Section 2 – J/602/2482

Understand how to communicate with others within Building Services Engineering
J/602/2482 - Understand how to communicate with others within Building Services Engineering

This knowledge unit provides learning in the development and continued maintenance of effective working relationships in the building services industry associated with work in dwellings, industrial and commercial premises and for private and contract type clients. Upon completion of the unit the learner will:

- **LO1.** Know the members of the construction team and their role within the building services industry
- **LO2.** Know how to apply information sources in the building services industry
- **LO3.** Know how to communicate with others in the building services industry
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Learning Outcome 1

Know the members of the construction team and their role within the building services industry
Within this Learning Outcome, there are three Assessment Criteria:

**AC1.1.** Identify the key roles of the site management team.

**AC1.2.** Identify the key roles of the individuals that report to the site management team.

**AC1.3.** Identify the key roles of site visitors.

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**AC1.1 Identify the key roles of the site management team**

The construction of a building from the initial design, through to hand over and occupation, is a complex process that can involve hundreds and sometimes thousands of individuals. Each person both on site and off has a specific role to play if the building is to be completed on time, within budget and to the necessary high quality. The key to this process is the Construction Management Team whose job it is to ensure a timely completion to the Client’s requirements.

The structure of the site management team may differ slightly from job to job but generally, if follows a set pattern, with variations according to the nature of the project.
Managing a construction project requires:

- A good understanding of modern management systems; and,
- Expert knowledge of the design and construction process

On large projects, the management team can be divided into two management tiers:

- Those people that only visit the site occasionally,
- Those people permanently based on site.

The Client

At the very top of the management tree is the Client. The Client is arguably the most important person of the whole project, simply because without their need for the building, the project would be non-existent. They directly and indirectly employ everyone who has a connection with the project. The Client can take many forms from a single individual to a large, multinational consortium or organisation.

The Construction (Design and Management) Regulations 2015 place specific responsibilities on the Client regarding the health and safety management of all people directly and indirectly employed as part of the project (with the exception of domestic Clients who intend to occupy the property as a dwelling). Clients will need to:

- Ensure that all team members are appointed early in the project, that they are competent and adequately resourced.
- Ensure that there are suitable welfare facilities on site.
- Ensure that there are adequate resources at all stages of the project and that sufficient time has been allowed from concept to completion.
- Ensure the provision of pre-construction information to designers and contractors so that the Regulations can be followed.

Where a project is to last more than 30 days or involve 500+ persons, the Client must also:

- Appoint a principle designer,
- Appoint a principle contractor,
- Provide information regarding Health and Safety to the Principle Designer
- Keep the health and safety file and make it accessible if required.
- Ensure that construction work does not take place until a construction phase plan is in place and that there are adequate welfare provisions on site.

The Architect

The Architect is the leader of the management team. They are responsible for converting the Clients’ requirements into a workable building design and working drawings. They must be registered with the
Architects Registration Board (ARB) and many Architects are also members of the Royal Institution of British Architects.

Architects (or their representatives on site, the Clerk of Works) generally supervise all aspects of the construction phase of a project until the formal handover to the Client.

The Project Manager

A Project Manager is a specialist advisor to the Client who represents the Client on the day-to-day running of the overall project. They do not participate directly in construction activities but, moreover, oversee the progress and interaction of the project team in a way that maximises benefits, controls the costs and reduces the risk of project failure. It is the Project Manager’s role to:

- Advise on the selection of the consultant team
- Issue information and instructions on behalf of the Client,
- Develop a project execution plan
- Contribute to risk management
- Contribute to design reviews
- Advise on the selection of contractors
- Advise on disputes
- Validate payments
- Advise on the transition from construction to occupation
- Report back to the Client

Where a project is funded by the government, the Project Manager is usually appointed from the private sector. A good Project Manager will be able to:

- Solve problems
- Inspire others
- See the whole picture
- Negotiate effectively.
Clerk of Works

Appointed by the Architect, the Clerk of Works (CoW) is the Architect’s direct representative on site. Their role is to ensure that the building is being constructed in accordance with the Architect’s drawings and instructions and to ensure the overall quality of the construction process, including materials. The CoW will make regular progress reports to the Architect and will often keep a diary recording any disputes, weather stoppages etc.

On large sites, the CoW will be a resident member of the site management team whilst on smaller sites may only be an occasional visitor.

Contracts manager

A Contracts Manager’s role is to identify, secure and manage construction projects and contracts. They are the main point of contact for site managers and building contractors. Their day-to-day responsibilities are:

- Putting together plans, estimates, budgets and timescales,
- Preparing and presenting tender documents,
- Contributing to work planning,
- Briefing project teams, contractors and suppliers,
- Resolving disputes,
- Identifying areas for improvement.

They usually work closely with construction managers, quantity surveyors and planning engineers and may also be responsible for overseeing health and safety.

Quantity surveyor

The Quantity Surveyor is a specialist accountant who advises how the building can be constructed within the
Clients budget. They will measure the amount of materials required and the total labour needed to complete the building to the architect’s drawings and specifications. The data is then collated into a report known as the Bill of Quantities, which is used to produce a tender.

