities	13.1. Ensure that finished materials are bundled, batched and stored correctly to prevent contamination and damage, when this is necessary 13.2. Ensure that storage areas are made secure in line with security requirements, when this is necessary
14. Be able to deal with problems	14.1. Deal promptly with problems that are within personal responsibility 14.2. Report problems that cannot be solved and/or are not own responsibility, to the relevant person
15. Be able to complete the documentation	15.1. Complete any necessary documentation accurately

## OPTIONAL UNITS - GROUP B

<b>UNIT 8</b>	<b>CARRY OUT WIDE FORMAT DIGITAL PRINT OPERATIONS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	6
GUIDED LEARNING HOURS	32

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### Unit Overview

This unit addresses the skills and knowledge required to carry out wide format digital print operations in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Tools**

Scissors, knives, cutting blades, knives, bits, brush

#### **File**

New, existing

#### **Image**

Bitmap, vector

**Output**

ICC profile, ink type, media

**Materials**

Vinyl, polyester, metal, wood, plastics, polystyrene, composite boards

**Protection Methods**

Warning signs, coverings, paddings, buffers

**Relevant Personnel**

Line manager, supervisor, team leader, etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Equipment**

Manual, automated, electronic

**Finish**

Hand finishing, manually and/or fully automated, machine finishing, polishing, shaping, reducing

**Customer**

Internal colleagues and external clients

**Fault indicators**

Unusual machine noise, vibration, machine stoppage, warning devices, alarm systems, fumes, etc.

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know the principles of carrying out wide format digital print operations	1.1. Explain the techniques and methods needed to complete the activity
2. Know how to prepare for wide format digital print operations	2.1. Explain how to ensure that the appropriate equipment, tools and materials are available and ready for use 2.2. Explain why it is important to calibrate and carry out test prints 2.3. Identify acceptable protection methods and when and how to use them
3. Know how to produce the required graphical image	3.1. Explain the different ways to manipulate the image 3.2. Identify when the job is in the correct file format 3.3. Explain why it is important to gas off printed media
4. Know how to carry out wide format digital print operations	4.1. Explain why it is important to monitor the print quality 4.2. Explain why it is important to check the finished print against the specification 4.3. Explain what is regarded as acceptable quality 4.4. Identify how to meet a product that is of an acceptable quality

5. Know how to finish the signage operation	<p>5.1. Explain how to maintain the equipment</p> <p>5.2. Explain how to shut down any equipment that has been used</p> <p>5.3. Identify suitable places to store the finished product</p>
6. Know how to deal with problems	<p>6.1. Identify the different fault indicators that may be activated</p> <p>6.2. Identify the problems that may occur when operating and maintaining a wide format printer</p> <p>6.3. Explain what action to take if there are problems</p> <p>6.4. Identify the hazards associated with own working environment and the risks they pose</p>
7. Know how to complete the documentation	<p>7.1. Identify when to complete documentation</p> <p>7.2. Explain why the documentation must be completed accurately</p>
8. Be able to prepare for wide format digital print operations	<p>8.1. Check that received job for printing is in the correct file format</p> <p>8.2. Check that all tools and equipment are in a safe condition and are operating correctly</p> <p>8.3. Ensure the selected media is appropriate for the image and specification requirements</p> <p>8.4. Set up and load the media for printing in accordance with manufacturers' instructions</p> <p>8.5. Carry out media feed calibrations and test prints that are appropriate for the printer</p>
9. Be able to produce the required graphical image	<p>9.1. Export and manipulate the image into the RIP to meet the specification</p> <p>9.2. Carry out sheet cut in line with specification</p>
10. Be able to carry out wide format digital print operations	<p>10.1. Print and monitor the quality of printing against specification</p> <p>10.2. Finish off the print and check against specification</p>
11. Be able to finish the signage operation	<p>11.1. Carry out the appropriate maintenance for the particular type of printer</p> <p>11.2. Safely shut down any equipment that has been used</p> <p>11.3. Store the finished product appropriately</p>
12. Be able to deal with problems	<p>12.1. Deal promptly with problems that are within personal responsibility</p> <p>12.2. Report problems that cannot be solved and/or are not own responsibility, to the relevant person</p>
13. Be able to complete the documentation	<p>13.1. Complete job records legibly and in accordance with organisational requirements</p>

<b>UNIT 9</b>	<b>CARRY OUT SHAPING OPERATIONS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	6
GUIDED LEARNING HOURS	32

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### **Unit Overview**

This unit addresses the skills and knowledge required to carry out shaping operations in a signmaking environment.

### **Assessment Guidance and Evidence Requirements**

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### **Information on use of Assessment Context**

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Types of Equipment**

Manual, mechanised, electronic

#### **Types of Material**

Metal, wood, plastics, vinyl, polystyrene, composite boards etc.

#### **Types of Cutting Tools**

Blades, knives, bits

#### **Securing, Fixing and Fastening Methods**

Jigs, clamps, fixing materials

**Relevant Personnel**

Line manager, supervisor, team leader etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Template Material**

Rigid, flexible

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Understand the methods needed to carry out shaping operations	1.1. Explain how to select and use appropriate techniques and methods to shape the materials by cutting
2. Know how to prepare the materials needed for shaping and cutting	2.1. Identify when and how to set out materials to the specified tension without distortion 2.2. Identify the materials that can be used to separate and prevent distortion in cutting and where to insert them 2.3. Explain how to set up the correct quantity of materials to match specification lengths, widths and number 2.4. Identify template materials appropriate for the work to be completed 2.5. Explain the consequences of not using the appropriate template material 2.6. Identify how and where to store materials
3. Know how to prepare the equipment needed for shaping and cutting	3.1. Explain how to identify, select and use tools and equipment 3.2. Explain how to identify and position securing devices and equipment
4. Know how to cut materials according to the specification	4.1. Explain the consequences of not getting the cutting device accurately positioned at the start of the process 4.2. Identify the need for notches and marks and how to cut them in the correct position 4.3. Describe how to measure shapes accurately and draw them onto a suitable template material 4.4. Explain the accepted sequences for cutting 4.5. Explain how to cut shapes accurately within specified tolerances 4.6. Explain how to deal with shaped products

