

1 SAMPLE CONTENT – HEALTH & SAFETY FILE.



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1 **SAMPLE CONTENT – HEALTH & SAFETY FILE** 1

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Sample

1.1 HEALTH & SAFETY FILE

1.1.1 INTRODUCTION & GUIDE

The Health and Safety File is a set of record documentation, (a suite of manuals and drawings), for the client/end user focused primarily on health and safety when dealing with maintenance, repair or construction works carried out to the premises.

It is the requirement of the CDM Regulations that the Client ensure that the Health and Safety File is kept available for inspection by any person who may need information in the file for the purpose of complying with the requirements and prohibitions imposed on him by or under the relevant statutory provisions.

The file should be made available for any persons who need to work on or operate any building related tasks. Any future works carried out to the building or its services should be documented and recorded in the health and safety file.

1.1.1.1 Index

Section	Title	Notes
1	Introduction and guide	
2	General Building Information	A brief description of the works carried out
3	Residual hazards	Details of any remaining residual hazards and how they have been dealt with
4	Key structural principles	Key structural principles incorporated in the design of the structure and safe working loads for floors and roofs
5	Hazardous Materials	Details of any hazardous materials used or which should be controlled during cleaning & maintenance
6	Removal & Dismantling	Information regarding the removal or dismantling of installed plant and equipment
7	Cleaning and Maintenance Facilities	Health & Safety information relating to specific equipment provided for cleaning or maintaining the structure
8	Significant Utilities & Services	The nature, location and marking of significant services including fire-fighting services, fire compartments, incoming underground services, reports
9	Reference & Fire Safety	Reference documents, reports and information related to fire and life safety systems.

1.1.1.2 Guidance

1.1.1.2.1 The Health & Safety File

The Health and Safety File provides a general index in respect of other parts of the building/facility information (the overall Building Manual) and contains information, relating to the structure or project, which it is reasonably foreseeable will be necessary to ensure the health and safety of any person at work, who is carrying out or will carry out construction work or cleaning working in or on the structure, or of any person who may be affected by the work of such a person at work.

The Health and Safety File is a set of record documentation, (typically sets of manuals and drawings), intended for the client/end user focused primarily on health and safety when dealing with maintenance, repair or construction works carried out to the premises.

Where the user wishes to carry out alterations to the building/facility the Health and Safety File will provide assistance, however, professional advice should be sought for example before forming holes, loading the structure more heavily than previously, or where there is any doubt.

The principal source of maintenance and operation information for the building is within the OPERATING AND MAINTENANCE MANUALS and 'hands on' training provided at initial handover. Where there is any uncertainty or lack of understanding of the manuals or actual building operation and maintenance, then specialist advice should be sought from the appropriate level of expertise. The file should be made available for any persons who need to work on or operate any building related tasks.

Any future works carried out to the building or its services should be documented and recorded in the HEALTH AND SAFETY FILE.

Unless otherwise stated, the Regulations referred to in this document are the Construction (Design and Management) Regulations 2015. Clients have specific duties under these Regulations. They should be aware that they have obligations under other Regulations created under the Health and Safety at Work Act 1974. This is particularly the case with respect to cleaning and maintenance (see Section 7 of this document).

For information about health and safety visit www.hse.gov.uk or to the Association for Project Safety www.aps.org.uk

You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

1.1.1.2.2 O&M Manuals

1.1.1.2.2.1 Scope

The Operating & Maintenance Manuals (OMM) has been prepared to provide guidance and recommendations to assist the personnel detailed below. It is assumed that the users of this documentation will fall into one of the categories listed below. It is further assumed that the correct instruction and training has been provided by the Client or appointed representative to the users of this document.

1. Users of the building - trained designated personnel who can operate appropriate end user controls e.g. controls, lifts, system overrides. Additionally they can contact appropriate personnel in the event of an emergency. It is not expected that these personnel will have access to controls that require passcodes to access control set points etc.
2. Managers of the building and services - technically qualified senior personnel who have an understanding of the building construction and its relation to components and systems installed. It is assumed managers know how to operate plant and systems and deal with emergency and other out of control situations. Personnel will usually have full access enabling them to alter engineering settings.
3. Employees, (both directly employed staff and contractors), who carry out maintenance, repair or new works within the building. Usually qualified trades persons with in depth knowledge of construction. They will usually be working under the guidance of a manager.

1.1.1.2.2.2 Operational Guidance

The procedures detailed in the Operational Section of the System description sections are listed in the order in which they should be carried out. The whole of the procedure, including any referenced Health and Safety information, should be read prior to carrying them out.

Manufacturers Recommendations

This document contains manufacturers equipment specific O&M manuals which contain information related to operational, fault finding, equipment and tool requirements. Reference must be made to these manuals located in the manufacturers/suppliers section of this document.

Emergency Procedures

Emergency procedures are intended for guidance only, and an assessment must be made with regard to the degree of severity and the conditions prevailing at the time.

Never take risks in an emergency, for a risk can turn a minor emergency into a major one. The safety of personnel must always come first.

