HS29: PRE-CONSTRUCTION INFORMATION

Client:
Mr R Glew & Ms Alexander

Site Address:
Kitts Cottage, Springfield, Bostan Spa, Wetherby, LS23 6EB

Principal Designer: Pre-Construction Only
MAS Design Consultants Ltd

Principal Contractor:
To be Appointed

MAS DESIGN CONSULTANTS LTD
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1 Description of Project

1.1 Project Description Including Client Brief

Mr Glew & Ms Alexander are considering extending their house.

The works broadly consist of a two storey side extension to provide additional living space and a bedroom, along with associated external works. In order to provide the enhanced living accommodation, structural alterations to the property will be carried out; all modifications to the structure will be designed by a structural Engineer and in accordance with current Building regulations. The works will involve alterations to the existing electrical and plumbing installations.

Site Address : Kitts Cottage, Springfield, Boston Spa, Wetherby, LS23 6EB

Key Participants

Client : Mr R Glew & Ms S Alexander
Principal Designer [pre-construction phase]: MAS Design Consultants Ltd
Principal Designer [construction phase]; the Principal Contractor appointed to carry out the works
Local Authority: Leeds City Council
Local HSE Office: 2nd Floor, 7 & 8 Wellington Place, Leeds. LS1 4AP.

1.2 Key Dates

Planning Submission date:	11/10/2022
Planning Consent date:	03/04/2023
Building Regulation Approval:	12/04/2023
Anticipated Commencement on Site:	TBC
Anticipated Construction Period:	TBC

1.3 Proposed use of structure

Following completion of the Works the building will be a residential dwelling and The Workplace (Health, Safety and Welfare) Regulations 1992 are not applicable on this contract.

1.4 Existing Records & Plans.

There is no existing building manual/health & safety file for the property and the plans of the existing structure have been prepared from a visual inspection, care must be exercised when opening up the works to ascertain the whereabouts of any load bearing members or structures.

Copies of enquiries that have been received from the utilities [gas, water, electric] are appended to this document.

1.5 Client Brief

Mr Glew & Ms Alexander are considering a two storey extension to their house and have asked MAS Design Consultants Ltd to consider these works and to develop the concept to a design that can be submitted for either Planning approval or consent under permitted development; following the granting of planning permission or permitted development the designs will be developed to satisfy Building regulations.

2 Client's Considerations & Management Requirements

2.1 Planning & Managing the Project Including Health & Safety Goals

All work shall be carried out in accordance with the Principal Contractors Company Health & Safety Policy, CDM 2015, current legislation, Approved Codes of Practice and Guidance.

2.2 Communication & Liaison Between Client & Others

As the principal contractor, you must work with the client and any other designers throughout the construction phase and ensure good communication exists between all members of the team. This will give you the opportunity to ask questions and offer suggestions to better plan and manage health and safety.

2.3 Site Security

The Principal Contractor shall detail within the Construction Phase Health & Safety Plan arrangements for securing the site and attention is specifically drawn to Regulation 18 in the Guidance on Regulations for CDM 2015.

The site is located in a residential area and the risks associated with the possibility of young person's gaining access to the site is present. The Principal Contractor must address these risks in the Construction Phase Health & Safety Plan.

Where trespass has been brought to the attention of the Principal Contractor, the use of 'out of hours' security should be considered.

2.4 Welfare Provision

Prior to activities commencing the Principal Contractor shall ensure that adequate welfare facilities are available, as a minimum these should include:

- Canteen.
- Site Office.
- Drying Room.
- Toilets.
- Hot and cold running water.
- Means of warming food and attention is specifically drawn to Schedule 2 in the Guidance on Regulations for CDM 2015.

The Principal Contractor will make available suitable accommodation if the existing premises/facilities cannot be utilised.

The Principal Contractor shall identify within the Construction Phase Health & Safety Plan that the facilities are adequate, and these are to be established prior to construction activities commencing.

2.5 Site Hoarding Requirements

The Principal Contractor is to ensure that the site and any compound area are adequately secured and to ensure all relevant health and safety signage is displayed and complies with

current health and safety legislation. A notice should be displayed confirming project team members and the Principal Contractors details.

Due to the location and nature of works a full site hoarding may not be suitable, however the Principal Contractor shall ensure that the extent and limit of the works are clearly identified and that no unauthorised access can be gained, and attention is specifically drawn to Regulation 18 in the Guidance on Regulations for CDM 2015.

2.6 Site Transport Arrangements & Vehicle Movement Restrictions

The site access will be agreed with the Client; the Principal Contractor's attention is drawn to the matter that the site is located in a residential area and the Principal Contractor shall address this within the Construction Phase Health & Safety Plan and attention is specifically drawn to Regulation 25 in the Guidance on Regulations for CDM 2015.

No obstruction to the emergency services, deliveries and the normal traffic movements of the neighbours will be permitted.

2.7 Client Permit-to-Work Systems

The Client will not be operating a Permit-to-Work system; the Principal Contractor however shall address and assess the need to adopt a permit-to-work system within the Construction Phase Health & Safety Plan.

2.8 Fire Precautions

The Principal Contractor shall detail within the Construction Phase Health & Safety Plan the fire detection / fighting strategy that will be adopted, and attention is specifically drawn to Regulation 32 in the Guidance on Regulations for CDM 2015.

No burning of materials is permitted on site i.e. No Bonfires.

2.9 Emergency Procedures & Means of Escape

The Principal Contractor shall detail within the Construction Phase Health & Safety Plan the emergency procedures that will be adopted, and attention is specifically drawn to Regulation 30 in the Guidance on Regulations for CDM 2015.

2.10 Areas Designated as Confined Spaces

No areas have been designated as confined spaces by the Client; the Principal Contractor however shall assess the works and the risks and attention is specifically drawn to Regulations 29 and 33 in the Guidance on Regulations for CDM 2015.

2.11 Smoking & Parking Restrictions

No smoking is permitted within the site, site office and welfare facilities; a designated smoking area is to be defined.

The site Principal Contractor's attention is drawn to the matter that the site is located in a residential area and that congestion of the local roads is likely due to parking by contractors, the Principal Contractor shall address the parking arrangements within the Construction Phase Health & Safety Plan.

No obstruction to the emergency services, deliveries and the normal traffic movements of the neighbours will be permitted.