<p>5. Know how to maintain quality during shaping operations</p>	<p>5.1. Identify what is regarded as acceptable quality (e.g. marks, scratches, chips and dust)</p> <p>5.2. Explain how to follow quality control procedures</p> <p>5.3. Identify the specified tolerances and why these are important</p>
<p>6. Know how to deal with problems</p>	<p>6.1. Identify the problems that may occur when carrying out shaping operations</p> <p>6.2. Explain what action to take if there are problems</p>
<p>7. Know how to complete the documentation</p>	<p>7.1. Identify when to complete documentation</p> <p>7.2. Explain why the documentation must be completed accurately</p>
<p>8. Be able to interpret the work instructions</p>	<p>8.1. Check and confirm that the work is carried out to the quality specifications, work instructions and any shaping relevant to the operations</p>
<p>9. Be able to prepare the resources needed for shaping and cutting</p>	<p>9.1. Select template materials appropriate for the work to be completed</p> <p>9.2. Set out materials according to work instructions</p> <p>9.3. Confirm that the correct quantity of materials is set out to match the specification</p> <p>9.4. Confirm that the necessary resources to shape the materials to specification have been obtained</p> <p>9.5. Check and confirm that the appropriate tools, equipment and resources, including Personal Protective Equipment, have been obtained</p>
<p>10. Be able to cut materials according to the specification</p>	<p>10.1. Identify required template shapes</p> <p>10.2. Measure and, where necessary, cut the template to shape</p> <p>10.3. Position notches and marks accurately according to cutting order requirements</p> <p>10.4. Position the template on the material to be shaped</p> <p>10.5. Ensure that positioning, securing devices and equipment are accurately, securely, safely and correctly positioned for the cutting process</p> <p>10.6. Position the cutting device and cut the shapes within specified tolerances</p>
<p>11. Be able to maintain quality during shaping operations</p>	<p>11.1. Follow the approved quality control procedures</p> <p>11.2. Ensure that cut shapes are free from marks, scratches, chips and dust</p> <p>11.3. Ensure that materials are kept free of contamination</p> <p>11.4. Store excess materials in an approved manner</p> <p>11.5. Deal with the shaped product, according to procedures</p>
<p>12. Be able to deal with problems</p>	<p>12.1. Report any problems that cannot be solved to the relevant personnel</p>
<p>13. Be able to complete the documentation</p>	<p>13.1. Complete documentation accurately and in accordance with organisational requirements</p>

<b>UNIT 10</b>	<b>CARRY OUT JOINING OPERATIONS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	6
GUIDED LEARNING HOURS	32

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### Unit Overview

This unit addresses the skills and knowledge required to carry out joining operations in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Types of Securing Devices**

Manual, automated

#### **Types of Material**

Metal, wood, plastics, vinyl, glass, polystyrene, composite board

#### **Types of Bonding Methods**

Heat welding, heat soldering, fixings, riveting, nuts and bolts, screws, taps

#### **Securing, Fixing and Fastening Methods**

Jigs, clamps, fixing materials

**Relevant Personnel**

Line manager, supervisor, team leader etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to access and interpret the instructions for joining operations	1.1. Explain how to check and confirm that the relevant work instructions and assembly instructions and procedures are ready for use 1.2. Explain how to check that the correct bonding instructions and quality specification relevant to the procedure have been obtained
2. Know how to prepare the resources needed for joining operations	2.1. Explain how to select and use appropriate materials, techniques and methods needed to complete the bonding activity 2.2. Explain how to ensure that the appropriate equipment, tools and materials are available
3. Know how to carry out joining operations according to the specification	3.1. Identify the appropriate securing and fixing devices for the materials being bonded 3.2. Explain how to use the securing and fixing devices 3.3. Explain how to position and secure devices for bonding materials together 3.4. Identify the relevant techniques and methods for assembling materials and how to perform them
4. Know how to maintain quality during joining operations	4.1. Identify the acceptable tolerances to work within for different types of materials 4.2. Explain how to interpret the quality specification for the materials that are worked with 4.3. Identify what is regarded as acceptable quality and how to meet that requirement 4.4. Explain how to deal with assembled products to maintain quality
5. Know how to deal with problems	5.1. Identify the problems that may occur when carrying out joining operations 5.2. Explain what action to take if there are problems
6. Know how to complete the documentation	6.1. Identify when to complete documentation 6.2. Explain why the documentation must be completed accurately

7. Be able to interpret the work instructions	7.1. Check and confirm that the work is carried out to the quality specifications, work instructions and any bonding procedures relevant to the operations
8. Be able to prepare the resources needed for joining operations	<p>8.1. Check and confirm that the tools, equipment and resources, including Personal Protective Equipment appropriate for the bonding and assembly operation have been obtained</p> <p>8.2. Ensure that materials to be bonded are of the specified dimensions</p> <p>8.3. Position and secure devices prior to assembly of materials</p>
9. Be able to carry out joining operations according to the specification	<p>9.1. Identify, position and use securing and fixing devices</p> <p>9.2. Ensure that materials are positioned, assembled and layered in the correct order within specified tolerances</p> <p>9.3. Ensure that bonded materials are completed to timescale</p>
10. Be able to maintain quality during joining operations	10.1. Ensure that the bonded materials are clean and free from marks, scratches, chips and dust within specified tolerances
11. Be able to deal with problems	11.1. Report any problems that cannot be solved promptly to the relevant personnel
12. Be able to complete the documentation	12.1. Complete documentation accurately and in accordance with organisational requirements, when this is required

<b>UNIT 11</b>	<b>CARRY OUT ENGRAVING OPERATIONS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	6
GUIDED LEARNING HOURS	32

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### Unit Overview

This unit addresses the skills and knowledge required to carry out engraving operations in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Removal Methods**

Hand held tools, fixed tools

#### **Types of Rectification Methods**

Manual, automated

#### **Relevant Personnel**

Line manager, supervisor, team leader etc.

### Relevant Health and Safety and Environmental Requirements

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

### Learning Outcome and Assessment Criteria

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to access and interpret the instructions for engraving operations	1.1. Explain how to check that the relevant work instructions and any relevant engraving procedures are ready for use 1.2. Explain how to check that the quality specification relevant to the procedure is ready for use
2. Know how to prepare for engraving operations	2.1. Explain how to determine the resources i.e. equipment, tools and materials needed to complete the activity 2.2. Explain how to identify and select template materials appropriate for the work to be completed 2.3. Identify the consequences of not using appropriate template material 2.4. Identify how and why surrounding areas should be protected from damage 2.5. Identify the acceptable pre marking methods 2.6. Identify the lubricants and coolants that are used in engraving operations and which to use in particular jobs
3. Know how to carry out engraving operations according to the specification	3.1. Explain how to select and use appropriate techniques and methods needed to carry out engraving operations 3.2. Explain how to measure shapes accurately and draw them onto a suitable template material 3.3. Explain how to carry out the engraving operation 3.4. Identify the specified requirements and positioning and quality tolerances and explain why these are important 3.5. Identify how to store the engraved product, if this is necessary 3.6. Identify what is regarded as acceptable quality
4. Know how to deal with problems	4.1. Identify the problems that may occur when carrying out engraving operations 4.2. Explain what action to take if there are problems
5. Know how to complete the documentation	5.1. Identify when to complete documentation 5.2. Explain why the documentation must be completed accurately