Any temporary repairs or arrangements made during or after an emergency must be corrected as soon as it is practically possible.

Automatic Operation

Where building services operate automatically, and are interdependent on each other they should not be treated in isolation.

Fault Conditions

Operatives should be familiar with the installed building services and system alarms. Equipment with control panels will display its operational status including alarms. If a BMS system is present, then alarms will usually be displayed at the BMS control terminal as well as at the local MCCP panels. Operatives should be able to operate the system by HAND should the central control system fail.

Routine Inspections

It is recommended that system users and operatives create site specific inspection routines based on information provided within the manufacturers O&M manuals and other recommendations as detailed in the system operating and maintenance sections of this document.

1.1.1.2.2.3 Maintenance Guidance

The maintenance instructions comprise generally of recommendations relating to the schedule of maintenance tasks designed to ensure that the various maintenance procedures required for each of the individual services and systems are carried out at the correct intervals in order to maintain all plant at the maximum efficiency and minimise breakdown and interruption to services.

Maintenance is required to be carried out to comply with equipment manufacturers warranties.

The maintenance instructions within make certain recommendations with regard to the general maintenance procedures to be adopted in respect of non-specialised plant, the maintenance of specialised plant being detailed in the separate instruction manuals provided by the equipment suppliers. All required manufacturers literature is supplied with this manual.

Prior to carrying any maintenance works the operative must be trained and competent both in the equipment and systems being maintained as well as in the complexity level of work being carried out. The operative should be fully conversant with the relevant Health and Safety Legislation. Isolation means the operation of switches, the removal of fuses or links, or physical disconnection of conductors in order to make any system, or part of a system, DEAD and secured so that it cannot be

inadvertently made alive. This will involve cutting off an electrical installation, a circuit or an item of equipment from every source of electrical energy.

Particular attention must be paid to secondary means of power supplies.

The Electricity at Work Regulations 1989 provides guidance to Building Operators and Engineers involved in the design, construction, operation or maintenance of electrical systems to take precautions against the risk of death or personal injury from electricity in work activities. The Regulations are made under the Health and Safety at Work Act 1974 which imposes duties principally on employers, the self-employed and on employees, including certain classes of trainees. The Regulations also provide that wherever repair, alteration, extension or cleaning is carried out upon electrical systems, or where technical knowledge and experience is required in order to avoid the danger of electric shock a competent person only may do such work and he must be accompanied.

In general remember the following golden rules:

1. Identify the source(s) of supply
2. Isolate
3. Secure isolation
4. Test that the equipment/system is DEAD, then:
5. Begin work
6. Reference should be made to the Health and Safety Executive's Health and Safety series booklet HS(G) 85 on Electricity at Work available from Government bookshops.
7. Reference should be made to Electricity at Work Guide 1989.
8. Reference should be made to the appropriate section of the B.S.7671 Regulations for Electrical Installations prepared by the Institution of Electrical Engineers.

A regular and organised programme of maintenance work, planned to cover all details of the installation within given maintenance periods, will ensure continued satisfactory operation with a minimum liability to interruptions to supply caused by equipment faults.

Careful attention must be given to securing the safety of personnel and equipment while maintenance or repair work is in progress.

The planned maintenance scheme should include a system of logging where records are kept of inspection, maintenance and repair on all items of plant and equipment.

Where maintenance work is in progress a DANGER notice must always be attached to any "live" apparatus to call attention to the danger of approach. A CAUTION notice must always be attached to plant or its associated control equipment warning of possible damage to equipment, which may be caused by interference.

Before any work is commenced on any item of equipment, the supply and ancillary circuits must be made "dead" and locked off.

The system headings that are detailed within each of the system description sections provide the basic requirements in the maintenance of the complete services installation.

1.1.1.2.3 Purpose & Responsibilities

Information to others: Every client shall take such steps as it is reasonable for a person in his position to take to ensure that the information in the Health and Safety File is kept available for inspection by any person who may need information from the File for the purpose of complying with the requirements and prohibitions imposed by the relevant statutory provisions. This would apply, for example, to window cleaners.

New Works: This Health and Safety File is designed to be enlarged as alterations are made to the building. Where alterations of a significant nature are carried out (i.e. where much of this Health and Safety File becomes superseded), a new Health and Safety File may need to be prepared and the previous one disposed of or archived (*as "superseded"). Users may find it prudent to include reference to any suspected hazards, e.g. uncertainty over potentially hazardous paintwork (e.g. lead paint) that has been covered up. It is only intended that the Health and Safety File should contain detailed information relevant to Health and Safety.

The Health and Safety File should be kept up to date. It is suggested that the original File be retained as a "controlled" working copy available for those who carry out day-to-day maintenance. It should be updated periodically. A control system should be investigated to ensure the location of the file is always known (particularly when it is removed from its normal keeping place for updating). Clients should ensure that those who need access to the File always use the "current" version. Additions to the Health and Safety File will normally only relate to the part of the original construction affected by any additional works.

Transfer of the File: The Health and Safety File is a transferable document. When a building owner disposes of the whole or a part of the property, the whole Health and Safety File and/or the relevant part(s) of the Health and Safety File should be passed on to the purchaser or purchasers.