2.12 Party Wall etc. Act 1996

Notices under the Party Wall Act are most likely required and are to be served by or on behalf of the building owner.
For further clarification on the Party Wall etc. Act 1996 contact:
Cairn Wharf Consultancy Ltd., 18 Station Road, Otley, LS21 3HX.
Tel 01943 468922 Mob 07739 576181
cw@cairnwharf.com

3 Environmental Restrictions & Existing On-Site Risk

3.1 Boundaries & Access

The site boundaries are clearly defined on the site plan and no problems are anticipated with access other than that the site is located in a narrow residential street, the Principal Contractor shall address any specific access arrangements within the Construction Phase Health & Safety Plan. There are limited facilities for material storage on site.

No obstruction to the emergency services, deliveries and the normal traffic movements of the neighbours will be permitted.

3.2 Restrictions on Deliveries, Waste Collection & Storage

Deliveries should only take place outside normal working hours with the prior agreement of the Client; particular care should be made to avoid peak traffic congestion and school starting/finishing times.

The Principal Contractor is to include within the Construction Phase Health & Safety Plan arrangements for waste collection and storage. Where waste is removed from site appropriate transfer/consignment notes are to be obtained and removal is to be carried out by an appropriate waste carrier

3.3 Adjacent Land Uses

The site is located adjacent to a built-up residential area and the Principal Contractor must take account of this when producing the Construction Phase Health & Safety Plan and attention is specifically drawn to Regulation 18 in the Guidance on Regulations for CDM 2015. Particular attention must be given to the possibility of young person's gaining access to the site.

The Principal Contractor is to include within the Construction Phase Health & Safety Plan arrangements in particular to the suppression of noise and dust during the demolition works.

3.4 Existing Storage of Hazardous Materials

None currently identified

3.5 Location of Existing Services

Copies of enquiries that have been received from the utilities [gas, water, electric] are appended to this document.

The Principal Contractor shall make all and any necessary further enquiries that may be required to locate any further services and the like before commencing work on site.

Particular attention is drawn to the fact that the works involve working within an existing property and the fact that many of the services will most likely be concealed within the structure and the existing services must be made safe prior to opening up any part of the works or cutting into the structure.

3.6 Ground Conditions, Underground Structures & Water Courses

The existing ground conditions appear to pose no problem to the proposed works; there are no reported underground structures or water courses.

The Principal Contractor shall make all and any necessary further enquiries that may be required to locate any further services and the like before commencing work on site.

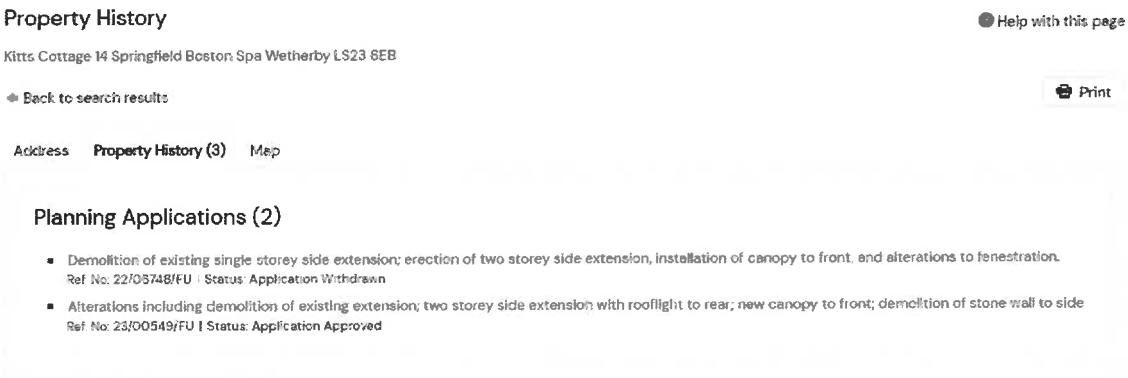
3.7 Existing Structures

The existing property was built prior to 2000 and appears to be in reasonable condition. It appears to be a traditionally constructed property consisting of masonry external walls and tiled roof with cut timbers.

The safety method statements and risk assessments in connection with the demolition/alteration work shall be developed prior to the commencement of the works.

3.8 Previous Structural Modifications

There doesn't appear to have been any previous modifications to the property.


Property History

Help with this page

Kitts Cottage 14 Springfield Boston Spa Wetherby LS23 6EB

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Print

Address Property History (3) Map

Planning Applications (2)

- Demolition of existing single storey side extension; erection of two storey side extension, installation of canopy to front, and alterations to fenestration.
  Ref No: 22/05748/FU | Status: Application Withdrawn
- Alterations including demolition of existing extension; two storey side extension with rooflight to rear; new canopy to front; demolition of stone wall to side
  Ref No: 23/00549/FU | Status: Application Approved

3.9 Fire Damage, Ground Shrinkage, Movement or Poor Maintenance

There doesn't appear to be any issues that complicate the proposed works.

3.10 Difficulties Relating to Plant & Equipment in the Premises

There doesn't appear to be any issues that complicate the proposed works.

3.11 Health & Safety Information Contained in Earlier Design, Construction or 'as-built' Drawings

There is no earlier design information available for the property.

3.12 Asbestos Including Survey Results

As the property was built before the year 2000, it is possible that asbestos could be present in the structure.

The existing structure has not been surveyed with regard to ACM's and as the potential exists for such to be present, it is recommended that specialist inspection and testing is conducted before the commencement of building works.

3.13 Contaminated Land Including Survey Results

Specialist testing of the soils has not been carried out but there doesn't appear to be any issues that would complicate the proposed works.

3.14 Existing Structures Containing Hazardous Materials

None currently identified

3.15 Health Risks Arising from Client's Activities

None currently identified

3.16 Relevant Information from an Existing Health and Safety File

There is no earlier information available for the property.

4 Significant Design & Construction Hazards

4.1 Significant Design Assumptions & Suggested Work Methods, Sequences or Other Control Measures

There are several structural alterations being made to the existing property. Openings are being made on both storeys from the existing house into the extension. The sequencing of the structural works and propping will need careful consideration to avoid damage to workers and the existing property. Also working at height will need careful consideration.

Special attention will need to be given to working methods given the close proximity of the other properties to the site and limited space for material storage and manoeuvrability outside the property.

4.2 Arrangements for Co-ordination of On-going Design Work & Handling Design Changes

It is essential that any design information is provided both in the initial contract documents and any subsequent changes to design of the structure etc. The Principal Designer and Principal Contractor will co-operate fully with the Client to ensure such information is properly integrated into the works. Similarly, where the Principal Contractor is required to carry out design work (this may also include temporary works) then this information will be communicated to the Client and Principal designer for approval as necessary.