6. Be able to interpret the work instructions	6.1. Check and confirm that the work is carried out to the quality specifications, work instructions and any engraving procedures relevant to the operations
7. Be able to prepare for engraving operations	<p>7.1. Protect the surrounding areas from damage</p> <p>7.2. Ensure that the necessary resources appropriate for the engraving operation, including suitable Personal Protective Equipment are available</p> <p>7.3. Identify required template shapes and measure them</p>
8. Be able to carry out engraving operations according to the specification	<p>8.1. Cut the template shapes if required, and then position on materials to be engraved</p> <p>8.2. Confirm that the areas to be engraved are identified and pre-marked using an accepted method</p> <p>8.3. Ensure that the correct lubricants and coolants are used at the appropriate time to minimise damage to materials, tools and equipment</p>
9. Be able to deal with problems	<p>9.1. Identify any defects and problems with the surface to be engraved prior to operation and inform the relevant personnel</p> <p>9.2. Report any problems promptly to the relevant personnel</p>
10. Be able to complete the documentation	10.1. Complete documentation accurately and in accordance with organisational requirements, when this is required

<b>UNIT 12</b>	<b>CARRY OUT ETCHING OPERATIONS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	6
GUIDED LEARNING HOURS	32

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### Unit Overview

This unit addresses the skills and knowledge required to carry out etching operations in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Types of Surface Defect**

Visual, tactile (touch)

#### **Types of Rectification Methods**

Manual, automated

#### **Masking Methods**

Physical, photographic

#### **Etching Agents or Methods**

Chemical, abrasive

**Etching Equipment**

Sealed liquid, sealed air

**Relevant Personnel**

Line manager, supervisor, team leader etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to access and interpret the instructions for etching operations	1.1. Explain how to check that the correct work instructions and any relevant etching procedures and quality specification are ready for use
2. Know how to prepare for etching operations	2.1. Explain how to ensure that the appropriate equipment, tools and materials have been obtained 2.2. Explain how to ensure that masking materials are appropriate for the work to be completed 2.3. Identify the consequences of not using appropriate masking materials 2.4. Explain what the acceptable pre-marking methods are
3. Know how to carry out etching operations according to the specification	3.1. Explain how to select and use appropriate techniques and methods needed to complete the activity 3.2. Explain how to position masking shape and check the measurements 3.3. Identify the specified requirements and positioning and quality tolerances and explain why these are important 3.4. Explain why etching agents are used and how and when to use them 3.5. Explain how to draw shapes onto a suitable masking material 3.6. Identify how to store the etched product, if this is necessary 3.7. Identify what is regarded as acceptable quality
4. Know how to deal with problems	4.1. Identify the types of problem that may occur 4.2. Explain what action to take if there are problems 4.3. Identify the types of defects and how to identify them
5. Know how to complete the documentation	5.1. Identify when to complete documentation 5.2. Explain why the documentation must be completed accurately

6. Be able to interpret the work instructions	6.1. Check and confirm that the work is carried out to the quality specifications, work instructions and any etching procedures relevant to the operations
7. Be able to prepare for etching operations	7.1. Protect the surrounding areas from damage 7.2. Ensure that the necessary resources appropriate for the etching operation, including suitable Personal Protective Equipment are available 7.3. Identify required template shapes and measure them
8. Be able to carry out etching operations according to the specification	8.1. Cut the template shapes if required, and then position on materials to be etched 8.2. Confirm that the areas to be etched are identified and pre-marked using an accepted method 8.3. Carry out the etching operation according to work instructions and safe operating/quality procedures
9. Be able to deal with problems	9.1. Identify any defects and problems with the surface to be etched prior to operation and inform the relevant personnel 9.2. Report any problems promptly to the relevant personnel
10. Be able to complete the documentation	10.1. Complete documentation accurately and in accordance with organisational requirements, when this is required

<b>UNIT 13</b>	<b>CARRY OUT HAND FINISHING OPERATIONS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	10
GUIDED LEARNING HOURS	40

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### Unit Overview

This unit addresses the skills and knowledge required to carry out hand finishing operations in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Types of Substrate**

Porous, non-porous

#### **Types of Coatings**

Paint, stain, gild

#### **Types of Treatments**

Pre-treatments, primers, intermediate coatings, finishing coatings

**Methods of Application**

Brush, roller, airbrush

**Masking Preparation Methods**

Manual, automated

**Types of Masking Materials**

Rigid, flexible

**Preparation Techniques**

Stir, strain, decant, viscosity adjustment

**Types of Protection Methods**

Warning signs, coverings, buffers, paddings

**Relevant Personnel**

Line manager, supervisor, team leader etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to access and interpret the instructions for hand finishing operations	1.1. Explain how to check that the correct work instructions and any relevant hand finishing procedures and quality specification are ready for use
2. Know how to prepare for hand finishing operations	2.1. Explain how to ensure that the appropriate equipment, tools and materials have been obtained 2.2. Explain how to ensure that the template materials are appropriate for the work to be completed 2.3. Identify what the consequences are of not using the appropriate template 2.4. Explain how to protect the surface from damage 2.5. Identify the correct preparation technique to use
3. Know how to carry out hand finishing operations according to the specification	3.1. Explain how to select and use appropriate techniques and methods needed to complete the activity 3.2. Explain how to measure shapes accurately and draw them onto a suitable template material 3.3. Explain how and when to apply coatings 3.4. Identify the specified positioning and quality tolerances and explain why these are important 3.5. Describe the accepted sequences and combinations for applying coatings 3.6. Identify how to store the hand finished product, if this is necessary

4. Know how to deal with problems	<p>4.1. Identify the types of problem that may occur</p> <p>4.2. Explain what action to take if there are problems</p> <p>4.3. Identify the types of defects and how to identify them</p>
5. Know how to complete the documentation	<p>5.1. Identify when to complete documentation</p> <p>5.2. Explain why the documentation must be completed accurately</p>
6. Be able to interpret the work instructions	6.1. Check and confirm that the work is carried out to the quality specifications, work instructions and any hand finishing procedures relevant to the operations
7. Be able to prepare for hand finishing operations	<p>7.1. Ensure that the necessary resources for the hand finishing operation, including suitable PPE (Personal Protective Equipment) have been obtained</p> <p>7.2. Protect surfaces from damage using an accepted method</p> <p>7.3. Ensure that the substrate is suitably prepared to receive subsequent treatments and coatings</p> <p>7.4. Carry out the correct preparation technique</p>
8. Be able to carry out hand finishing operations according to the specification	<p>8.1. Identify required template shapes, measure and where necessary, cut and then position on the materials to be decorated</p> <p>8.2. Carry out the hand decorating operation according to work instructions and safe operating/quality procedures</p> <p>8.3. Ensure that the time left between treatments and coatings meets manufacturers' recommendations</p>
9. Be able to deal with problems	9.1. Report any problems promptly to the relevant personnel
10. Be able to complete the documentation	10.1. Complete documentation accurately and in accordance with organisational requirements, when this is required