Monitoring and updating: The document is used to log changes and monitor building performance and continual fine-tuning commissioning. It is essential that it is kept up to date. Alterations should only be made with the approval of the building manager and should be signed and dated by that person.

Fire Safety: Users are reminded that alterations to the accommodation may affect their existing fire safety strategy and that the appointed Relevant Person should review their Fire Risk Assessment in accordance with the Regulatory Reform (Fire Safety) Order 2005. For further details refer to Section 9 of this file.

1.1.1.3 Client / Occupier Contact Details

The contact details for each of the project teams are located within project information.

1.1.1.3.1 Client

Company Name	EDOCUMENTS LTD		
Address	UNIT 32 WATERHOUSE BUSINESS CENTRE		
..	2 CROMAR WAY		
..	CHELMSFORD		
..	ESSEX		
Postcode	CM1 2QE	Phone	+44 (0)1245 330010
Country	United Kingdom	Fax	+44 (0)1245 331010
www	www.edocuments.co.uk		

1.1.1.4 Associated Information

Volume	Title	Media	Date
01	Health & Safety File	online, electronic	2020/11/21
02	Building Log Book & BREEAM User Guide	online, electronic	2020/11/21
03A	Building Manual	online, electronic	2020/11/21

Volume	Title	Media	Date
03B	Mechanical & Electrical Services Manual	online, electronic	2020/11/21
03D	Security Manuals	online, electronic	2020/11/21
03E	Drawings & Models	online, electronic	2020/11/21
	Future Project - Details To Be Added As Required	X	YYYY/MM/DD

1.1.1.5 Review & Updates

These documents should be reviewed and any changes recorded here.

Date	Description of Annual Review and Updates Made	Pages, Updated or Added	Author
YYYY/MM/DD	Document Creation Date	All	Edocuments

1.1.2 GENERAL BUILDING INFORMATION

1.1.2.1 About the Building

The scheme provides a 2 form-entry School building within the grounds of the Academy, provided for pupils and members of staff and aims to provide an educational focused environment to enhance the learning experience of the attending pupils and staff.

The accommodation is generally formed of the following areas:

- Reception, General Teaching & Group Rooms
- Hall Area
- Manager, Staff and Administration areas
- Kitchen
- WC Facilities
- Circulation Spaces & Stairs
- Store Areas
- SEN (Special Educational Needs) Rooms
- LRC (Learning Resource Centre) Rooms

1.1.2.2 Emergency Information

1.1.2.2.1 Electricity Supply

Company Name	UK POWER NETWORKS (LONDON)		
Address	EMERGENCY CONTACT NUMBER		
..			
..			
..			
Postcode		Phone	0800 028 0247
Country	United Kingdom	Fax	
www	www.ukpowernetworks.co.uk		

1.1.2.2.2 Gas

Company Name	BRITISH GAS		
Address	PO BOX4805		
..	WORTHING		
..			
..			
Postcode	BD11 9QW	Phone	0800375675
Country	United Kingdom	Fax	
www			

1.1.2.2.3 Water Supply

Company Name	THAMES WATER		
Address	CLEARWATER COURT		
..	VASTERN ROAD		
..	READING		
..	WEST BERKSHIRE		
Postcode	RG1 8DB	Phone	0800 714614
Country	United Kingdom	Fax	
www	www.thameswater.co.uk		

1.1.2.2.4 Users Own Emergency Contacts

1.1.2.2.4.1 Contact No.1

Company Name			
Address			
..			
..			
..			
Postcode		Phone	
Country		Fax	
www			

Contact No.2

Company Name	...		
Address			
..			
..			
..			
Postcode		Phone	
Country		Fax	
www			

1.1.2.2.4.2 Contact No.3

Company Name	...		
Address			
..			
..			
..			
Postcode		Phone	
Country		Fax	
www			

1.1.2.2.4.3 Contact No.4

Company Name	...		
Address			
..			
..			
..			
Postcode		Phone	
Country		Fax	
www			

1.1.2.3 Project - 1234 Base Build**1.1.2.3.1 Description of Works**

The projects involved the creation of a kitchen area and server room, some external works, refurbishment works to existing.

Internal lighting has been provided via surface mounted and recessed LED luminaires. External lighting has been provided via surface and column mounted LED luminaires.

Emergency lighting has been installed to provide 3 hours emergency operation. The emergency lighting system has been connected via the local lighting circuit to clearly and unambiguously indicate escape routes whilst providing safe egress from the building.

The mains cold water service was extended to serve the potable cold water outlets within the Kitchen with hot water by means of electric water heaters installed within the Kitchen.

The office is heated by radiators, underfloor heating systems and heater batteries within the air handling units which are provided with low temperature hot water by the gas fired boilers installed within the Wet Services Plantroom.

The kitchen is provided with supply and extract ventilation by means of air handling units and an extract fan.

The Server Room has been provided with cooling by means of a split air conditioning system.