Periodically, the QS will take further measurements and assess variations to the work to ensure that the main contractor can receive interim payments for work carried out. The QS also advises on the cost of any variations to the specification and any additional work completed not covered by the original contract. It is the QS that produces the final account (the bill) to be presented to the Client.

Building Surveyor

The Building Surveyor’s role changes with the nature of the construction project:

- On new build projects, the Surveyor may work on the design and development of the new building to ensure that the Building Regulations are followed during planning and design.
- On existing or historical projects, the surveyor will identify defects and advise on repair and maintenance options. They often work on preventative measures to keep buildings in good condition.
- They may be called on to give evidence in a court of law where breaches of Building Regulations have taken place.

The information they collate will be reproduced in a building survey report. The main duties of a building surveyor are:

- Determine the condition of existing buildings,
- Identify and analyse defects,
- Carry out feasibility studies,
- Deal with planning applications and advise on property legislation,
- Advise on energy efficiency, environmental aspects and sustainable construction,
- Prepare scheme designs, programmes for work completion and specification of works,
- Assess the designs for building to meet the requirements of people with disabilities,
- Prepare survey reports and insurance assessments and claims.

Structural engineer

The structural engineer works closely with the Architects and designers to calculate the building loads, taking into account ground conditions, weather considerations, dead loads and live loads. They ensure that the design is both structurally and environmentally sound.

Building services engineer

The building services engineer designs and calculates the internal services to the building, such as heating systems, light and power systems, hot and cold water supplies, air conditioning and sanitation. In addition,
they may provide designs for fire alarms, sprinkler systems and security. Most reputable BSEs belong to the Charted Institute for Building Services Engineers (CIBSE).

The Civil Engineer

The civil engineer designs the roads, bridges and tunnels that lead to the site. They may also be involved in the design of the drainage and sewer systems as well as the building’s water requirements.

The Building Contractor

The building contractor enters into a contract to construct the building based on the drawings by the Architect and the bill of quantities written by the quantity surveyor. In most cases, each contractor will have specialists within the company to undertake key roles on the project:

- **The Estimator** – The estimator breaks down the bill of quantities into three areas - labour, plant and materials - and applies pay rates for each item. A percentage is then added for profit, overheads, such as office staff/administration costs.

- **The Buyer** – The buyer is responsible for sourcing and purchasing the necessary materials at the best price. They will generally seek quotations for the materials from a number of suppliers, whilst ensuring that these can be delivered in the correct quantities required and on time to complete the project.

- **The Planning Engineer** – They are responsible for pre-contract planning, which involves planning an efficient and economical method of using the available plant, material and labour resources.

- **Health and Safety Manager** – Also known as the safety officer, the health and safety manager has the responsibility of ensuring the health, safety and welfare of those persons working on site and any visitors to the site. They will administer safety inspections, keep safety records and instigate accident investigations and health and safety training. They are accountable to senior management.

**AC1.2 Identify the key roles of the individuals that report to the site management team**

Good planning and good management are essential if a construction project is to run smoothly from beginning to end. So far, we have looked at the senior management side of construction. However, no construction project can take place without the workers and trades on the site. In AC1.2, we will look at the various managers, supervisors, trades and sub-contractors whose job it is to turn the Architect’s vision into a building.
Site manager/Site Supervisor

Site managers, also known as Site Agents or Construction Managers, are responsible for ensuring the day-to-day on-site running and supervision of the project. Their work often begins before construction starts. Key responsibilities are:

- Supervising and overseeing the project, ensuring that the Client’s specifications and requirements are met.
- Ensuring that the project keeps to the schedule and budget.
- Reviewing the construction progress and liaising with quantity surveyors to monitor the overall costs.
- Liaising with the Client, other construction professionals and, occasionally, members of the public.
- Coordinating and supervising the various construction trades.
- Selecting tools and materials.
- Making safety inspections and ensuring construction and site safety.
- Checking designs and drawings and preparing site reports.
- Maintaining quality control.
- Finding ways to prevent problems and to solve any that occur.
- Helping in negotiating contracts and securing permits and licences.

Trade supervisor

As well as the site supervisor, each of the individual trades will also have their own supervisor to organise and oversee the work of their part of the overall contract. A trade supervisor may be based on the site or may be a frequent site visitor. The role includes:

- Looking at work allocation and requirements of the operatives under their direct control,
- Overseeing the work quality and standard.
- Liaising with other trades on site to ensure coordination of activities.
- Initiating toolbox talks
- Maintaining attendance records and rotas
- Enforcing and, if necessary, explaining Regulations
- Resolving grievances
- Work on the tools, if required.

Sub-contractors

Sub-contractors usually enter into a contract with the main contractor for work on either a specific part of the contract or a specialised area of the contract, such as air conditioning, electrical work or plumbing. The contract may take several forms:

- Supply and fix – where the sub-contractor will purchase all the materials for the contract and provide the labour to install it, or;
• Labour only – where the sub-contractor provides only the installation of the materials, which are supplied by the main contractor.

• The Architect may use nominated sub-contractors as part of the contract, where a specific company would be required to undertake the work.