<b>UNIT 14</b>	<b>CARRY OUT SPRAY PAINT OPERATIONS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	10
GUIDED LEARNING HOURS	40

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### Unit Overview

This unit addresses the skills and knowledge required to carry out spray paint operations in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Types of Substrate**

Porous, non-porous

#### **Types of Coatings**

Pre-treatments, primers, intermediate coatings, finishing coatings

#### **Masking Preparation Methods**

Manual, automated

#### **Types of Masking Materials**

Rigid, flexible

**Paint Preparation Technique**

Stir, strain, decant, viscosity adjustment

**Types of Protection Methods**

Warning signs, coverings, buffers, paddings

**Methods of Application**

Air, airless, electrostatic, high volume/low pressure (HVLP)

**Relevant Personnel**

Line manager, supervisor, team leader etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to access and interpret the instructions for spray paint operations	1.1. Explain how to check that the correct work instructions and any relevant spray paint procedures and quality specification are ready for use
2. Know how to prepare for spray paint operations	2.1. Explain how to ensure that the appropriate equipment, tools and materials have been selected 2.2. Explain how to ensure that the template materials are appropriate for the work to be completed 2.3. Identify what the consequences are of not using the appropriate template 2.4. Identify acceptable protection methods and when and how to use them 2.5. Identify the correct preparation technique to use
3. Know how to carry out spray paint operations according to the specification	3.1. Explain how to select and use appropriate techniques and methods needed to complete the activity 3.2. Explain how to use template materials appropriate for the work to be completed and what the consequences are of not using the appropriate template material 3.3. Identify the specified positioning and quality tolerances and why these are important 3.4. Explain how to use spray painting tools and equipment 3.5. Explain how to use shapes accurately and draw them onto a suitable template material 3.6. Explain how and when to apply coatings

4. Know how to deal with problems	<p>4.1. Identify the types of problem that may occur</p> <p>4.2. Explain what action to take if there are problems</p>
5. Know how to complete the documentation	<p>5.1. Identify when to complete documentation</p> <p>5.2. Explain why the documentation must be completed accurately</p>
6. Be able to interpret the work instructions	6.1. Check and confirm that the work is carried out to the quality specifications, work instructions and any spray paint procedures relevant to the operations
7. Be able to prepare for spray paint operations	<p>7.1. Ensure that the necessary resources for the spray paint operation, including suitable PPE (Personal Protective Equipment) have been selected</p> <p>7.2. Protect surfaces from damage using an accepted method</p> <p>7.3. Carry out the relevant preparation technique and ensure that the substrate is suitably prepared to receive subsequent treatments and coatings</p>
8. Be able to carry out spray paint operations according to the specification	<p>8.1. Confirm that the required template shapes have been obtained, measure and position on the materials to be spray painted</p> <p>8.2. Carry out the spray paint operation according to work instructions and safe operating/ quality procedures</p> <p>8.3. Ensure that the time left between treatments and coatings meets manufacturers' recommendations</p>
9. Be able to deal with problems	9.1. Report any problems promptly to the relevant personnel
10. Be able to complete the documentation	10.1. Complete documentation accurately and in accordance with organisational requirements, when this is required

<b>UNIT 15</b>	<b>CARRY OUT SCREEN PRINT OPERATIONS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	6
GUIDED LEARNING HOURS	32

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### Unit Overview

This unit addresses the skills and knowledge required to screen print products in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Types of Substrate**

Porous, non-porous

#### **Types of Inks**

Water based, solvent based, spirit based

#### **Methods of Application**

Manual, automated

**Types of Protection Methods**

Warning signs, coverings, buffers, paddings

**Positioning and Securing Methods**

Vacuum, jigs, clamps, fixing materials

**Stencil Preparation Techniques**

Hand, photographic, light sensitive films

**Relevant Personnel**

Line manager, supervisor, team leader etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to access and interpret the instructions for screen print operations	1.1. Explain how to check that the correct work instructions and any relevant screen print procedures and quality specification are ready for use
2. Know how to prepare for screen print operations	2.1. Explain how to ensure that the appropriate equipment, tools and materials have been obtained 2.2. Identify the different types of positioning and securing devices and how to use them 2.3. Identify acceptable protection methods and when and how to use them 2.4. Identify the correct preparation technique to use
3. Know how to carry out screen print operations according to the specification	3.1. Explain how to select and use appropriate techniques and methods needed to complete the activity, to include organic and non-organic mesh stencil equipment 3.2. Identify the specified positioning and quality tolerances and why these are important 3.3. Explain how to use screen printing tools and equipment
4. Know how to deal with problems	4.1. Identify the types of problem that may occur 4.2. Explain what action to take if there are problems
5. Know how to complete the documentation	5.1. Identify the documentation to complete and explain why it must be completed accurately
6. Be able to interpret the work instructions	6.1. Check and confirm that the work is carried out to the quality specifications, work instructions and screen print procedures relevant to the operations

7. Be able to prepare for screen print operations	7.1. Ensure that the necessary resources for the screen print operation, including suitable PPE (Personal Protective Equipment) have been obtained 7.2. Protect relevant surfaces from damage using an accepted method 7.3. Carry out any relevant preparation technique prior to screen print operations
8. Be able to carry out screen print operations according to the specification	8.1. Position and secure devices and equipment and, when appropriate, set out materials to the specified tension without distortion 8.2. Carry out the screen print operation according to work instructions and safe operating/ quality procedures
9. Be able to deal with problems	9.1. Report any problems promptly to the relevant personnel
10. Be able to complete the documentation	10.1. Complete documentation accurately and in accordance with organisational requirements, when this is required

<b>UNIT 16</b>	<b>CARRY OUT FORMING OPERATIONS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	6
GUIDED LEARNING HOURS	32

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### Unit Overview

This unit addresses the skills and knowledge required to form materials and products in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Types of Forming Devices**

Manual, automated

#### **Types of Materials**

Metal, wood, plastics, vinyl, polystyrene, composite boards

#### **Forming Methods**

Mechanical or manual methods using either heat and/or manipulation

## Securing, Fixing and Fastening Methods

Jigs, clamps, fixing materials

### Relevant Personnel

Line manager, supervisor, team leader, etc.