1.1.2.3.1.1 Architectural

The building is a timber frame construction with cavity wall, concrete plank first floor and timber load-bearing internal partitions. The roof is timber cassette with Bauder single-ply membrane. Externally the building is clad with timber-effect cladding, brick and Trespa. The windows and doors are double-glazed aluminium.

1.1.2.3.1.2 Civil & Structural

The overall project involved the construction of a two-storey school, loosely T-shaped on plan. The classroom accommodation takes up a block of 58m x 16m - with the gymnasium and ancillary rooms 12m x 28m at one end.

Structural Ltd were appointed to design the ground floor structure, piled ground beams and drainage.

1.1.2.3.1.3 Mechanical & Electrical

Electrical Distribution

A low voltage (LV) supply has been provided to the School by the local supplying authority from their local network. The supply serves a main LV MCCB panel that in turn serves combined/split lighting and power MCB distribution boards as well as general power and lighting MCB distribution boards that deliver the final circuits to the building.

Lighting

The School has been provided with a complete lighting installation which has designed and installed to provide general, functional, decorative and display lighting using energy saving LED lamp technology which significantly minimises the carbon footprint of the School.

The School has been provided with emergency lighting to meet the necessary requirements and to effect the safe evacuation in the event of loss of power to the building or local area circuits.

External lighting has been installed to provide functional illumination to the School's entrances/exits.

Domestic Water Services

The School is provided with a Mains Cold Water Service (MCWS) from the local supplying authority. This MCWS serves a tank and booster set that deliver a Booster Cold Water Service (BCWS) to the building for domestic use and hot water via an indirect calorifier served with heat energy by the School's LTHW Heating System.

The School has been provided with Hot Water Services (HWS) via an indirect calorifier that uses heat energy from the School's LTHW Heating System.

Direct, electrical water heating is also provided for the Category 5 HWS in the Hygiene/Shower Room and facilities for a water boiler are provided in the Staff Room.

Natural Gas Service

The School has been provided with a Natural Gas Service by the local supplying authority in order to directly provide the heat energy medium for its LTHW Heating System and Hot Water Service.

A service is also installed to the Kitchen for catering purposes.

Heating

fired boilers along with associated items of plant installed in the Mechanical Plantroom. The system generally distributes heat throughout the building via wall mounted radiators and ceiling mounted radiant heat panels although heat is also distributed to the Kitchen and Main Hall via the Mechanical

Ventilation System through heater batteries located within air handling units.
The system also provides the heat energy medium for the School's general Hot Water Service.
An electrical overdoor heater is provided to the main entrance.

Ventilation

The School is provided with Mechanical Ventilation Systems using supply and extract heat recovery units and an air handling unit (for the Main Hall) that recover heat/cooling from the air extracted from the areas served and re-introduce it into the supply air path should the building be calling for heat/cooling.

Dedicated toilet extract systems are also installed to serve the WCs, Changing Rooms, Cleaner's Rooms, Hygiene/Shower Room, etc. and the Kitchen and Servery are provided with supply and extract systems that are interlocked with the catering appliances gas supply.

Air Conditioning

The School's larger teaching areas have been provided with cooling and heating via variable refrigerant flow (VRF) Air Conditioning Systems with external condensers that serve fan coil units in the rooms/areas served in conjunction with the Mechanical Ventilation Systems
A further, direct expansion (DX) Air Conditioning System is also provided that provides cooling for the Server Room.

1.1.2.3.2 Project Directory

Below is a list of those involved in the design and installation of the Building Structure and its components.

1.1.2.3.2.1 Client PM_20_20_14

Company Name	EDOCUMENTS LTD		
Address	UNIT 32 WATERHOUSE BUSINESS CENTRE		
..	2 CROMAR WAY		
..	CHELMSFORD		
..	ESSEX		
Postcode	CM1 2QE	Phone	+44 (0)1245 330010
Country	United Kingdom	Fax	+44 (0)1245 331010
www	www.edocuments.co.uk		

1.1.2.3.2.2 Project manager PM_20_20_67

Company Name			
Address			
..			
..			
..			
Postcode		Phone	
Country		Fax	
www	www.concentreconsulting.com		

Design lead PM_20_40_25

Company Name			
Address			
..			
..			
..			
Postcode		Phone	
Country		Fax	
www			

1.1.2.3.2.3 Architect PM_20_50_03

Company Name			
Address			
..			
..			
..			
Postcode		Phone	
Country	United Kingdom	Fax	
www			

1.1.2.3.2.4 Structural engineer PM_20_50_83

Company Name			
Address			
..			
..			
..			
Postcode		Phone	
Country		Fax	
www			

1.1.2.3.2.5 Building services engineer PM_20_50_08

Company Name			
Address			
..			
..			
..			
Postcode		Phone	
Country		Fax	
www			

1.1.2.3.2.6 Principal contractor PM_20_30_67

Company Name			
Address			
..			
..			
..			
Postcode		Phone	
Country		Fax	
www			

Mechanical & Electrical Services Sub-contractor PM_20_20_85

Company Name			
Address			
..			
..			
..			
Postcode		Phone	
Country		Fax	
www			

1.1.2.3.3 Contractual & Legal Information

Practical Completion Date: 12 May XXXX

Defects Liability period: 12 months from Practical Completion date. 11 May XXXX

1.1.2.3.4 Project Details - Future No & Name xxx**1.1.3 RESIDUAL RISKS****1.1.3.1 General**

Generally the work undertaken and the materials specified are those that are commonplace in construction and would be easily recognised by competent contractors, however, where this is not the case the designer has made reference below to features and materials requiring special consideration.