4.3 Significant Risks Identified During Design

Structural stability during alteration, demolition and dismantling

What you need to do:

The law says that all alteration, demolition and dismantling work should be carefully planned and carried out by competent people to avoid unplanned structural collapse.

The law requires clients to provide contractors with relevant information about a building's structure, including stability and structural form and any significant design assumptions, suggested work methods and sequences. The contractor must then use that information to plan and carry out the work safely.

Key requirements are:

- Survey and assessment
- Preventing structural collapse
- Arrangements for demolition
- Consulting building control departments

What you need to know:

Workers and passers-by can be injured by premature and uncontrolled collapse of structures, and by flying debris.

Survey and assessment

A competent person should do a thorough structural survey and assessment before any potentially load- bearing parts of a structure are altered.

The structural survey should consider:

- the age of the structure.
- previous use.
- type of construction; and
- any nearby buildings or structures.

This information should be used to determine the steps required to prevent any collapse.

Preventing structural collapse

A competent person should decide the method and design of temporary supports. Temporary support provided must be designed, installed and maintained to withstand foreseeable loads and structures should never be overloaded.

Arrangements for demolition

Demolition or dismantling arrangements should be written down before the work begins. This safe system of work may be in the form of a safety method statement identifying the sequence required to prevent accidental collapse of the structure.

In addition to the design and method of temporary supports a safe system of work may include:

Establishing exclusion zones and hard-hat areas, clearly marked and with barriers or hoardings; covered walkways; using high-reach machines; reinforcing machine cabs so that drivers are not injured; and training and supervising site workers.

Consulting Building Control departments

You should consult the building control department of the local authority in the area where a building is located before any structural alterations are made to a building.

The local authority is the enforcing body for Building Regulations.

Asbestos

What you need to do

The law says that anyone responsible for maintenance and repair of a property has a duty to identify asbestos in the premises and manage the risk.

Key issues are:

- Identifying asbestos risk
- Licensed work with asbestos
- Other work with asbestos
- Waste
- Instruction and training

What you need to know

Asbestos-related diseases kill more people than any other single work-related cause. All types of asbestos can be dangerous if disturbed. The danger arises when asbestos fibres become airborne. They form a very fine dust. Breathing asbestos dust can cause serious damage to the lungs and cause cancer.

Identifying asbestos risk

Before you commission or do any construction work that is likely to disturb asbestos, you will need to find out if there are any asbestos-containing materials (ACMs) in the premises or structure.

You need to know:

- the amount of asbestos.
- where it is and what condition it is in.
- whether work is likely to disturb the material; and
- whether, and how the material needs to be safely protected or removed.

For demolition and refurbishment work, it is essential to find out, either from checking existing records (such as the client's survey, asbestos plan or register) or commissioning a suitable survey before any construction work starts. It is good practice to include the need to survey asbestos and protect or remove it in the initial project cost and programme.

Licensed work with asbestos

Work with high-risk asbestos products, such as asbestos insulating board, sprayed fire or insulation coatings or lagging, must only be carried out by an asbestos licence holder who works within the conditions of their licence.

Other work with asbestos

For work with lower-risk asbestos products, such as decorative ceiling coatings and corrugated asbestos cement sheets, make sure that workers are properly protected

and that you minimise the spread of debris – public fear and bad publicity are all too common, and decontamination costs can be huge.

Waste

Make sure that asbestos waste is disposed of properly and in accordance with Environment Agency and Scottish Environment Protection Agency requirements.

Instruction and training

It is a legal requirement that your workers are trained to know about the health risks associated with asbestos, how to spot it, and what to do if they uncover damaged asbestos.

Once construction work is finished, you may need to share information about the location and condition of any asbestos that is still within the premises. This is so that the client can comply with their duty to manage asbestos in non-domestic premises.

Working at Height

Assessing all work at height

What you need to do

The law requires that employers and self-employed contractors assess the risk from work at height and go on to organise and plan the work so it is carried out safely.

Try avoiding work at height, if you can. You must otherwise prevent or arrest a fall and injury if work at height is necessary.

Instruct and train your workforce in the precautions needed. Method statements are widely used in the construction industry to help manage the work and communicate what is required to all those involved.

Key issues for all work at height are:

- Risk assessment
- Precautions required
- Method statements

Work at height is the biggest single cause of fatal and serious injury in the construction industry, particularly on smaller projects.

Over 60% of deaths during work at height involve falls:

- from ladders, scaffolds, working platforms and roof edges; and
- through fragile roofs or rooflights.

Risk assessment

Employers and self-employed contractors must:

- Assess the risks.
- Decide on the precautions required.
- Record the significant findings; and
- Review the assessment as necessary.

Do not overcomplicate the process. For many firms your work at height risks will be well known and the necessary control measures easy to apply.

Follow the HSE Five steps to risk assessment

Precautions required

The law on work at height requires that you take account of your risk assessment in organising and planning work and identifying the precautions required. Your objective is to make sure work at height is properly planned, supervised and carried out in a safe manner.

The approaches you can adopt for work at height are to:

- Avoid work at height where it reasonably practicable to do so, e.g., by assembly at ground level and:
- Prevent any person falling a distance liable to cause personal injury e.g., by using a scaffold platform with double guard-rail and toe - boards; and
- Arrest a fall with equipment to minimise the distance and consequences of a fall, e.g., safety nets, where work at height cannot be avoided or the fall prevented.

Method statements

A method statement is a useful way of recording the hazards involved in specific work at height tasks and communicating the risk and precautions required to all those involved in the work. The statement need be no longer than necessary to achieve these objectives effectively.

The method statement should be clear and illustrated by simple sketches where necessary. Avoid ambiguities or generalisations, which could lead to confusion. Statements are for the benefit of those carrying out the work and their immediate supervisors and should not be overcomplicated.

Equipment needed for safe working should be clearly identified and available before work starts. Workers should know what to do if the work method needs to be changed.

Slips and trips

What you need to do

Contractors and others in control of construction sites must manage work so that people can move safely around the site.

Your site should be kept in a clean and orderly condition so as to reduce the chance of injury through slips and trips.

Everyone can make a contribution to reducing slips and trips on site. If you see a risk, sort it, or report it to someone who can.

Key aspects of construction slips and trips include:

- Uneven surfaces
- Obstacles
- Trailing cables
- Wet or slippery surfaces
- Changes in level

What you need to know

Several thousand construction workers are injured each year following a trip or slip whilst at work on a building site. Around 1000 of these injuries involve someone fracturing bones or dislocating joints.

Most could be avoided by the effective management of working areas and access routes, such as stairwells, corridors, footpaths and site cabins.