### Relevant Health and Safety and Environmental Requirements

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

## Learning Outcome and Assessment Criteria

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to access and interpret the instructions for carrying out forming operations	1.1. Explain how to check that the correct work instructions and any relevant forming procedures and quality specification are ready for use
2. Know how to prepare for forming operations	2.1. Explain how to check and confirm that the appropriate resources for forming operations, including suitable PPE (Personal Protective Equipment) are available
3. Know how to carry out forming operations according to the specification	3.1. Explain how to identify and use positioning and securing devices 3.2. Identify the specified tolerances and why these are important 3.3. Identify the preliminary positioning places, suitable fastening and fixing methods and materials 3.4. Explain how to determine positioning, fastening and fixing methods and materials for the materials being formed 3.5. Explain how to carry out the forming operation 3.6. Explain how to deal with formed products appropriately i.e. bundled, batched and stored 3.7. Identify the acceptable quality for the forming operations and how this is achieved
4. Know how to deal with problems	4.1. Identify the types of problem that may occur 4.2. Explain what action to take if there are problems
5. Know how to complete the documentation	5.1. Identify the documentation to complete and explain why it must be completed accurately
6. Be able to interpret the work instructions	6.1. Check and confirm that the work is carried out to the quality specifications, work instructions and any forming procedures relevant to the operations
7. Be able to select the resources needed to carry out forming operations	7.1. Ensure that the necessary resources for the forming operation, including suitable PPE (Personal Protective Equipment) have been obtained

<p>8. Be able to carry out forming operations according to the specification</p>	<p>8.1. Position and secure suitable positioning and securing devices for the forming process</p> <p>8.2. Ensure that preliminary positioning, where used, is accurate and secure using suitable fastening and fixing methods and materials</p> <p>8.3. Check that the dimensions, position and angles of bend are accurate to specified tolerances</p> <p>8.4. Carry out the forming operation according to work instructions and safe operating/quality procedures</p> <p>8.5. Ensure that formed materials are completed to timescale and are clean, free from marks, scratches, chips and dust and accurate within specified tolerances</p>
<p>9. Be able to deal with problems</p>	<p>9.1. Report any problems promptly to the relevant personnel</p>
<p>10. Be able to complete the documentation</p>	<p>10.1. Complete documentation accurately and in accordance with organisational requirements, when this is required</p>

<b>UNIT 17</b>	<b>CARRY OUT SELF-ADHESIVE OPERATIONS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	6
GUIDED LEARNING HOURS	32

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### Unit Overview

This unit addresses the skills and knowledge required to apply self-adhesive materials in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Self-adhesive Methods and Techniques**

Application, pressing, wet, dry, heat

#### **Tools**

Scissors, knives

#### **Materials**

Vinyl, polyester

**Securing, Fixing and Fastening Methods**

Jigs, clamps, fixing materials

**Types of Substrate**

Porous, non-porous

**Types of Protection Methods**

Warning signs, coverings, paddings, buffers

**Preparation Techniques**

Cutting, positioning

**Template Materials**

Rigid, flexible

**Relevant Personnel**

Line manager, supervisor, team leader etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to access and interpret the instructions for carrying out self-adhesive operations	1.1. Explain how to check that the correct work instructions and any relevant self-adhesive procedures and quality specification have been obtained
2. Know how to prepare for self-adhesive operations	2.1. Explain how to ensure that the appropriate equipment, tools, materials, techniques and methods needed to complete the activity are available 2.2. Identify acceptable protection methods and when and how to use them 2.3. Identify the preparation techniques that are relevant
3. Know how to carry out self-adhesive operations according to the specification	3.1. Explain how to use application and setting out tools and equipment 3.2. Explain how to identify template materials appropriate for the work to be completed and what the consequences are of not using appropriate template materials 3.3. Identify the specified positioning and quality tolerances that are required 3.4. Explain how to carry out the self-adhesive operation
4. Know how to deal with problems	4.1. Identify the types of problem that may occur 4.2. Explain what action to take if there are problems

5. Know how to complete the documentation	5.1. Identify the documentation to complete and explain why it must be completed accurately
6. Be able to interpret the work instructions	6.1. Check and confirm that the work is carried out to the quality specifications, work instructions and any forming procedures relevant to the operations
7. Be able to prepare for self-adhesive operations	<p>7.1. Ensure that the necessary resources for the application operation, including suitable PPE (Personal Protective Equipment) have been obtained</p> <p>7.2. Protect surfaces from damage using an accepted method</p> <p>7.3. Carry out the relevant preparation technique</p>
8. Be able to carry out self-adhesive operations according to the specification	<p>8.1. Identify template shapes, measure and where necessary, cut and then position on the materials</p> <p>8.2. Position and secure devices and equipment for self-adhesive operations</p> <p>8.3. Check that materials are laid out to the specified tension without distortion</p> <p>8.4. Carry out the self-adhesive operation according to work instructions and safe operating/ quality procedures</p>
9. Be able to deal with problems	9.1. Report any problems promptly to the relevant personnel
10. Be able to complete the documentation	10.1. Complete documentation accurately and in accordance with organisational requirements, when this is required

<b>UNIT 18</b>	<b>MANIPULATE THE SIGN LAYOUT AND PRODUCE GRAPHICAL IMAGE FOR ROAD TRAFFIC SIGNS</b>
LEVEL	2
CREDIT VALUE	6
GUIDED LEARNING HOURS	32

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### Unit Overview

This unit addresses the skills and knowledge required to manipulate data provided by others for Road Traffic Signs using design software and information technology.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **File**

New, existing

#### **Images**

Bitmap, vector

#### **Input Device**

Keyboard, selection device, scanner, digitiser

#### **Organisation's Standards**

Naming convention, location, frequency

**Facilities**

Size, location, orientation, rotation, invert

**Attributes**

Colour, shade, patterns, size, shape

**Additional Elements**

Line, shape, text

**Destination**

Local, remote

**Destination Device**

Hard copy, printer, production plotter, digital printer, file storage device, file transmittal device

**Output Parameters**

CCT profile, page range, number of copies, definition, colour

**Relevant Personnel**

Line manager, supervisor, team leader etc

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Learning Outcome and Assessment Criteria**

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Know how to prepare to produce a graphical image	1.1. Explain the importance of gaining authority to access files and images 1.2. Describe the organisation's standards applicable to accessing images
2. Know how to manipulate the sign layout according to the specification	2.1. Explain the principles of manipulating sign layout to include: legibility, proportion, balance, spacing, margin and colour 2.2. Identify the software functions for manipulating images 2.3. Identify relevant methods of saving and locating files 2.4. Explain the methods of using file operations 2.5. Explain how to use input devices
3. Know how to send the image to the output device	3.1. Identify the types of destination devices available 3.2. Explain the methods of using hard copy devices and magnetic storage devices 3.3. Explain how to communicate with the selected device
4. Know how to deal with problems	4.1. Identify the types of problem that may occur 4.2. Explain what action to take if there are problems
5. Be able to prepare to produce a graphical image	5.1. Ensure that authority to access files and images has been obtained 5.2. Identify and locate sources of files and images required 5.3. Check and confirm that the required equipment and resources are available for the job to be carried out 5.4. Identify options for sign layout, and agree preferred solution with client
6. Be able to manipulate the sign layout according to the specification	6.1. Select and use software to manipulate images 6.2. Use software to alter attributes in line with the specification 6.3. Enter, select and combine stored images in line with the specification 6.4. Save files/images using approved organisational standard
7. Be able to send the image to the output device	7.1. Select the output device appropriate to the specification requirements and check that it can receive the design information 7.2. Verify and check that the design is complete and correct prior to output 7.3. Identify and set up output parameters to meet client requirements 7.4. Check that the design is sent to correct output device 7.5. Check that the output is complete and meets the client's requirements 7.6. Work within approved timescales