The schedule below provides information on future significant hazards and control measures envisaged in the design.

Suitable site specific risk assessments should be carried out prior to commencing any maintenance works. The assessment must take into account potential hazards to employees and members of the public arising from the works to be carried out.

Risk Assessments are usually carried out by a competent/skilled person and follow a systematic approach detailed in The Risk Assessment documents. This document provides details including evaluation of the potential risks and hazards together with any measures which need to be taken to minimise or eliminate them.

Refer to free guidance leaflets available from the HSE www.hse.gov.uk .

1.1.3.2 Designers Residual Risks

Index	Reference	Description	Company	Link
5.1.3.2_001			NOT SET	Awaiting

1.1.3.3 Project - 1234 Base Build

1.1.3.3.1 Residual Risk Summary

Supplier / Manufacturer	Model	Description	Residual Risk
SCHNEIDER ELECTRIC UK LIMITED	Acti 9	3 Phase Distribution Board	None identified
DOORS LTD	A100 Series	Kitchen Servery Shutter	Danger of injury from the door mechanism.
DOORS LTD	A100 Series	Kitchen Servery Shutter	Danger of injury if a body part gets trapped in the door.
DOORS LTD	A100 Series	Kitchen Servery Shutter	Do not or allow any persons to pass through the opening whilst the door is in operation
DOORS LTD	A100 Series	Kitchen Servery Shutter	Do not remove the casing over the curtain roll and the headgear unless the door is stopped, the chain is secured and locked in position or the power switched off at the isolator on power operated doors.
DOORS LTD	A100 Series	Kitchen Servery Shutter	Operate the door only by the means provided.
DOORS LTD	A100 Series	Kitchen Servery Shutter	Stand clear of the opening whilst operating the door.
SCHNEIDER ELECTRIC UK LIMITED	MG6C12	Panel Board	None identified
MITSUBISHI ELECTRIC EUROPE	CMB-P108V-GA1	AC Branch Controller	Working at height
MITSUBISHI ELECTRIC EUROPE	CMB-P1010V-GA1	AC Branch Controller	Working at height
MITSUBISHI ELECTRIC EUROPE	PEFY-P50VMA-E	Fan Coil Units	Working at height
MITSUBISHI ELECTRIC EUROPE	PKA-RP100KAL	Fan Coil Units	Working at height
MITSUBISHI ELECTRIC EUROPE	PUHZ-ZRP100VKA	External Condensing Unit	None identified
MITSUBISHI ELECTRIC EUROPE	PURY-EP350YLM-A	External Condensing Unit	None identified
MITSUBISHI ELECTRIC EUROPE	PURY-EP450YLM-A	External Condenser Unit	None identified

1.1.4 KEY STRUCTURAL PRINCIPLES

1.1.4.1 Project - 1234 Base Build

1.1.4.1.1 Structural Design

Introduction

The proposed superstructure is formed in a timber frame. Load bearing timber panels, support a first floor and roof.

External walls are timber panels, which resist both gravity loads and lateral wind pressures.

The superstructure is specialist design. XXX Ltd incorporated loading supplied by the designer into the ground floor and foundation design.

Geotechnical site investigations have identified significant depth of made ground. Consequently a suspended RC ground floor slab and piled ground beam foundations have been used.

The Ground Floor slab is cast on the piling mat, but assume it is suspended in the permanent condition.

Stability

Stability of the superstructure is by others.

Dowel bars between the piled ground beams and RC ground slab ensure both horizontal shear loads are transferred to foundation and resist horizontal forces should the piles be installed out of tolerance.

This ensures the top of piles are restrained in both directions.

Horizontal forces are ultimately resisted by bearing of the piles and piled ground beams on the adjacent ground.

Robustness

As an educational building of 2 storeys, in accordance with Regulation A3 of Building Regulations (England & Wales), it is classified as a Class 2B structure. This primarily affects the design of the superstructure by others. Any foundation loading resultant from conditions preventing disproportionate collapse are provided by the superstructure designer.

Analysis

Generally, calculations have generally been undertaken by hand, augmented with spreadsheet design and isolated Masterseries models.

Design Responsibility

With regards to the structure XXX Ltd Consulting have designed the ground floor slab, piled ground beams and provided pile loads. The following items are designed and detailed by others:

- Any superstructure above ground floor RC slab
- Canopy structures above foundation level
- Piles
- Piling mat
- Any fixings into the foundation or ground floor slab from superstructure elements, e.g holding down bolts etc.
- Temporary works

Codes of Practice

The design is undertaken to Eurocode.