Involving the workforce can help identify problem areas and increase the reporting of near misses. Everyone can make a contribution to reducing slips and trips – see it, sort it.

Uneven surfaces

Many slips and trips occur when people are walking on uneven surfaces. The risk can be reduced by providing walkways that are.

- clearly designated as a walkway.
- provided with good conditions underfoot.
- signposted, and provided with adequate lighting.

You can also use mechanical lifting aids rather than carrying unwieldy loads that block the view ahead and make sure everyone wears suitable footwear with a good grip.

Obstacles

Other slips and trips happen because there is something in the person's way, such as building materials or waste.

You can help avoid these incidents by:

- Housekeeping - everyone keeping their work and storage areas tidy.
- Deliveries - planning deliveries to minimise the quantity of materials on site.
- Waste - designating areas for waste collection, providing skips and bins where needed and making clear the responsibilities for waste removal.

Trailing cables

If you can use cordless tools, you may not need to use cables. Where you need cables for temporary lighting or mains-powered tools, run them at high level, especially along corridors

Wet or slippery surfaces

Treat slippery surfaces with stone (mud) or grit (for ice) or provide temporary covering.

Signpost any slippery areas and make sure footwear with a good grip is worn.

Changes in level

Where you cannot avoid small changes in level, such as in doorways, consider installing ramps. If you cannot do this, use signs to warn workers to look out for the change in level.

Electrical safety in construction

The law says you must take precautions against the risk of death or injury from electricity. Electrical equipment must be safe, and properly maintained. Only in exceptional circumstances should work be carried out on live systems, and then only by a competent authorised person.

Electrical systems in buildings - Refurbishment work in buildings presents the greatest risk and must be planned, managed and monitored to ensure that workers are not exposed to risk from electricity.

Overhead power lines - Any work near electric overhead power lines must be carefully planned and carried out to avoid danger from accidental contact or close proximity to the lines.

Underground cables - Damage to underground electrical cables can cause fatal or severe injury you must take precautions to avoid danger. These precautions include a safe system of work based on planning, use of plans, cable locating devices and safe digging practices.

Electricity – systems in buildings

What you need to do

The law says you must take precautions against the risk of death or injury from electricity during construction work.

Refurbishment work in buildings presents the greatest risk and must be planned, managed and monitored to ensure that workers are not exposed to risk from electricity.

Specific specialist electrical work should only be undertaken by those who are trained and competent to do so and by following strict procedures

The electrical equipment used must be safe, and properly maintained.

The key issues are:

- Managing electrical risk during refurbishment work
- Controlling risk to electricians

What you need to know

About three workers are electrocuted each year during refurbishment work on commercial and domestic buildings. Further deaths occur in incidents involving overhead power lines and underground electric cables.

Incidents within buildings involve both qualified electricians and other trades people. They happen when people are working on or close to equipment that is either:

- assumed to be dead but is in fact live; or
- known to be live but adequate precautions are not taken.

There are many more incidents which damage equipment and thousands of 'near-misses', any of which could have had fatal results.

Remember: electricity can kill – unlike most other hazards you cannot see, feel, hear or smell electricity so there is no advance warning of danger.

Managing electrical risk during refurbishment work

A number of electrocutions involve workers who are not electricians but who are carrying other works, such as plumbers and joiners. These incidents could be reduced by:

Understanding the system

Those responsible for planning and managing refurbishment work must understand the electrical system of the building in which the work takes place and liaise with the building occupier.

This will enable building work to be planned and managed so that the integrity of the electrical system is not compromised, and the workforce remains safe.

Working dead

Relevant parts of the electrical system should be isolated if the refurbishment work, e.g., labouring, joinery, or plumbing, is liable to disturb or damage the existing electrical system and expose people to electrical danger.

Portable electrical equipment

Tools, plugs and cables designed for DIY and domestic use are not suitable for site conditions. You should use cordless tools or those that operate from a 110v supply system earthed so that the maximum voltage does not exceed 55v.

Regularly inspect power tools and take them out of service if they are damaged. Tools should be serviced by qualified electricians. Do not do makeshift repairs.

Residual current (trip) devices

Where mains voltage (230v) is used, the risk of injury is high if equipment, tools, or leads are damaged or there is a fault. 230v equipment should be visually checked for damage every shift, have a visual inspection every week and have a combined inspection and test before first use on a site and then every month - ideally records of these checks should be kept. An RCD is a device which detects some, but not all, faults in the electrical system and rapidly switches off the supply.

RCDs must be properly installed and enclosed; checked daily; treated with care; kept free of moisture and dirt; and protected against vibration and mechanical damage.

Lighting systems

Protect cabling and bulbs against breakage. If a bulb breaks, the exposed filament may present a hazard. Have a system for checking bulbs regularly to maintain electrical safety and to keep the site well-lit.

Controlling risk to electricians

Electricians are not immune from electrical dangers. A number of the electrocutions on construction projects involve qualified electricians.

Safe working practices rely on clearly thought-out systems of work, carried through by competent and trained personnel who are self-disciplined and aware of their own limitations.

To plan and execute electrical work safely, there should be adequate information available about the electrical system and the work to be done.

Electrical contractors should not work 'live' if it can be avoided nor should they make systems live before they have finished their work, and everything has been installed correctly.

Safe isolation procedures must be followed at all times.

Remember: electrical work should only be undertaken by those who are trained and competent to do so.

Noise

What you need to do

The law says you must manage the exposure of your workforce to risk from noise on construction projects. This involves:

- Assessing the noise risk to workers from plant, machinery and tools.
- Eliminating and reducing noise at source by modifying working methods, choice of equipment, and by technical means; and
- Hearing protection to deal with any risk from noise after you have taken steps to eliminate and reduce risk by other means.

Hearing loss

Who is at risk

Managing the risks

What you need to know

Regular, frequent exposure to high noise levels causes deafness or tinnitus (permanent ringing in the ears).

The longer the exposure and the higher the noise level, the greater the degree of hearing loss.

Hearing loss

The hearing loss caused can be temporary or permanent.

Temporary deafness can occur after leaving a noisy place. Hearing usually recovers within a couple of hours. This is a sign that continued exposure to loud noise could permanently damage your hearing.

Sudden extremely loud noise can cause instant damage; and

Repeated exposure causes gradual hearing loss due to repeated exposure. This is more common, and it can take years for a worker to realise just how deaf they have become.

Who is at risk?

General construction site noise usually comes from machinery used for demolition, excavation or piling work and from compressors and concrete mixers etc.