<b>UNIT 19</b>	<b>CREATE A SIGN LAYOUT AND PRODUCE A GRAPHICAL IMAGE FOR COMMERCIAL SIGNS</b>
LEVEL	2
CREDIT VALUE	12
GUIDED LEARNING HOURS	78

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### Unit Overview

This unit addresses the skills and knowledge required to create and produce a sign layout for Commercial Signs using design software and information technology.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **File**

New, existing

#### **Images**

Bitmap, vector

#### **Input Device**

Keyboard, selection device, scanner, digitiser

#### **Organisation's Standards**

Naming convention, location, frequency

**Facilities**

Size, location, orientation, rotation, invert

**Attributes**

Colour, shade, patterns, size, shape

**Additional Elements**

Line, shape, text

**Destination**

Local, remote

**Destination Device**

Hard copy, printer, production plotter, digital printer, file storage device, file transmittal device

**Output Parameters**

CCT profile, page range, number of copies, definition, colour

**Planning Sign Layout**

Legibility, proportion, balance, spacing, margin and colour

**Relevant Personnel**

Line manager, supervisor, team leader etc

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of Health & Safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to prepare to produce a graphical image	1.1. Explain the importance of gaining authority to access files and images 1.2. Identify the standards used for producing images 1.3. Describe the organisation's standards applicable to accessing images
2. Know how to create images and designs according to the specification	2.1. Explain the principles of planning sign layout 2.2. Identify the software available to produce images 2.3. Identify the software functions for: <ul style="list-style-type: none"> <li>• manipulating images</li> <li>• formatting images</li> <li>• image layout</li> </ul> 2.4. Identify relevant methods of saving and locating files 2.5. Explain the methods of using file operations 2.6. Explain how to use input devices

<p>3. Know how to send the image to the output device</p>	<p>3.1. Identify the types of destination devices available</p> <p>3.2. Explain the methods of using hard copy devices and magnetic storage devices</p> <p>3.3. Explain how to communicate with the selected device</p> <p>3.4. Explain the methods of using Bitmap and Vector images for presentations</p>
<p>4. Know how to deal with problems</p>	<p>4.1. Identify the types of problem that may occur and what action to take if there are problems</p>
<p>5. Know how to complete the documentation</p>	<p>5.1. Identify when to complete documentation and why it must be completed accurately</p>
<p>6. Be able to prepare to produce a graphical image</p>	<p>6.1. Establish, verify and check customer sign layout requirements</p> <p>6.2. Ensure that authority to access files and images has been obtained</p> <p>6.3. Identify and locate sources of files and images required</p> <p>6.4. Check and confirm that the required equipment and resources are available for the job to be carried out</p> <p>6.5. Identify options for sign layout, and agree preferred solution with client</p>
<p>7. Be able to create images and designs according to the specification</p>	<p>7.1. Enter, select and combine stored images in line with the specification</p> <p>7.2. Create and enter images using the software in line with the specification</p> <p>7.3. Select and use software to manipulate images</p> <p>7.4. Use software to create additional elements in line with the specification</p> <p>7.5. Use software to alter attributes in line with the specification</p> <p>7.6. Check that the sign layout is complete and to customer requirements</p> <p>7.7. Save files/images using approved organisational standard</p>
<p>8. Be able to send the image to the output device</p>	<p>8.1. Select the output device appropriate to the specification requirements and check that it can receive the design information</p> <p>8.2. Verify and check that the design is complete and correct prior to output</p> <p>8.3. Identify and set up output parameters to meet client requirements</p> <p>8.4. Check that the design is sent to correct output device</p> <p>8.5. Check that the output is complete and meets the client's requirements</p> <p>8.6. Work within approved timescales</p>

<b>UNIT 20</b>	<b>DETERMINE AND CARRY OUT MAINTENANCE OF SIGN PRODUCTS IN A SIGNMAKING ENVIRONMENT</b>
LEVEL	2
CREDIT VALUE	10
GUIDED LEARNING HOURS	60

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### Unit Overview

This unit addresses the skills and knowledge required to determine and carry out maintenance of sign products in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Sources of Danger**

People, equipment, components, surrounding environment

#### **Records**

Written, graphic

#### **Installations**

Indoor, outdoor, unrestricted access, restricted access

#### **Specification**

Written, in diagrammatic form, provided verbally

**Equipment and Components**

Complex; Simple, fragile, robust

**Removal and Replacement Involving**

Easy access, simple removal and replacement difficult access, complex removal and replacement

**Post-Removal Handling**

Cleaning, marking, storing, transporting

**Repairs**

Simple, routine

**Relevant Personnel**

Line manager, supervisor, team leader, client, supplier etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of Health and Safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to carry out maintenance procedures	1.1. State why is it important that disconnections and isolation have been carried out prior to maintenance or repair 1.2. Identify the different types of maintenance used to maintain sign products 1.3. Outline the consequences of not carrying out preventative maintenance 1.4. State how to interpret instructions and work to agreed timescales 1.5. Identify personal and organisational consequences of not being efficient 1.6. Describe the relevant authorisation procedures and how to follow them 1.7. State how to determine the resources required and how to use them cost effectively 1.8. Describe what marking systems could be used and how to use them
2. Know how to identify and eliminate sources of danger	2.1. Identify the sources of danger associated with the installation and how to eliminate them 2.2. Describe why dangers need to be considered before starting and the consequences of not doing so