LOADING

Gravity Loads

	Area Loads (kN/m ²)	Classroom	Corridors	Gymnasium	Plant rooms
DL	225mm Ground Slab	5.40	5.40	5.40	5.40
SD	Finishes	2.00	2.00	2.00	2.00
LL	Area	3.00	4.00	5.00	7.50
	Total Dead Load	7.60	7.60	7.60	7.60
	Total SLS Load	10.60	11.60	12.60	15.10
	Line Loads (kN/m)				
DL	Foundation 0.6m x 0.6m + slab thickening	15.10	15.10	15.10	15.10
DL	Superstructure	By others	By others	By others	By others
LL	Superstructure	By others	By others	By others	By others
	Points Loads (kN)				
DL	Superstructure	By others	By others	By others	By others
LL	Superstructure	By others	By others	By others	By others

For rational design, all classrooms are designed for a LL of 4.0kN/m². This allows for additional partitions and simplifies the loading arrangement with corridors.

Line and point loads have been provided by the superstructure designer which accommodate the loads from the superstructure.

Wind Loads

Wind loading is incorporated into the loads provided by the superstructure designer.

Heave Loads

There is an existing band of mature trees to the South and East of the proposed building. Typically to the South these trees are >20m from the proposed building and >10m from the East. However the existing ground levels falls away to both the South and significantly to the East, so it is deemed that typically the trees will not result in heave to the underside of the slab.

There is a single tree at the South West corner, at the higher end of the site, which is 9m from the building. Heave protection is required locally to the underside of the slab. The extent of this is in accordance with NHBC guidance.

The failure load of the heave protection provides the heave forces applied to the underside of the affected slabs and ground beams.

1.1.4.1.2 Drawings & Calculations

Index	Reference	Description	File Type	Company	Link
5.1.4.1.2_001	FS0469-XXX-ZZ-FN-DR-S-0002	Foundation GA	Drawing	WML CONSULTING LTD	View

1.1.5 HAZARDOUS MATERIALS

1.1.5.1 General

The following hazards resulting from materials used in the construction of this project may pose a health and safety risk under certain circumstances. It is advised that appropriate risk or COSHH assessments are carried out to determine the risks involved during routine maintenance. Up to date COSHH assessments should be obtained or prepared at the time work is carried out.

1.1.5.2 Asbestos

None present - new building

1.1.5.3 Project - 1234 Base Build

1.1.5.3.1 Hazardous Materials

Description	Model	C.O.S.H.H
AC Branch Controller	CMB-P108V-GA1	410a refrigerant
AC Branch Controller	CMB-P1010V-GA1	410a refrigerant
External Condensing Unit	PUHZ-ZRP100VKA	410a refrigerant
External Condensing Unit	PURY-EP350YLM-A	410a refrigerant
External Condensor Unit	PURY-EP450YLM-A	410a refrigerant
Fan Coil Units	PEFY-P50VMA-E	410a refrigerant
Fan Coil Units	PKA-RP100KAL	410a refrigerant

1.1.6 REMOVAL & DISMANTLING

1.1.6.1 General

There are items of plant and equipment installed to the building which are likely to need replacement either due to irreparable breakdown, obsolescence of parts or when the end of the economic life is reached.

A Plan of Work should be established and will usually include method statements, risk assessments, consents, permits to works, disposal methods and details of who will have overall responsibility for the works.

The plan of works should consider:-

1. The substances used or processed by the plant or equipment including decontamination, and safe disposal of any waste.
2. Isolation and making safe of all supplies to and from the piece of equipment.
3. Physical considerations such as size, weight and space around the equipment and entry/exit paths and routes including assessment of the types of lifting equipment to be used.
4. Interfaces with members of the public
5. Transportation of the equipment including loading and unloading methods.

6. Consideration of waste disposal options i.e. any parts that can be recycled or retained as spares, special waste, Waste Electrical and Electronic Equipment Directive (WEEE) Directive.