Workers who are most at risk are those who use tools such as concrete breakers, pokers and compactors, sanders, grinders and disc cutters, hammer drills, chipping hammers, chainsaws, cartridge-operated tools, scabblers or needle guns.

Heavy plant operators and those who control machines on site, and anyone in close proximity to them, are also at risk

Remember: Noise exposure may not just be from the equipment that you operate – it might be produced by the fixed plant or the activities of another contractor.

Managing the risks

The HSE five-stage plan for managing construction health risks can help you manage risk from noise:

Stage 1: Arrangements
Stage 2: Assess health risks
Stage 3: Eliminate risk
Stage 4: Control risk
Stage 5: Manage remaining risk

Top tips for managing noise risks on smaller projects

Noise from equipment is probably loud enough to damage hearing if a person has to shout to talk to someone 2m away. Get levels assessed by someone with the skill and experience to measure noise and identify what needs to be done.

Manufacturers and suppliers of equipment provide information on the noise their equipment produces. Use this information to choose low-noise tools and equipment, e.g., breakers and drills.

Do jobs in another way that does not involve using noisy equipment or uses a quieter item of equipment. When buying or hiring equipment, choose the quietest model.

Do noisy jobs well away from where other people are working. Move workers who are not involved out of the noisy area. Erect signs to keep people out of the noisy area.

Poor maintenance of tools leads to increased noise levels. Maintain your equipment and any noise reduction devices, e.g., silencers.

Tell workers where there is a risk to their hearing, what is being done about it and what they are expected to do to minimise the risk.

Provide workers with ear defenders but remember – hearing protection is not a substitute for eliminating and reducing noise elimination at source.

Carefully select ear defenders and keep them in good condition. Train wearers in their use to ensure that they fit well and are kept in good condition.

Make sure that where defenders are needed, they are actually used. Check that the hearing protection does not interfere with other safety equipment.

Respiratory disease

What you need to do

The law says employers must reduce the exposure of workers to substances that can cause respiratory disease or breathing difficulty if inhaled.

This can be done by eliminating the hazard where possible or controlling the substance by means other than personal protective equipment (PPE), e.g., by water suppression or extraction of the dust.

As a last resort, PPE may be needed along with clear information, instruction and training for those exposed to the risk.

In the construction industry the most prevalent of these respiratory diseases are:

- Chronic obstructive pulmonary disease
- Occupational asthma and
- Silicosis

It is vital that you are managing the risk.

What you need to know

Work-related respiratory disease covers a range of illnesses that are caused or made worse by breathing hazardous substances that damage the lungs.

A number of construction activities can cause respiratory disease. These include:

- cutting kerbstones, stonemasonry, scabbling and surface grinding, tunnelling, crushing and screening demolition material, clearing and removing rubble, chasing out mortar before repointing, laying epoxy floors and carpentry.
- Chronic obstructive pulmonary disease

COPD is an obstruction of the airway that is not fully reversible. The condition is usually progressive and is associated with inflammatory responses of the lungs to hazardous substances.

Causes – the main cause of COPD is cigarette smoking, but exposure to harmful dust, fume and gases at work can contribute to the development of the disease.
Symptoms – include a chronic cough, sputum production, and shortness of breath.
Construction workers have higher levels of this disease than the general population.

Occupational asthma

Occupational asthma is an allergic reaction some people experience when they are exposed to substances in the workplace, e.g., wood dust.

These substances are called 'respiratory sensitisers', or asthmagens. They can cause a 'hypersensitive state' in the airways of those affected.

Not everyone who becomes sensitised goes on to develop asthma, but once the lungs become hypersensitive, further exposure to the substance, even at quite low levels, may trigger an attack.

Work-related asthma can be triggered by exposure to substances in the workplace. People with asthma are more likely to be sensitive to these respiratory sensitisers.

Silicosis

Silicosis is an irreversible lung disease that can take years to develop.

Causes – fine particles of respirable crystalline silica (RCS) cause damage and inflammation in the lungs. Over time, this leads to the formation of scar tissue (fibrosis), which shows up on chest X-rays.

Symptoms are breathing difficulties and a chronic cough which may not appear before retirement. Silicosis can be extremely disabling and lead to early death.

Construction workers have an increased risk of developing silicosis because of exposure to high levels of silica dust during certain tasks.

If high-speed cutting tools are used on high-silica-content materials without suitable controls, RCS exposures can be very high. Exposures to freshly cut surfaces of RCS occur in many construction tasks such as cutting, blasting, drilling and grinding.

The RCS hazard is present whether the parent material is granite, sandstone, slate, or a manufactured product such as brick or concrete.

Managing the risk

The HSE five-stage plan for construction health risks shows how to manage the risk from substances that can cause respiratory disease:

Stage 1: Arrangement
Stage 2: Assess health risks
Stage 3: Eliminate risk
Stage 4: Control risk
Stage 5: Manage remaining risk

Protecting the public

What you need to do

The law says you must conduct your business without putting members of the public at risk. This includes the public and other workers who may be affected by your work.

The project client or co-ordinator should provide information about:

- Boundaries
- adjacent land usage
- access; and
- measures to exclude unauthorized persons

This will influence the measures contractors take.

Key issues are:

- Managing site access
- Hazards causing risk to the public
- Vulnerable groups

What you need to know

All construction sites require:

- Measures to manage access through defined boundaries; and
- Steps to exclude unauthorised people.

While the numbers of children being killed or injured on construction sites has reduced, there is no room for complacency. Each year, two or three children die after gaining access to building sites, and many more are injured.

Other members of the public are seriously injured by:

- Materials or tools falling outside the site boundary.
- Falling into trenches; or
- Being struck by moving plant and vehicles.

The client's pre-construction information should include:

- project boundaries.
- adjacent land use.
- access; and
- measures to exclude unauthorised people.

Managing site access

Site boundaries: You need to define boundaries physically, where necessary, by suitable fencing. The type of fencing should reflect the nature of the site and its surroundings.

Determining the boundary is an important aspect of managing public risk. You need to:

- planning what form the perimeter will take.
- providing the fencing; and
- maintaining the fencing.

Questions you need to ask yourself include:

- What is the nature and type of the construction work?
- How heavily populated is the area is?
- Who will need to visit the site during the work?
- Will the site attract children?
- What are the site characteristics (e.g., existing site boundaries, location, proximity to other buildings).
- Typically, in populated areas, this will mean a two-metre-high small mesh fence or hoarding around the site.

Authorisation: The principal contractor must take reasonable steps to prevent unauthorised people accessing the site.

People may be authorised to access the whole site or be restricted to certain areas.