Craft operatives

Craft operatives are those workers who have completed an apprenticeship in their trade. They include:

Bricklayers – Construct the building using traditional materials such as brick, block and, occasionally, stone.

Plumbers – On domestic housing construction sites, plumbers install the hot and cold water supplies, the central heating systems, the gas installation within the property and the sanitation and rainwater systems. They may also install sustainable systems such as grey water recycling and rainwater harvesting. On larger sites, the plumber may be restricted to just hot and cold water supplies, with other specialist companies providing heating and gas supplies.

Electricians – These install and test the power and lighting circuits to the building and may well also install smoke and fire alarms and security systems.

Joiners and Carpenters – A vital part of the construction process both during the initial construction phase, installing window frames, roof trusses etc and in the later stages hanging doors, architraves and skirting boards.

Heating and Ventilating Engineer – This is a very specialist trade, very rarely seen on domestic construction sites. Their work is mainly to large buildings installing air conditioning and specialist heating systems as well as refrigeration and ventilation systems.

Gas fitters – These operatives, mainly seen on larger construction sites, are responsible for installing the gas installation systems and appliances. These operatives have specialist knowledge of the large gas installation and testing regimes that are outside a plumber’s or heating engineer’s scope of work.

Painter and decorator – These are responsible for all internal and external wall and ceiling finishes. Apart from painting skirting boards, architraves, doors, walls and ceilings, they may be required to do more specialist decorations, such as specialist wood treatments, stains and wall coverings.

Plasterer – Plasterers are responsible for wall, floor and ceiling finishes and may be required to complete external rendering, stucco work and pebbledash, using traditional and modern methods and materials.

Tilers – Tilers provide internal and external tiling to walls and floors as well as specialist applications such as
wet rooms, swimming pools and mosaics.

**Groundworkers**—Groundworkers are responsible for external works, such as drain laying, trench digging and ground levelling prior to landscaping activities.

**AC1.3 Identify the key roles of site visitors**

Outside visitors to construction sites can take three forms:

Those important visitors who have a specific reason for their visit, such as:

- Health and Safety inspectors
- The Building Inspector
- The Water Inspector
- The Electrical Services Inspector
- Delivery drivers
- Members of the public

**The Inspectors**

The inspectors’ role is to check the Regulations in force that control the health and safety of people on the site, the way the building is being constructed and the services that the occupiers of the building will eventually use are being enforced and that the building itself is safe and without risk.

**The Health and Safety Inspector**—These persons generally work for the Health and Safety Executive (HSE) but they can also work for the local authority. Their role is to ensure the Health and Safety Laws of the UK are being complied with. The HSE Inspectors were covered in detail in Unit 1: Health and Safety for the Built Environment Sector.

**The Building Inspector**—Also known as the Building Control Officer, their role is to ensure that the Building Regulations are being complied with both at the planning stage and during construction of the building itself. The Building Inspector must know how to interpret the Regulations accurately and must use their professional judgement to offer advice when problems arise. They will make planned visits to the construction site at different stages of construction and may also make unannounced visits to ensure that the work is being carried out in accordance with the accepted drawings, specifications and plans.

**The Water Inspector**—The Water Inspector works for the local water undertaker. Their specific role is to ensure that the Water Supply (water fittings) Regulations are being complied with. The main objective, at installation stage, is to ensure that there are no potential contamination risks to the water undertaker’s mains cold water supply due to backflow, back pressure or back syphonage. The
Water Inspector provides advice and guidance on hot and cold water installations and will inspect water installations by hands-on inspections in a percentage of new build domestic properties, all new commercial and industrial premises and targeted inspections at properties where there is an increased contamination risk.

Reactive inspections are carried out where poor water quality has been reported or where a customer has requested advice to specific plumbing problems with new or existing installations.

The Electrical Services Inspector – Electrical inspections are mandatory on all new electrical installations. These are usually carried out by a local electrical supply company. However, since these are now privately owned, electricity supply companies now employ sub-contractors to undertake these inspections and issue test certificates on their behalf. Any fees attached to this service are paid for by the customer.

Delivery drivers – Most delivery drivers to construction sites are experienced operatives who know and adhere to the rules regarding materials delivery protocols. All delivery drivers must wear personal protective equipment whilst on site and must follow the marked roads to the site compound for delivery of materials. They should have undergone a site health and safety induction if their visits to the site are to be regular in occurrence.

The Public – to the uninitiated, construction sites are dangerous, daunting places with many different activities all taking place at once. To experienced people, this situation presents no problems because they are aware of the many dangers that exist on site but to those people who have never been on a construction site, they are noisy, confusing and often, frightening places.

All visitors, irrespective of the reasons for their visit, must follow set protocols that exist on construction sites:

1. Check in at the site office and sign the visitor’s book. Here, they may be given a visitor’s pass and will receive some basic do’s and don’ts about their conduct on site.
2. Undergo a site induction to comply with health and safety law.