1.1.6.2 Project - 1234 Base Build

1.1.6.2.1 Disposal and Dismantling - Building

Supplier / Manufacturer	Model	Description	Disposal and Dismantling
BURMATEX LTD	Cordiale	Carpet Tile - 12103 Netherland Slate	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Cordiale	Carpet Tile - 12105 Canadian Diamond	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Cordiale	Carpet Tile - 12122 Chinese Turquoise	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Cordiale	Carpet Tile - 12180 Japanese Indigo	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Cordiale	Carpet Tile - 12182 Brazilian Sky	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Cordiale	Carpet Tile - 12186 Cambodian Silk	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Cordiale	Carpet Tile - 12188 Costa Rican Sun	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Grade	Carpet Plank - Grade 22509 Smoke	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Grade	Carpet Plank- Grade 22508 Zinc	Materials form inert waste and can be disposed of in normal landfill.
HECKMONDWIKE FB LTD.	Zephyr	Carpet Tile - Silver	Materials form inert waste and can be disposed of in normal landfill.
POLYFLOR LTD	Expona Flow	Safety Vinyl Sheet - 9840 Oatmeal	Materials form inert waste and can be disposed of in normal landfill.
POLYFLOR LTD	Expona Flow	Safety Vinyl Sheet - 9849 Flaxen	Materials form inert waste and can be disposed of in normal landfill.
POLYFLOR LTD	Polysafe Apex	Safety Vinyl Sheet - 4202 Chromite	Materials form inert waste and can be disposed of in normal landfill.
POLYFLOR LTD	Polysafe Quattro	Safety Vinyl Sheet - Cool Pebble	Materials form inert waste and can be disposed of in normal landfill.
POLYFLOR LTD	Polysafe Verona	Safety Vinyl Sheet - 5201 Cookie Cream	Materials form inert waste and can be disposed of in normal landfill.
POLYFLOR LTD	Polysafe Verona	Safety Vinyl Sheet - 5203 Dolphin Grey	Materials form inert waste and can be disposed of in normal landfill.
GERFLOR LTD	Taraflex Multi-use	Sports Floor - 6.2 Wood Natural 433	Materials form inert waste and can be disposed of in normal landfill.
DOORS LTD	A100 Series	Roller Shutter Door	Dismantling of the Door MUST be carried out by competent trained engineers.
MITSUBISHI ELECTRIC EUROPE	CMB-P108V-GA1	AC Branch Controller	By specialist in compliance with local regulations
MITSUBISHI ELECTRIC EUROPE	CMB-P1010V-GA1	AC Branch Controller	By specialist in compliance with local regulations
MITSUBISHI ELECTRIC EUROPE	PEFY-P50VMA-E	Fan Coil Units	By specialist in compliance with local regulations
MITSUBISHI ELECTRIC EUROPE	PKA-RP100KAL	Fan Coil Units	By specialist in compliance with local regulations
MITSUBISHI ELECTRIC EUROPE	PUHZ-ZRP100VKA	External Condensing Unit	By specialist in compliance with local regulations

Supplier / Manufacturer	Model	Description	Disposal and Dismantling
MITSUBISHI ELECTRIC EUROPE	PURY-EP350YLM-A	External Condensing Unit	By specialist in compliance with local regulations
MITSUBISHI ELECTRIC EUROPE	PURY-EP450YLM-A	External Condensor Unit	By specialist in compliance with local regulations

1.1.6.2.2 Disposal and Dismantling - Mechanical & Electrical

Supplier / Manufacturer	Model	Description	Disposal and Dismantling
BURMATEX LTD	Cordiale	Carpet Tile - 12103 Netherland Slate	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Cordiale	Carpet Tile - 12105 Canadian Diamond	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Cordiale	Carpet Tile - 12122 Chinese Turquoise	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Cordiale	Carpet Tile - 12180 Japanese Indigo	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Cordiale	Carpet Tile - 12182 Brazilian Sky	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Cordiale	Carpet Tile - 12186 Cambodian Silk	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Cordiale	Carpet Tile - 12188 Costa Rican Sun	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Grade	Carpet Plank - Grade 22509 Smoke	Materials form inert waste and can be disposed of in normal landfill.
BURMATEX LTD	Grade	Carpet Plank- Grade 22508 Zinc	Materials form inert waste and can be disposed of in normal landfill.
HECKMONDWIKE FB LTD.	Zephyr	Carpet Tile - Silver	Materials form inert waste and can be disposed of in normal landfill.
POLYFLOR LTD	Expona Flow	Safety Vinyl Sheet - 9840 Oatmeal	Materials form inert waste and can be disposed of in normal landfill.
POLYFLOR LTD	Expona Flow	Safety Vinyl Sheet - 9849 Flaxen	Materials form inert waste and can be disposed of in normal landfill.
POLYFLOR LTD	Polysafe Apex	Safety Vinyl Sheet - 4202 Chromite	Materials form inert waste and can be disposed of in normal landfill.
POLYFLOR LTD	Polysafe Quattro	Safety Vinyl Sheet - Cool Pebble	Materials form inert waste and can be disposed of in normal landfill.
POLYFLOR LTD	Polysafe Verona	Safety Vinyl Sheet - 5201 Cookie Cream	Materials form inert waste and can be disposed of in normal landfill.
POLYFLOR LTD	Polysafe Verona	Safety Vinyl Sheet - 5203 Dolphin Grey	Materials form inert waste and can be disposed of in normal landfill.
GERFLOR LTD	Taraflex Multi-use	Sports Floor - 6.2 Wood Natural 433	Materials form inert waste and can be disposed of in normal landfill.
DOORS LTD	A100 Series	Roller Shutter Door	Dismantling of the Door MUST be carried out by competent trained engineers.
MITSUBISHI ELECTRIC EUROPE	CMB-P108V-GA1	AC Branch Controller	By specialist in compliance with local regulations
MITSUBISHI ELECTRIC EUROPE	CMB-P1010V-GA1	AC Branch Controller	By specialist in compliance with local regulations
MITSUBISHI ELECTRIC EUROPE	PEFY-P50VMA-E	Fan Coil Units	By specialist in compliance with local regulations
MITSUBISHI ELECTRIC EUROPE	PKA-RP100KAL	Fan Coil Units	By specialist in compliance with local regulations
MITSUBISHI ELECTRIC	PUHZ-	External Condensing Unit	By specialist in compliance with local

Supplier / Manufacturer	Model	Description	Disposal and Dismantling
EUROPE	ZRP100VKA		regulations
MITSUBISHI ELECTRIC EUROPE	PURY- EP350YLM-A	External Condensing Unit	By specialist in compliance with local regulations
MITSUBISHI ELECTRIC EUROPE	PURY- EP450YLM-A	External Condensor Unit	By specialist in compliance with local regulations

1.1.7 CLEANING & MAINTENANCE FACILITIES

The purpose of this section is to identify equipment or systems provided for cleaning or maintaining the structure.