- You must explain relevant site rules to authorised people and do any necessary site induction.
- You may need to supervise or accompany some authorised visitors may need while they are on site or visiting specific areas.

Hazards causing risk to the public

Many hazards have the potential to injure members of the public and visitors. Consider if they exist on your project and how you will manage them.

Falling objects - You must make sure objects cannot fall outside the site boundary. On scaffolds you can achieve this using toe-boards, brick guards and netting. You may also need fans and/or covered walkways.

Delivery and other site vehicles - Make sure pedestrians cannot be struck by vehicles entering or leaving the site. Obstructing the pavement during deliveries may force pedestrians into the road, where they can be struck by other vehicles.

Scaffolding and other access equipment - Prevent people outside the boundary being struck while they are erecting, dismantling and using scaffolding and other access equipment.

Storing and stacking materials - You can reduce the risks associated with the storage of materials by storing materials within the site perimeter, preferably in secure compounds or away from the perimeter fencing.

Openings and excavations - People can be injured if they fall into excavations, manholes, stairwells or from open floor edges. You'll need to put up barriers or covers.

Other hazards include -

- slips, trips and falls within pedestrian areas.
- plant machinery and equipment.
- hazardous substances.
- electricity and other energy sources.
- dust, noise and vibration; and
- road works.

Vulnerable groups

The elderly, children and people with certain disabilities may need special attention. Work in premises such as schools and hospitals need careful thought and planning.

Some children are drawn to construction sites as exciting places to play. You must do everything you can to keep them out of the site and away from danger.

The following specific steps are particularly relevant to child safety:

- Secure sites adequately when finishing work for the day.
- Barrier off or cover over excavations and pits.
- Isolate and immobilise vehicles and plant and if possible, lock them in a compound.
- Store building materials (such as pipes, manhole rings, and cement bags) so that they cannot topple or roll over.
- Remove access ladders from excavations and scaffolds.
- Lock away hazardous substances.

Hazardous Substances

Controlling hazardous substances

Construction work can involve a number of hazardous substances. The sections below provide more information about what you need to know and do.

Key points – construction workers are exposed to a number of hazardous substances. Be aware of the significance of the ill health effects these cause and the main risk factors behind them.

Construction dust - construction dust is not just a nuisance; it can be a real risk to your lungs.

Cement - cement based products, like concrete or mortar, can cause serious skin problems such as dermatitis and burns.

Lead - lead is still commonly used and found in older buildings. Breathing in lead dust and fume inadvertently or swallowing it can cause serious health problems.

Solvents - solvents are found in many products such as paints, thinners, resins and glues. Poorly controlled work with solvents can create both short-term ill-health effects and longer-term disease.

Isocyanates - products that contain isocyanates include paints, coatings, foams and glues. Exposure to isocyanates can create a risk of asthma and dermatitis.

Harmful micro-organisms - construction workers can be exposed to a variety of disease-causing micro-organisms such as bacteria, viruses and fungi. They can be transmitted through the air, by hand to mouth contact or through the skin and lead to a range of health problems.

Carbon monoxide (CO) - this is a colourless and tasteless poisonous gas produced by gas appliances and engines when there is not sufficient air for them to work correctly. Carbon monoxide can kill.

Construction hazardous substances:

Key points

Construction workers are exposed to many different types of hazardous substances such as dust, lead or cement. You need to be aware of the substances you are working with, how these could get into your body and what the potential health effects are. Below are some key points.

Form

Hazardous substances come in a number of different forms:

Solids - including particles of solid material that get into the air such as dust, fibres, smoke and fume.

Liquids - including fine sprays, mists and aerosols made up of small droplets of liquid – e.g., sprayed paint.

Vapours - gaseous forms of a liquid or solid, e.g., solvent vapour.

Gases - some processes can generate gases like carbon monoxide or engine exhaust gases.

Micro-organisms - microscopic organisms, like bacteria, viruses and fungi can be found almost everywhere.

Under certain conditions, a substance can exist in more than one form at the same time (e.g., paint spraying can produce fine mists of liquid droplets and also solvent vapour). Knowing the correct form(s) a hazardous substance takes is important for getting the right controls.

Exposure route

Hazardous substances can get into the body in a number of ways. There are three main routes:

Lungs and airways – hazardous substances can be inhaled in the air you are breathing. The lungs and airways are vulnerable to many of these substances like dust or isocyanates. Your lungs are also closely linked to the circulatory system so the oxygen we breathe in the air can be transferred to the blood and on to all the tissues and organs in the body. This means that harmful substances, like solvent vapours, could also get into your blood and be distributed around your body.

Skin – some substances, such as cement, can directly affect your skin through contact leading to problems like dermatitis or burns. Other substances, e.g., solvents, can be absorbed through your skin into the blood. Harmful micro-organisms can also get into your body through cuts and wounds.

Mouth – everyone eats and drinks. Some people also smoke. You can therefore transfer hazardous substances into your body e.g., when eating or smoking with hands contaminated with lead dust.

Effects

Different substances can harm your health in different ways. Some of these occur more immediately, like dizziness, headaches and nausea from solvents or burns from cement. Others, such as lung diseases, can take much longer and sometimes many years to develop.

Construction is a high-risk industry for health issues. Hazardous substances cause many of these issues, particularly in relation to occupational cancers where the industry has the largest burden amongst the industrial sectors.

Physical Health Risks

Controlling physical ill health risks

Construction work involves many physical health hazards. The sections below outline more information about what you need to know and do.

Key points – construction workers are exposed to a number of physical ill health risks. Be aware of the significance of the ill health effects these cause and the main risk factors behind them.

Noise – noise is not just a nuisance. It can seriously damage your hearing. Many construction workers suffer from deafness, ringing in their ears and other illness as a result of excessive exposure to noise.

Vibration – vibrating hand-held power tools or machinery used as a regular part of the job can cause permanent harm. A range of conditions, including vibration white finger, can result from frequent poorly controlled exposure. This is known as hand-arm vibration syndrome (HAVS).

Manual handling – lifting, carrying and handling can create excessive stresses on areas of the body like the back. This can cause immediate damage to muscles and tendons such as strains and sprains. It can also lead to longer term or recurrent problems known as musculoskeletal disorders (MSDs). These can be permanently disabling.

Repetitive work – repetitive work and carrying out tasks in awkward postures can affect the arms, from fingers to shoulder, and neck. Known as Upper Limb Disorders (ULDs) they are often called repetitive strain injuries or 'RSI'. Symptoms of these MSDs include pain, aching, tingling, weakness, numbing or swelling. They can result in an inability to carry on with the work.