Wear the proper attire for a construction site. As a minimum, this will mean safety boots or shoes, high viability vests or jackets, hard hat or safety helmet and safety goggles/glasses. Tee shirts and shorts are not allowed.
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Learning Outcome 2

Know how to apply information sources in the building services industry
There are four Assessment Criteria within Learning Outcome 2:

AC2.1. Identify the types of statutory legislation and guidance information that applies to working in the industry
AC2.2. Identify the purpose of information that is used in the workplace
AC2.3. Identify the purpose of information given to customers
AC2.4. State the importance of company policies and procedures that affect working relationships

AC2.1 Identify the types of statutory legislation and guidance information that applies to working in the industry

Legislation

Here, we will investigate four areas of legislation:

- Data protection
- Equal opportunities
- Health & safety
- Employment

Data protection - The General Data Protection Regulation (GDPR) 2018

The general data protection regulation (GDPR) is a new EU law that came into effect on 25 May 2018 to replace the Data Protection Act. It’s the biggest overhaul of data protection legislation for over 25 years, and introduces new requirements for how organisations process personal data. It relates to how companies and individuals store and use your personal information.

The GDPR requires that personal data shall be:

a) Processed lawfully, fairly and in a transparent manner in relation to individuals;

b) Collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes; further processing for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes shall not be considered to be incompatible with the initial purposes;

c) Adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed;

d) Accurate and, where necessary, kept up to date; every reasonable step must be taken to ensure that personal data that are inaccurate, having regard to the purposes for which they are processed, are erased or rectified without delay;

e) Kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the personal data are processed; personal data may be stored for longer periods...
insofar as the personal data will be processed solely for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes subject to implementation of the appropriate technical and organisational measures required by the GDPR in order to safeguard the rights and freedoms of individuals;

f) Processed in a manner that ensures appropriate security of the personal data, including protection against unauthorised or unlawful processing and against accidental loss, destruction or damage, using appropriate technical or organisational measures.

Extract from:

Equal opportunities - The Equality Act 2010

The Equality Act 2010 directly prohibits discrimination in employment or education/training on the grounds of any of the following protected characteristics:

- Age
- Disability
- Gender reassignment
- Marriage or civil partnership
- Race
- Religion/belief
- Sex
- Sexual orientation
- Pregnancy/maternity

Discrimination can occur in several ways:

- **Direct discrimination** – where one individual is treated less favourably than another because of a protected characteristic they have or thought to have or because they associate with someone who has a protected characteristic.
- **Indirect discrimination** – this is where a practice, policy or rule, although applying to everyone within the company, has a detrimental effect on an individual. The Equality Act says that it puts the person at a disadvantage.
- **Discrimination by association** – this is direct discrimination because a person might associate with another person who possesses a protected characteristic. (see above)
- **Perception discrimination** – this is discrimination because of how someone is perceived i.e. where an employer wrongly perceives that a person is gay or of a particular race and treats them less favourably.
- **Harassment** – This is defined as unwanted conduct related to a relevant protected characteristic which has the effect of either: (a) violating another person’s dignity; or (b) creating an intimidating, hostile, degrading, humiliating or offensive environment for that person.
- **Victimisation** – This is defined as treating a person badly because they have done a protected act, such as making a complaint or claim of discrimination on the grounds of their age or sex, or helped
somebody else to do so, and they are now being treated less favourably by their manager. A ‘protected act’ is:

- Making a claim or complaint of discrimination (under the Equality Act).
- Helping someone else to make a claim by giving evidence or information.
- Making an allegation that you or someone else has breached the Act.
- Doing anything else in connection with the Act.

Health & safety - The Health and Safety at Work etc Act 1973

The Health and Safety at Work etc Act 1973 was covered in J/602/2479: Understand and carry out safe working practices in building services engineering.

Employment - Employment Rights Act 1996

The Employment Rights Act 1996 encapsulates a number of earlier employment laws, including the Contracts of Employment Act 1963, the Redundancy Payments Act 1965, the Employment Protection Act 1975 and the Wages Act 1986. It applies across England, Scotland, Wales and Northern Ireland. It sets out the rights of employees in situations such as:

- Dismissal
- Unfair dismissal
- Parental leave
- Redundancy

In 1997, an amendment to the Act strengthened the right of an employee to request flexible working time.

Regulations

These are rules and procedures designed to control the conduct of those to whom they apply and are set by authorities or governmental agencies. They are legally enforceable in a court of law and must be followed if prosecution is to be avoided.

British standards

The British Standards take the form of recommendations. By ensuring that the installation meets the requirements of the British Standards, the installation will meet the strict requirements of the regulations.

Approved Codes of practice

These give practical advice on how to comply with the Regulations. ACoPs are not law and not complying with them is not a criminal offence but, in a court of law, proof that their advice has been ignored, could be seen as evidence of guilt if an employer or employee faces prosecution under Health and Safety law. Following the guidance given in an ACoP is considered good practice.
Manufacturer Guidance documents, installation instructions and service and maintenance information.

These documents are required when installing, commissioning, servicing and maintaining appliances and equipment. They give guidance on installation position possibilities, installation methods and how to service and maintain the equipment in working order. They also list replacement parts and methods of ordering them. They may also contain important contact details for customer services, technical enquiries and sales.

They should be left with the customer on completion of the job.