<p>3. Know how to position and install sign maintenance equipment</p>	<p>3.1. Describe how to determine the structural and equipment factors which affect where equipment can be positioned</p> <p>3.2. State what is acceptable positioning and why its consideration is important</p> <p>3.3. Describe what is acceptable and unacceptable damage</p> <p>3.4. Identify the methods and techniques for securing equipment and how to carry them out</p> <p>3.5. Describe the meanings of terms used in installation specifications</p>
<p>4. Know how to repair and restore components to their original condition</p>	<p>4.1. Identify suitable repair materials to meet required specifications for type, quality and serviceability</p> <p>4.2. Identify the appropriate timescale for a given repair or replacement</p> <p>4.3. Identify the operations that could be disrupted by repair and explain how to minimise the disruption</p> <p>4.4. Identify removal and replacement methods and techniques that are suitable in given situations and explain how to carry them out</p> <p>4.5. Identify acceptable tools, equipment and methods for the given repair or replacement and explain how to use them</p> <p>4.6. Identify suitable types of protection for components and surrounding components in various situations</p> <p>4.7. State when repaired components comply with the specified condition for the operation</p>
<p>5. Know how to deal with problems</p>	<p>5.1. Identify the types of problems that may occur</p> <p>5.2. Identify the appropriate action to take if there are problems</p> <p>5.3. Outline the action to take to prevent damage to components, tools and equipment during repair</p> <p>5.4. Describe how and why it is important to control the release of hazardous substances</p> <p>5.5. Describe the risks associated with the removal and replacement of substances and components</p>
<p>6. Know how to maintain records and other documentation</p>	<p>6.1. Identify which records are required and explain how to complete them accurately</p> <p>6.2. Identify when to complete documentation and why it must be completed accurately</p>
<p>7. Be able to carry out maintenance procedures</p>	<p>7.1. Ensure that resources comply with specification and are used cost effectively</p> <p>7.2. Remove, clean and replace signs and associated fittings in line with work instructions</p> <p>7.3. Ensure appropriate action is taken during maintenance operations to minimise disruption</p> <p>7.4. Carry out maintenance procedures within an agreed timescale</p> <p>7.5. Use tools, equipment and methods according to safe working practices</p>

<p>8. Be able to position and install sign maintenance equipment</p>	<p>8.1. Identify, report and eliminate potential sources of danger before installation</p> <p>8.2. Undertake installation safely using approved methods and techniques following quality procedures</p> <p>8.3. Ensure that the position of equipment and components meets specified requirements</p> <p>8.4. Check that equipment and components are free of damage after positioning and installation</p> <p>8.5. Ensure that the installation is secure in the specified location with fixed items attached to suitable load bearing structures</p> <p>8.6. Carry out necessary preventative maintenance and remedial actions</p>
<p>9. Be able to remove and replace sign components</p>	<p>9.1. Apply clear and appropriate marking systems for components and connections</p> <p>9.2. Ensure that the removal and replacement of components is completed using appropriate methods within agreed timescales</p> <p>9.3. Handle components after removal according to specification</p> <p>9.4. Check that any replacements used meet the required specification</p> <p>9.5. Check that the repaired components comply with operational requirements</p> <p>9.6. Complete repairs within an agreed timescale and take the appropriate action to minimise disruption to operations</p> <p>9.7. Take adequate precautions to prevent damage to components, tools and equipment during repairs</p>
<p>10. Be able to deal with problems</p>	<p>10.1. Deal with problems and report those that cannot be solved personally to the relevant person</p> <p>10.2. Minimise the release of hazardous materials according to site and environmental requirements</p>
<p>11. Be able to maintain records and other documentation</p>	<p>11.1. Ensure that work records are complete, accurate, current and legible</p>

<b>UNIT 21</b>	<b>CARRY OUT THE INSTALLATION OPERATION FOR COMMERCIAL SIGNAGE OPERATIONS</b>
LEVEL	2
CREDIT VALUE	12
GUIDED LEARNING HOURS	86

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### Unit Overview

This unit addresses the skills and knowledge required to carry out the installation operation for illuminated and/or non-illuminated sign products, in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Types of Positioning and Securing Devices**

Jigs, clamps, hoists, lifts, portable towers, ladders, access equipment

#### **Types of Products and Materials**

Metal, wood, composite boards, plastics, vinyl, glass, fabric

#### **Types of Tools**

Cutting, boring, assembling, bending, heat generating, holding

#### **Types of Assembly Equipment**

Jigs, clamps

**Types of Installation**

Illuminated and/or non-illuminated

**Relevant Personnel**

Line manager, supervisor, team leader etc.

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures, including CSCS (Construction Skills Certification Scheme) requirements when appropriate

**Learning Outcome and Assessment Criteria**

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to access and interpret the instructions for carrying out the installation operation	1.1. Explain how to establish requirements of the finished product from work instructions and other specifications  1.2. Identify the tolerances that are important  1.3. Identify the timescales for completing the installation
2. Know how to prepare to carry out installation operations	2.1. Identify the different types of installation equipment, tools, materials, personnel, methods and techniques and when to use them  2.2. Explain how to confirm that resources are available and suitable to assemble the product to the specified requirements
3. Know how to install commercial signs	3.1. Determine fastening and fixing methods appropriate to the sign product and how to carry them out  3.2. Identify the different types of positioning, securing devices and equipment and how they are used in installation  3.3. Explain how to ensure that equipment and components are brought up to operating levels in a sequence which is safe and optimises the integration of the installation  3.4. Explain how to erect sign supporting structures in accordance with work instructions  3.5. Identify when preliminary positioning may be required  3.6. Explain how to secure sign products
4. Know how to configure the installation	4.1. Explain how to configure the installed structure for use in accordance with work instructions  4.2. Explain how to achieve the required configuration within agreed timescales

<p>5. Know how to maintain the quality of the installation</p>	<p>5.1. Explain how to check that supporting structures forming part of the sign product are clean, free from marks, scratches, chips and dust, within specified tolerances</p> <p>5.2. Identify what causes damage to products and how to prevent this</p> <p>5.3. Identify how to rectify and repair sign products and structures</p>
<p>6. Know how to deal with problems</p>	<p>6.1. Identify the problems that may occur when carrying out the installation operation</p> <p>6.2. Explain what action to take if there are problems</p>
<p>7. Know how to work safely</p>	<p>7.1. Identify why risk assessments are important and why they are carried out</p> <p>7.2. Identify how to handle supporting structures and materials to be assembled safely to prevent damage and maintain the safety of the individual, colleagues and the public</p> <p>7.3. Identify what is regarded as waste and how to remove it safely</p> <p>7.4. Identify how to repackaged picked up signs</p>
<p>8. Know how to complete the documentation</p>	<p>8.1. Identify the different paperwork relevant to the job</p>
<p>9. Be able to access and interpret the instructions for carrying out the installation operation</p>	<p>9.1. Check that the correct paper work accompanies the appropriate signs or components to be installed</p>
<p>10. Be able to prepare to carry out installation operations</p>	<p>10.1. Confirm that the equipment, tools, materials, techniques and methods are appropriate for the configuration that is being carried out</p>
<p>11. Be able to install commercial signs</p>	<p>11.1. Ensure that dimensions and positioning of sign supporting structures are accurate, within specified tolerances</p> <p>11.2. Assemble and secure sign products without damage in accordance with the paperwork relevant to the job</p>
<p>12. Be able to maintain the quality of the installation</p>	<p>12.1. Check that the signs or components are free from damage before and after transportation to site</p>
<p>13. Be able to deal with problems</p>	<p>13.1. Deal with problems in the implementation procedure and report those that cannot personally be solved</p>
<p>14. Be able to work safely</p>	<p>14.1. Maintain personal safety and that of colleagues and the public when handling supporting structures, materials and components</p> <p>14.2. Ensure the work area is left clean, tidy and in accordance with health, safety and environmental policies and procedures</p> <p>14.3. Ensure that all waste is removed in line with company environmental policy</p>
<p>15. Be able to complete the documentation</p>	<p>15.1. Complete job records legibly and in accordance with organisational requirements</p>

<b>UNIT 22</b>	<b>CARRY OUT BASIC INSTALLATION OPERATIONS FOR ROAD TRAFFIC SIGNAGE OPERATIONS</b>
LEVEL	2
CREDIT VALUE	10
GUIDED LEARNING HOURS	60

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### Unit Overview

This unit addresses the skills and knowledge required to carry out the installation operation of non-illuminated road traffic sign products, in a signmaking environment.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet the requirements of the Assessment Criteria, and those aspects of the Assessment Context (described below) that are relevant to their workplace and work role. In order to demonstrate consistent performance, evidence should be provided to show that learners carry out activity relevant to this unit on at least two separate occasions.