4.4 Materials Requiring Particular Precautions

4.5 Design Risk Assessments

Risk Description	Demolition / Alteration
Risk Rating	M
Mitigation / Controls	Contractor to make do allowance for safe working practices for operations generally and appropriate screening / protection is required.
Risk Rating	M
Residual Risk	There will be an ongoing safety risk during the demolition / alteration works, and the contractor should regularly review safety procedures / screening to ensure risks are minimised.

Risk Description	Possibility of Asbestos
Risk Rating	H
Mitigation / Controls	Asbestos survey to be carried out prior to opening up works. Contractor to liaise with asbestos consultant for safe removal of asbestos materials from the affected areas.
Risk Rating	M
Residual Risk	Contractor to maintain detailed record of asbestos investigation and removal, and clearly identify areas where site operatives should not access. Any asbestos contaminated areas to be sealed off using appropriate method to be agreed with the asbestos consultant.

Risk Description	Ensuring safety of the occupiers during the works.
Risk Rating	H
Mitigation / Controls	Contractor to agree a programme of works, including phases, from the outset and for this to be regularly reviewed with the relevant parties to ensure optimum safe working methods are employed at all times.
Risk Rating	M
Residual Risk	Ongoing liaison is required at all times to review progress and to deal with any unforeseen matters that may arise during the site operations.

Risk Description	Storage of materials on site
Risk Rating	M
Mitigation / Controls	Contractor to provide appropriate guarding to prevent materials falling, particularly from height.

Risk Rating	L
Residual Risk	Ongoing liaison is required at all times with site workers to ensure compliance.

Risk Description	Existing services in the area of proposed works
Risk Rating	M
Mitigation / Controls	Contractor to identify the location of any concealed services using record plans and careful hand dug excavations.
Risk Rating	L
Residual Risk	Reduced risk, but contractor should be constantly aware of potential services not previously identified

Risk Description	Erection of steelwork within confined space
Risk Rating	M
Mitigation / Controls	In conjunction with the structural engineer, the contractor is to establish an appropriate safe method for erecting new steelwork.
Risk Rating	L
Residual Risk	Contractor to ensure all relevant subcontractors are adequately briefed on the agreed working method, and any restrictions that may apply to the programming of the work.

Risk Description	Noise and dust arising from the works.
Risk Rating	M
Mitigation / Controls	Contractor should take measures to keep noise to a minimum, and programme noisy operations to reduce the impact on neighbouring properties. Also implement measures to minimise the spread of dust arising from the works.
Risk Rating	L
Residual Risk	Reduced risk but will require ongoing monitoring by the contractor.

Risk Description	Occupiers / Children trespassing on site.
Risk Rating	M
Mitigation / Controls	Ensure the site/works is properly secure.
Risk Rating	L
Residual Risk	Reduced risk but will require ongoing monitoring by the contractor.

Risk Description	Refurbishment works generally - Falls from height – holes and openings e.g., lift shafts. - Collapse of structures. - Contact with live electric power cables, water or gas supplies.

	- Contact with asbestos containing materials (ACMs) and lead. - Dust and contaminants or hazardous substances - previous use of buildings. - Removal of old glass and reglazing. - Fire and hotwork. - Work in confined spaces
Risk Rating	H
Mitigation / Controls	- Competent persons will carry out a comprehensive survey of the building. - A structural engineer will design temporary support systems, with design details held on site (drawings and calculations). - Holes and openings, e.g., lift shafts, should be securely covered or fitted with properly constructed guardrails and toeboards. Proper covers must be secured over the openings to prevent the risk of falls or the formation of "traps". - Work should not be carried out over open joists and therefore floorboards should be removed in sequence so that persons are working towards the access point. Alternatively, access to open areas must be blocked and appropriate warning signs displayed. Adequate walkways must be maintained for access. Boards must be replaced and secured once the work has been completed. - Services i.e., gas, electricity, etc. shall be isolated or made safe before work starts. All services must be checked carefully, where any suspect installation is found, the appropriate authorities must be contacted to eliminate any faults. - Asbestos containing materials (asbestos coatings, asbestos insulation, asbestos cement and asbestos insulating board) shall be identified (Refurbishment Asbestos Survey) and where necessary removed by a licensed contractor. - Suitable dust masks (FPP3) must be provided and worn. Dust should be cleaned up regularly to ensure reasonable working conditions and it must not be allowed to spread into public areas. In particular, precautions must be taken to prevent dust getting into ventilation systems and thereby spreading to occupied areas of a building. Water may be useful in keeping dust levels down but may create attendant problems. - Carry out a fire risk assessment and develop a fire plan. - Hotwork shall be controlled by a permit system. - Maintain water feed to hose reels and sprinkler systems for as long as possible. - Maintain fire separation in corridors, stairwells, lift shafts, etc.

	- Where contaminants found carry out a COSHH assessment.
Risk Rating	L
Residual Risk	Reduced risk but will require ongoing monitoring by the contractor.

Risk Description	Working at Height
Risk Rating	H
Mitigation / Controls	- Ladders will only be used for light work of short duration or where existing features on site cannot be altered. - Only Industrial Duty (Class 1) ladders which are designed for a Maximum Static Vertical Load (MSVL) 175kg or Trade Duty (previously Class 2, but now EN131) designed for a MSVL 150kg should be used. - Any surface upon which a ladder rests shall be stable, firm, of sufficient strength and of suitable composition-- safely to support the ladder so that its rungs or steps remain horizontal, and any loading intended to be placed on it. - A ladder shall be so positioned as to ensure its stability during use. - A suspended ladder shall be attached in a secure manner and so that, with the exception of a flexible ladder, it cannot be displaced, and swinging is prevented. - A portable ladder shall be prevented from slipping during use by securing the stiles at or near their upper or lower ends and/or an effective anti-slip or other effective stability device and/or any other arrangement of equivalent effectiveness - A ladder used for access shall be long enough to protrude sufficiently above the place of landing to which it provides access, unless other measures have been taken to ensure a firm handhold. - Interlocking and extension ladders should be prevented from moving relative to each other whilst in use. - Where a ladder or run of ladders rises a vertical distance of 9 metres or more above its base, there shall, where reasonably practicable, be provided at suitable intervals sufficient safe landing areas or rest platforms. - Every ladder shall be used in such a way that - (a) a secure handhold and secure support are always available to the user; and (b) the user can maintain a safe handhold when carrying a load unless, in the case of a step ladder, the maintenance of a handhold is not practicable when a load is carried, and a risk assessment under regulation 3 of the Management Regulations has demonstrated that the use of a stepladder is justified because of - (i) the low risk; and (ii) the short duration of use). - Ladders should only be used if a risk assessment has