User instructions

These are simplified instructions for the end user to understand how to operate the appliance or equipment installed. These will contain vital contact details of the installer, customer support and service contacts.

AC2.2 Identify the purpose of information that is used in the workplace

Construction sites cannot function without information. On every construction site there are certain key documents such as drawings and specifications as well as a certain amount of day-to-day paperwork, such as invoices and advice/delivery notes. In AC2.1 we will investigate some of these important pieces of information that are required to keep the site running smoothly and the customer informed of progress.

Workplace information

The Job Specification

The Job Specification is a detailed description of the work that is being quoted for. It will include the types of materials to be used and any appliances or components that must be installed. It may also quote a specific manufacturer or British Standard reference. For example, the specification may say:

‘The hot and cold water installations must be completed using copper tubes to BSEN 1057, using end feed capillary fittings to BS864 and in accordance with the recommendations laid down in BSEN806 and BS8558….’

Plans/drawings

Also known as working drawings, these are the floor plans, elevations and detail drawings required to allow the building to be constructed and to allow any services, such as hot and cold water installations to be installed. They are also used to draw up the initial tender for the building. Plans and drawings, unless otherwise stated, will always be to scale.
Below is an example of a construction site drawing.

A detailed construction drawing

Work Programmes

Also known as GANTT charts, a programme of work illustrates the time frame within which the building is to be constructed. It will show when the building was started and the estimated date that it will finish. It lists all activities on site, in the order that they will be completed and gives an estimated date when each job will begin and end. Complex work programmes will also list the plant that is required, when it is required and how long for.

Below is a simple programme of work:

A simple programme of work (GANTT chart)
The Variation Order

A variation order is an alteration to the scope of works in the construction contract, in the form of an addition, omission or substitution to the original works contract.

Almost every construction project will alter from its original conception and design and some will inevitably change from the original drawings, design and specification from the design team. Variations may include:

- Alterations to the design
- Alterations to the quantities
- Alterations to quality
- Alterations to the materials
- Alterations to the sequence of work.

Any alterations to the agreed contract must be agreed in writing by the Architect, Client or some other person in the senior management team. There is no legal obligation to pay for alterations that have not been agreed and signed for in writing by a senior management official.

Delivery notes

Also known as an advice note, a delivery note is a document that shows the type and amount of materials delivered on site. Delivery notes should be checked against the actual material delivered to ensure that they match in terms of quantity, type, quality and size. All delivery notes should be saved for administration purposes.

Time sheets

These give the total number of hours worked and the work completed by an individual or, occasionally the trade foreman, usually, on a weekly basis. They are then used to calculate the wages of the person named on the time sheet. Companies often use timesheets as a way of estimating the cost of future contracts.

Policy documents

Policy documents can be categorised into three types:

- **Health and safety file** – a document that is held by the Client. It contains all recorded health and safety related issues and actions made by the senior management team. Under the CDM Regulations 2015, this document must be maintained and retained for the lifetime of the building. The information it contains is designed to help those in positions of responsibility identify any issues, risks etc that may be encountered and provide operating and maintenance information for the building and any equipment installed within it.
• **Customer care charter** – this document provides a framework for defining the standards of the company, the rights of customers and how complaints will be handled and resolved. In addition, the document aims to provide:
  - A summary of the company’s business activities
  - An insight into the goals of the customer care programme
  - Information on the rights of the customer
  - Details of what the company will do to ensure good customer care and satisfaction

• **Environmental policies** – This is a statement of intent to manage human activities to prevent, reduce and remove any harmful effects on the environment and the earth’s resources, whilst ensuring that man-made changes to the environment do not adversely affect humans. Generally, environmental policies make written commitments to:
  - Lower pollution and emissions
  - Reduce waste
  - Use energy resources efficiently
  - Minimise the environmental impacts of the work activities

An environmental policy can be implemented through the Environmental Management System (EMS). An environment policy, whilst desirable from a company point of view, is not a mandatory requirement in the UK and there are no legal frameworks. It is purely a voluntary company undertaking.

**AC2.3 Identify the purpose of information given to customers**

**Customer information**

Communication between the customer and the company takes place at every stage of the contract. Here are just some of the documents that may be used to communicate important information to the customer:

- **Estimates and quotations** – these are written prices as to how much the job will cost but they differ in their meaning:
  - **A quote** is a fixed price for the work to be carried out to the customer’s satisfaction. It cannot vary once the price has been agreed. Generically, because of this, quotes tend to be slightly higher than estimates.
  - **An estimate** approximates how much the job will cost and can vary both upwards and downwards depending on the actual time taken to complete the work and the final cost of the materials. Most small businesses opt for estimates because of its inherent flexibility.
- **Invoices and statements** – these are documents that are issued at the end of the contract, which show the final account to be paid by the customer. Itemised statements and invoices are often requested because they show the customer exactly what they are paying for. It is usual to give a period of between 14 and 28 days for payment.

- **Statutory cancellation rights** – all customers have the right to cancel a contract once it has been signed. Usually, there is no cancellation penalty providing the contract cancellation was confirmed in writing within a specific amount of time.