For the Assessment Criteria relating to the learner's knowledge, different types of evidence and assessment methods could be used, for example learner statements, questioning and professional discussion which should be recorded for verification.

### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- The assumption is made that the learner undertaking this unit will have a fundamental level of experience and induction of the sector and will be looking for recognition of their skills, understanding and knowledge.

### Information on use of Assessment Context

The learner will work safely in accordance with organisational and operational procedures. Organisational and operational procedures relate to:

- legal requirements
- workplace policies
- manufacturers' instructions
- work instructions
- Health and Safety and environmental policies

The following terms have a specific meaning in this unit:

#### **Types of Positioning and Securing Devices**

Jigs, clamps, hoists, lifts, portable towers, ladders, access equipment

#### **Types of Products and Materials**

Metal, wood, composite boards, plastics, vinyl, glass, fabric

#### **Types of Equipment**

Manual, automated, electronic, pneumatic

#### **Types of Tools**

Cutting, boring, assembling, bending, heat generating, holding

**Types of Assembly Equipment**

Jigs, clamps

**Types of Installation**

Fixed vertical, non-illuminated, permanent road traffic signs

**Types of structures**

Post(s), cantilever, passive, no greater than 114mm outside diameter or similar

**Types of foundation**

Concrete no greater than 1m<sup>3</sup>, screw or driven depth no greater than 1000mm

**Relevant Personnel**

Line manager, supervisor, team leader etc.

**Transportation Methods**

Manual, automated

**Relevant Health and Safety and Environmental Requirements**

Responsibilities in respect of health and safety and environmental requirements and legislation, regulations, safe working practices, local, national and organisational/site specific procedures, including CSCS (Construction Skills Certification Scheme) requirements when appropriate

**Learning Outcome and Assessment Criteria**

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Know how to access and interpret the instructions for carrying out the installation operation	1.1. State how to establish requirements of the finished product from work instructions and other specifications  1.2. Identify the tolerances that are important
2. Know how to prepare to carry out installation operations	2.1. Identify the different types of installation equipment, tools, materials, personnel, methods and techniques and when to use them  2.2. State how to confirm that resources are available and suitable to assemble the product to the specified requirements
3. Know how to install road traffic signs	3.1. Describe fastening and fixing methods appropriate to the sign product  3.2. Identify the different types of positioning, securing devices and equipment and how they are used in installation  3.3. Identify how to operate CAT and genny scanning devices and the significance of the readings  3.4. Outline how to ensure that equipment and components are brought up to operating levels in a sequence which is safe and optimises the integration of the installation  3.5. Identify when preliminary positioning may be required  3.6. State how to secure sign products to the approved position

4. Know how to configure the installation	<p>4.1. Describe how to configure the installed structure for use in accordance with work instructions</p> <p>4.2. Describe how to achieve the required configuration within agreed timescales</p>
5. Know how to maintain the quality of the installation	<p>5.1. Describe how to check that supporting structures forming part of the sign product are clean, free from marks, scratches, chips and dust, within specified tolerances</p> <p>5.2. Identify what causes damage to products and how to prevent this from happening</p> <p>5.3. Identify how to rectify and repair sign products and structures</p>
6. Know how to deal with problems	<p>6.1. Identify the problems that may occur when carrying out the installation operation</p> <p>6.2. Outline what action to take if there are problems</p>
7. Know how to work safely	<p>7.1. Identify why risk assessments are important and why they are carried out</p> <p>7.2. Identify how to handle supporting structures and materials to be assembled safely to prevent damage and maintain the safety of the individual, colleagues and the public</p> <p>7.3. Identify how to ensure work area is safe from overhead and underground obstructions and why this is important</p> <p>7.4. Identify the importance of ensuring that work is carried out without excavation to services</p> <p>7.5. Identify what is regarded as waste and how to remove it safely</p> <p>7.6. Identify how to repackaged picked up signs</p>
8. Know how to complete the documentation	<p>8.1. Identify the different paperwork relevant to the job and outline how to complete it correctly</p>
9. Be able to access and interpret the instructions for carrying out the installation operation	<p>9.1. Interpret work instructions to establish optimum configuration for the required operating parameters of the installed product</p>
10. Be able to gather the resources needed to carry out installation operations	<p>10.1. Confirm that the equipment, tools, materials, techniques and methods are appropriate for the configuration that is being carried out</p>
11. Be able to install road traffic signs	<p>11.1. Ensure that dimensions and positioning of sign supporting structures are accurate, within specified tolerances</p> <p>11.2. Ensure the correct traffic management is in place for both vehicular and pedestrian traffic, and that the site area is properly signed, fenced/barriered and secure</p> <p>11.3. Ensure safe and correct installation of steel or passive support structures less than up to and including 114mm outside diameter</p> <p>11.4. Ensure safe and correct installation of signs manually not exceeding 2.5sq m in area mounted 2.1m above ground level on structures excluding gantries</p> <p>11.5. Assemble and secure sign products without damage in</p>

	accordance with the paperwork relevant to the job
12. Be able to maintain the quality of the installation	12.1. Check that the signs or components are free from damage before and after transportation to site
13. Be able to deal with problems	13.1. Deal with problems in the implementation procedure and report those that cannot be solved
14. Be able to work safely	<p>14.1. Ensure work is carried out according to all health and safety and legislative requirements</p> <p>14.2. Maintain personal safety and that of colleagues and the public when handling supporting structures, materials and components</p> <p>14.3. Carry out manual excavations with due care for services</p> <p>14.4. Ensure the work area is left clean, tidy and in accordance with health, safety and environmental policies and procedures</p> <p>14.5. Ensure that all waste is removed in line with company environmental policy</p>
15. Be able to complete the documentation	<p>15.1. Check that the correct paper work accompanies the appropriate signs or components to be installed</p> <p>15.2. Complete job records legibly and in accordance with organisational requirements</p>