1.1.7.1 Base Build

A cleaning and access strategy has been provided by XXX Consulting. High level windows to be cleaned by reach and wash and roof to be accessed by articulated cherry picker.

1.1.8 SIGNIFICANT UTILITIES AND SERVICES

Through the south arrival plaza, the main services for the building enter, which are gas, electric, water and telecoms.

Refer to As Built external works drawings for M&E and drainage buried services. Any future groundworks should be surveyed by a competent surveyor prior to any works commencing on site. Please note that the As-Built external services drawing will not be produced until the external mechanical and electrical works are completed as part of Phase 2.

Incoming, underground services drawings are located within each of the respective project O&M Manuals.

- Civils, Drainage and Underground Services - [Building O&M Manuals](#)
- Pipework, Electrical and Data cabling services - MEP O&M Manuals.

1.1.9 REFERENCE INFORMATION

1.1.9.1 Reference Documents

Link	Reference	Description
Awaiting		

1.1.9.2 Regulatory Reform (Fire Safety) Order 2005

The information in the table below is provided for use by the building occupier's responsible person for fire risk assessments. These systems have significant bearing on fire and life safety and must be suitably maintained.

1.1.9.2.1 Guidance

GENERAL

The Regulatory Reform (Fire Safety) Order 2005 replaces the existing fire legislation such as the Fire Precautions Act 1971, the amended 1997 Fire Precautions (Workplace) Regulations, and applies to all premises except private dwellings. The local fire and rescue authority will enforce the Fire Safety Order in most premises. The exceptions are:

1. crown-occupied/owned premises where Crown fire inspectors will enforce
2. premises within armed forces premises where the defence fire and rescue service will enforce
3. certain specialist premises including construction sites, ships (under repair or construction) and nuclear installations, where the HSE will enforce
4. sports grounds and stands designated as needing a safety certificate by the local authority, where the local authority will enforce

Fire certificates are no longer valid and are now based on fire risk assessments being carried out, precautions being implemented and regularly reviewed, particularly when alterations or changes are made, to reduce or eliminate the risk.

The Fire Risk Assessment must be carried out by the responsible person(s) for the premises or area they control and must take into account ALL persons including visitors and passers by.

RESPONSIBLE PERSONS

The responsible person is deemed to be anyone who has control of premises or anyone who has a degree of control over certain areas, for example;

the employer for those parts of premises staff may go to the managing agent or owner for shared parts of premises or shared fire safety equipment such as fire-warning systems or sprinklers the occupier, self-employed people or voluntary organisations if they have any control any other person who has some control over a part of the premises.

The responsible person is ultimately liable to ensure the Regulations are complied with, even if a third party is used to review the fire safety arrangements.

FIRE RISK ASSESSMENTS

The Fire Risk assessment should include and record the following:-

1. Identify fire hazards
2. Identify people at risk
3. Evaluate, remove or reduce, and protect from risk
4. Record, plan, inform, instruct, and train
5. Review your fire-risk assessment regularly.

GUIDANCE DOCUMENTS

HM Government have published guidance documents for different types of premises which are available for download on the www.gov.uk/government/collections/fire-safety-law-and-guidance-documents-for-business web site.

1.1.9.2.2 Fire & Life Safety Systems

Note: hyperlinks can be added to any of the systems or manuals to link directly to information.

System or Service	Item	Location of the Information
Emergency Lighting Electrical Systems Fire Alarms Lightning Protection	<ul style="list-style-type: none"> • Design & System Description • Operation & Maintenance • Testing and Commissioning • Certification • Drawings 	Electrical O&M Manuals
Sprinkler or other fire suppression Hydrant, wet and dry riser Smoke ventilation Gas Services	<ul style="list-style-type: none"> • Design & System Description • Operation & Maintenance • Testing and Commissioning • Certification • Drawings 	Mechanical O&M Manuals
Intruder and CCTV	<ul style="list-style-type: none"> • Design & System Description • Operation & Maintenance • Testing and Commissioning • Certification • Drawings 	Security Systems O&M Manuals
Evacuation lifts	<ul style="list-style-type: none"> • Design & System Description • Operation & Maintenance • Testing and Commissioning • Certification • Drawings 	Building O&M Manuals
Fire Stopping	<ul style="list-style-type: none"> • Design & System Description • Operation & Maintenance • Testing and Commissioning • Certification • Drawings 	Building O&M Manuals