- **Handover information** – when the work is completed, all information such as manufacturer’s installation and servicing instructions, warranty documents, information leaflets, component brochures, commissioning documents etc, should be presented in a folder to the customer. In addition, the folder should also contain a thank you letter, thanking the customer for their business, a list of other jobs and services the company undertakes, a plan showing where any emergency isolation valves and cut-offs are located and the contact details of key personnel within the company, including an emergency contact telephone number, should any problems arise.

- **Finally** – inform the customer of any servicing timeframes or requirements that the appliances or components may have.

### AC2.4 State the importance of company policies and procedures that affect working relationships

#### Working policies and procedures

These highlight the importance of the company image and will often link to its daily operations. Written policies and procedures help employees to understand their role within the company. They highlight the responsibilities expected of all employees. Many companies have policy documents relating to:

- **Behaviour** – companies expect their employees to conduct themselves with respect and professionalism towards both customers and management. Customers demand:
  - Respect for their property
  - Respect towards themselves
  - A professional attitude towards the work

- **Timekeeping** – Customers will not tolerate lateness, unless it is because of circumstances beyond the control of the company or the employee. The key to preventing issues with lateness is keeping the
customer informed at the earliest opportunity of issues that may lead to an employee arriving late at a customer’s property.

- **Dress code** – a professional look, such as company uniforms presents a positive image to the customer. A company uniform becomes something that the customer recognises as a symbol of good work, a friendly disposition and a positive, respectful attitude towards the customer. Companies demand that any uniform issued be kept in a good condition, that it is washed regularly and returned if the employee leaves the company. Some companies may have a laundry service where uniforms are cleaned weekly.

- **Contract of employment** – This is a mutual agreement between the employer and the employee. It sets out an employee’s:
  - Employment conditions
  - Rights
  - Responsibilities
  - Duties

  These are called ‘the terms of contract’.

**Limits to the authority of company employees**

In every organisation, there is a hierarchy of authority and responsibilities of the employees. Each person within the team will have expectations and limits placed upon them by the company management. In any organised structure, the higher up you are, the more responsibility is placed upon you.

Let us look at the hierarchy of a group of plumbers working on a construction site and their roles and responsibilities to the company and each other:

![Diagram of hierarchy]

As the inverted pyramid shows, the person with the greatest responsibility is the **Plumbing Supervisor**. He/she will have many years of experience within the trade and will be capable of both designing and installing a wide range of systems. They will have knowledge of the Regulations that govern the trade as well as knowing the British Standards. They will have good managerial and supervisory skills and be able to communicate in a like manner with other managers and members of senior management team.
Many Supervisors hold a high level of qualification, such as an HNC or HND in Building Services Engineering. They may also have responsibility for improving the quality of services and products the company offers and have overall authority over the operatives under their supervision.

Next down comes the Senior Plumber. They will have many years of experience with a high quality of workmanship and skills covering a wide range of installations and systems. They will be included in the company GAS SAFE Registration and may hold many additional certifications, such as unvented hot water registration and approved plumber’s status. They can work without close supervision. Like the Supervisor, they may also have responsibility for improving the quality of the services and products of the company. They work closely with the supervisor and may have some involvement with senior management.

The Junior Plumber may only have a limited experience but will be able to install non-complex systems to a good standard. Although capable of working on their own, they will be closely supervised and monitored for quality and Regulation compliance. They may have some responsibility for improving services and products.

The Apprentice Plumber has very little responsibility except to learn their trade. They will be under constant supervision from not only the plumber they work with (usually a senior plumber) but also the supervisor. As they gain experience and confidence, they may be asked to perform simple plumbing installation and maintenance tasks on their own. They will be expected to maintain the company image with regard to dress, time keeping and customer care.
End-point Assessment
An expert & independent service you can trust

BPEC is an approved End-point Assessment Organisation for
- Gas Engineering (Level 3)
- Smart Meter Installer (Level 2)

What is End-point Assessment? (EPA)
EPA has been introduced to improve the apprenticeship programme.

All apprentices must take an independent End-point Assessment during the last 3 months of their programme to confirm that they have achieved occupational competence.

This must be carried out by an independent End-point Assessor who is approved by the End-point Assessment Organisation.

What’s included?
The assessment involves practical tasks, theory tests, knowledge exams and interviews giving employers the confidence that apprentices are ‘work ready’.

What next?
Contact us on 01332 376000
Email us at aoadmin@bpec.org.uk
www.bpec.org.uk

Why BPEC?
BPEC’s End-point Assessment Organisation (EPAO) are approved by the Education and Skills Funding Agency (ESFA) and are included on the Register of End-point Assessment Organisations (ReEPAO).

Through our expertise and specialism in Plumbing, Heating & Gas Engineering you can be sure you are getting an impartial service you can trust.
Learning Outcome 3

Know how to communicate with others in the building services industry.
There are four Assessment Criteria within Learning Outcome 3:

AC3.1. Identify suitable communication methods for use in work situations

AC3.2. Define methods of effective communication methods for people with:
   a. Physical disabilities
   b. Learning difficulties
   c. Language differences
   d. Dialects
   e. Accents
   f. Foreign and second language issues

AC3.3. State the actions to take to deal with conflicts

AC3.4. State the effects that poor communication may have on an organisation

AC3.1 Identify suitable communication methods for use in work situations

Communication

As a rule, when communicating with a customer, it is good practice to think about what kind of information you may need to give beforehand and what reply you might expect to receive. Always ensure that your body language and tone are appropriate to what you are saying and who you are saying it to and always bear in mind that you may need to alter and adapt your communication skills to communicate effectively with different individuals and groups. The overriding principle, is to ensure that everyone is clear about what is being said and both parties understand each other perfectly.

There are several ways that organisations and companies communicate with employees, customers, suppliers and other businesses:

- **Letters**
- **e-mail**
- **Fax**
- **Text**
- **Social Media**

Written communication is a key method of communication that promotes a good company image.
**Letters** – These are an official method of written communication, insomuch that if a contract or tender document is given in writing, it becomes binding. Good, well-written letters can help in portraying a professional company image, which helps to build goodwill and the company reputation. Official company letters should always be on company headed paper, with a good layout, using good English with the correct use of grammar and punctuation.

**e-mail** – a hugely popular method of communication because of the speed at which information, instructions and memos can be distributed to customers, businesses and staff. However, e-mails can be misused and bad habits can form when using the e-mailing system. For example, an e-mail that just says ‘FYI’ meaning ‘for your information’, with no greeting, explanation, conclusion or salutation is a poor way to communicate that neither motivates the reader to read its content nor encourages a response. A throw-away attitude towards the recipient, usually means the e-mail is thrown away! E-mails should be given the same consideration as letters. They should be well-constructed, using good English, grammar and punctuation. It is still a method of communication that reflects the attitude of the sender, and therefore the company.

**Faxes** – These are not often used but can still be useful for sending information such as invoices, orders, statements and contracts where the receiving party may wish to see a signature or other official form of authorisation. Here again, the basic rules of good English, punctuation and grammar apply with a logical layout required to any fax sent on the company’s behalf. A cover page containing the company logo or graphics should always be used.

**Text messaging** – A fast way of sending short messages to staff, although they should not be used to send official company business to customers, unless it has been agreed beforehand. Receiving constant text messages can be an annoyance and can have a negative effect on customers.

**Social media** – A recent addition to the company communication methods is social media. Having a company Facebook or Twitter page can be an excellent way of getting new information about the services

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<th>Oral Communication</th>
<th>Face-to-face</th>
<th>Telephone</th>
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Oral communication is vital to give a company a human side. However, it should always be backed up with written confirmation to prevent confusion and misunderstanding.
that the company offers to existing and new customers alike. It allows a company to show its ‘other’ side, where staff can take the onus to portray the workforce as happy and dedicated to good customer service. However, if a customer uses social media to contact the company, the company should respond in like kind by replying with a positive response as soon as possible. Problems should be dealt with outside of the public’s viewing and you should never argue with a customer on a world-wide public communication platform. The effects on company business can be catastrophic!

AC3.2 Define methods of effective communication methods for people with Physical disabilities, Learning difficulties, Language differences, Dialects, Accents and Foreign and second language issues

Communicating with people with physical disabilities

When communicating with a person who has a physical disability, we may need to adopt a different strategy for communication, depending on the person’s needs:

People with a hearing impairment – speak clearly but normally and directly at the person as many people with hearing impairments can lip read. Use written notes or drawings to reinforce the verbal information. Take advantage of leaflets and manufacturer’s literature to make sure that both you and the other person understand what is being indicated. If possible and appropriate, use telephone amplifiers to assist communication. If the person’s impairment is profound, then consider the use of a third person who is proficient at sign language.

People with a visual impairment – Try to give more verbal detail than you would normally use but make it relevant and clear. Describe any visual aids or diagrams in as much detail as possible. Keep the person informed about who is present in the room and who has left the room etc.

People with a physical impairment – firstly, remember to respect the person personal space and that includes any wheel chairs or crutches. Do not touch any of the personal aids without their permission. When speaking to a person, use a chair or kneel down so that you are both at the same eye level.

General tips for communicating with people with disabilities – speak to the person as you speak to anyone else. Speak in an age-appropriate manner and remember to treat adults as adults. If a person is accompanied by someone else, address the person with the disability and not the companion. Remember to put the person first, not their disability, by using phrases such as ‘a person with a disability’ and NOT ‘a disabled person’.

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Communicating with people with special learning needs

When communicating with people with special learning needs, we must be aware of our own communication skills and more specifically, how we communicate. We are in a better position to adapt our communication to help others by being aware of the language we use and by providing other prompts to help them. When it comes to communicating with people with special learning needs, it is vital that we adopt strategies that will help the communication process. For example, for people with autism, visual aids are often useful tools for helping the learning and understanding process. Facial expression, gesture and body language are good examples of non-verbal communication techniques which are important because they have meaning and never forget that people with a communication impairment are still able to use their voice and speech.

Language differences – dialect versus accent

Modern construction sites are a multicultural mix of people from different ethnic backgrounds, geographical locations and genders. We may find ourselves communicating with someone from a different parts of the UK, Europe or even the wider world. The implications are that we will have to communicate with people who have different accents, dialects or whose first language is not English.

Dialect versus accent - These two words are often used as interchangeable words with the same meaning but, in fact, they both have different meanings. An **accent** is the way a person sounds. It is the way that they actually produce the words or, to put it technically, it is ‘the musicality’ of their speech. A **dialect** describes both a person’s accent AND the grammatical way a person talks. For instance, an Italian speaking English would do it with an accent. If they were to talk Italian, they would do it with the Italian regional dialect of their part of Italy. In the same way, an English person from say London would pronounce words slightly different than a person from Manchester because of their regional dialect.

Dialects can often cause confusion on a construction site. A phrase that means one thing to one person, might have a totally different meaning to someone else. For example, a club hammer to some is a lump hammer to others. Similarly, a pair of grips to one plumber is a water pump plier to another.

People whose first language is not English - Whilst many UK residents and visitors speak English very well, there are times, because their first language is not English, when they may not understand what we are saying. Add to this the complexities of the English regional dialects and the problem is often a barrier to good communication. When communicating with a colleague or customer whose first language is not English, we may need to:

- Speak clearly without using slang or regional word variations.
- Use short, simple sentences.
- Ask questions to confirm understanding.
- Use diagrams, drawings and visual aids.
- Use an interpreter or family member to translate.
AC3.3 State the actions to take to deal with conflicts

When groups of people work together, there will doubtless be occasions when someone within the group disagrees with another member of the group. If left unchecked, conflicts can occur, which have the potential to damage the wider group. Whether the disagreement leads to a bigger conflict or whether it builds a problem-solving culture is largely down to the person in charge of the group. Conflicts can arise for many reasons:

- Working conditions,
- Pay structures
- Language differences
- Personality clashes
- Ethnic, political, cultural or religious differences

Conflicts require immediate and effective intervention. If they are left, they can affect morale, motivation and ultimately, productivity. Serious conflicts can have a negative effect on health and safety that can lead to work related stress illnesses.

Conflicts can occur between:

- **Employer and employee** – this may need union involvement to resolve the issue or some other form of mediation.

- **Two or more employees** – this will require the involvement of the immediate manager or even the employer.

- **Customer and employer** – often leads to the intervention by a professional or trade body.

- **Customer and employee** – this situation will almost certainly require direct employer involvement.

So, how can conflicts in the workplace be dealt with?

The employer has many ways to deal with disagreements, conflicts and disputes within the workplace environment. Some disputes will almost certainly be more serious than others, but all should be treated sensitively, objectively, impartially and in complete confidentiality. The employer should:

1. **Identify the problem.** Ensure that all parties know what the issue is and why the argument has occurred. Talking through the problem helps all parties to understand the problem better.

2. **Allow all parties to clarify their position and express their opinions.** A strict time limit can be imposed for each of the parties to state their case. At all times, everyone should feel safe and supported.
3. Identify the ideal end result from each party.

4. Establish what can realistically be done to achieve each person’s objectives.

5. Explore any areas of compromise to see if there are any issues on which all parties agree. If none exist, then the employer may attempt to identify the long-term objectives that mean something to all parties involved.

There are methods that managers and supervisors can employ to address and manage workplace conflicts:

- By informal meetings
- **Negotiation** – basically, a discussion aimed at reaching a mutual agreement.
- **Mediation** – a dynamic, interactive process where a neutral third party assists the disputing parties to resolve their issues through the use of communication and negotiation. It is focussed primarily on the needs, rights, and interests of all parties involved in the dispute.
- **Conciliation** – a process where a third party, called a conciliator, who meets with the disputing parties both separately and together in an attempt to resolve their differences. This is done by lowering tensions, improving communication, interpreting the issues, encouraging the parties to explore solutions and helping the parties to find a mutually acceptable outcome.

It is very important for employees to realise that there is someone to talk to when conflicts develop.

Where disputes cannot be settled, then mediation or union involvement may be required. In the plumbing industry, the Joint Industry Board (JIB) is usually the organisation that is approached to help in such matters.

The Advisory, Conciliation and Arbitration Service (known as ACAS) is an organisation that provides free and impartial advice to employees and employers on all aspects of workplace relations and employment law and they may be consulted in severe cases.

**AC3.4 State the effects that poor communication may have on an organization**

Poor communication at work can be harmful to both the business and the employees. In extreme cases, poor communication leads to missed targets, de-motivation and dis-function:

- Employees become mistrustful of management and each other,
- Employees result to argument and reject opinions and input,
- More grievances are filed over performance related issues,
- Employees avoid talking to management,
- Employees hide their performance-related deficiencies and refuse to take responsibility.
Poor communication disrupts normal working patterns and strains employee relations. This often results in:

- Lost time due to misunderstandings in instructions,
- Frustration develops as the workforce are not sure what to do or how to do the task,
- Materials are wasted,
- People feel ostracised because the communication is not clear or effective,
- Messages and instructions may be misunderstood or misinterpreted causing bad feelings,
- Health and Safety are put at risk.

These problems will eventually reach existing and potential new customers, leading to loss of confidence in the company’s products, loss of custom and the possible collapse of the business.