	demonstrated that the use of more suitable equipment is not justified (taking into account the short duration of the work and site features that cannot be altered). - Ladders must not be painted, as paint can hide faults. - Ladders made for DIY use are not strong enough for site work - Mobile ladders should be prevented from moving before being stepped on. - Leaning ladders shall be placed at the correct angle i.e., 75° or a ratio 4:1. - Users should face the ladder at all times whilst climbing or dismounting. - Only one person should climb or work from a ladder or a stepladder. - Users working from a ladder must not over-reach or 'jump' the ladder to reposition it. - Ladders left standing, after working hours, will be 'boarded' or removed to prevent unauthorised use. - Ladders should be stored correctly. - Ladders will carry an identification mark and should be checked before setting up and inspected regularly. - Ladder defects should be reported immediately. - Weather: work at height shall only be carried out when weather conditions do not jeopardise the health and safety of persons involved in the work. - Trestles must be founded on a firm and level surface. - Youngman boards shall be used in preference to scaffold boards. - Trestles must be positioned so that the boards or staging are supported at recommended intervals. - No board will overhang its support by more than 4 x thickness or have less than 50 mm overhang. - Only proprietary components supplied by the manufacturer will be used. - The dimensions and layout of working platforms shall be appropriate to the nature of the work to be performed and suitable for the loads to be carried. - Separate steps will be provided for access to all platforms – these will be secure. - Trestle platforms will not be overloaded. - All equipment used will be checked to ensure that it is in good order before use. - All trestles will be inspected by a competent person before use to ensure all parts of the equipment are in good condition and suitable for intended use. - Warning notices must be displayed, and adequate protection provided (barriers etc.) where trestles are erected in areas where members of public have access.

	- Work at height shall only be carried out when weather conditions do not jeopardise the health and safety of persons involved in the work. - Work at height shall only be carried out when weather conditions do not jeopardise the health and safety of persons involved in the work. - Mobile access scaffold should be used in preference to trestles. - Where a person is at risk of falling a distance which is liable to cause personal injury, the guard-rail shall be at least 950 millimetres above the platform; toe-boards shall be suitable and sufficient; and any intermediate guard-rail or similar means of protection, shall be positioned so that the gap between it and any other means of protection does not exceed 470 millimetres. - A soft-landing system will be provided where a person is at risk of falling a distance which is liable to cause personal injury. - Stepladders will only be used for short-term/light work. - Only Industrial Duty (Class 1) ladders which are designed for a Maximum Static Vertical Load (MSVL) 175kg or Trade Duty (previously Class 2, but now EN131) designed for a MSVL 150kg should be used. - Stepladders will be placed on firm level surfaces with the steps horizontal and set at right angles to work. - Users should face the ladder at all times whilst climbing or dismounting. - Stepladders should not be used sideways-on where sideways loads are applied. - The legs of stepladders should be positioned as far apart as retaining cord or hinges allow with all four legs firmly and squarely on the ground. Retaining cords should be the same length. - The knees of persons using stepladders should be below the top of the steps. - Top tread of ladder not to be used as a working platform, unless constructed with a secure handhold. - Only one person should climb or work from a stepladder. - Users must not overreach. - Stepladders should be checked before setting up and inspected regularly. - Stepladders should be stored correctly and maintained in a good condition. - Stepladders will be inspected by user before use. - Stepladders will be subject to regular inspections (3 months) by a competent person and details of inspection recorded. - Work at height shall only be carried out when weather

	conditions do not jeopardise the health and safety of persons involved in the work.
Risk Rating	M
Residual Risk	Reduced risk but will require ongoing monitoring by the contractor.

5 The Health & Safety File

5.1 Layout & Format

- A brief description of the work carried out
- Any hazards that have not been eliminated through the design and construction processes, and how they have been addressed (for example, surveys or other information concerning asbestos, contaminated land, water-bearing strata, buried services and so on)
- Key structural principles (for example, bracing or sources of substantial stored energy including pre- or post-tensioned members) and safe working loads for floors and roofs
- Hazardous materials used (for example, lead paints and special coatings)
- Information regarding the removal or dismantling of installed plant and equipment (for example, any special arrangements for lifting such equipment)
- Health and safety information about equipment provided for cleaning or maintaining the structure
- The nature, location and markings of significant services, including underground cables, gas supply equipment and fire-fighting services
- Information and as-built drawings of the building, its plant and equipment (for example, the means of safe access to and from service voids, and the position of fire doors).

5.2 Arrangements for the Collection & Gathering of Information

The Principal Designer will prepare, review amend or add to the file and give it to the client at the end of the project. If his duties terminate before the end of the project, then the principal contractor will take over these duties.
Clients, designers and contractors will supply the information necessary for compilation and updating the file.
Everyone providing information will ensure it is accurate and provided promptly.
There should be enough detail to allow the likely risks to be identified and addressed by those carrying out the work and be proportionate to those risks.

6 Appendices

6.1 Searches:

Drainage & Water
Gas
Electricity
Radon

YORKSHIRE WATER
PROTECTION OF MAINS AND SERVICES

1. The position of Yorkshire Water Services Ltd (YWS) apparatus shown on the existing mains record drawing(s) indicates the ***general*** position and nature of our apparatus and the accuracy of this information cannot be guaranteed. Any damage to YWS apparatus as a result of your works may have serious consequences and you will be held responsible for all costs incurred. Prior to commencing major works, the exact location of apparatus must be determined on site, if necessary by excavating trial holes. The actual position of such apparatus and that of service pipes which have not been indicated must be established on site by contacting the Customer Helpline on 0845 124 24 24 for both water and sewerage.

2. The public sewer and water network is lawfully retained in its existing position and the sewerage and water undertaker is entitled to have it remain so without any disturbance. The provisions of section 159 of the Water Industry Act 1991 provides that the undertaker may "inspect, maintain, adjust, repair or alter" the network. Those rights are given to enable the undertaker to perform its statutory duties. Any development of the land or any other action that unacceptably hindered the exercise of those rights would be unlawful. The provisions contained in Section 185 of the Water Industry Act 1991 state that where it is reasonable to do so, a person may require the water supply undertaker to alter or remove a pipe where it is necessary to enable that person to carry out a proposed change of use of the land. The provisions contained in Section 185 also require the person making the request to pay the full cost of carrying out the necessary works.

3. Ground levels over existing YWS apparatus are to be maintained. Sewers in highways will ***generally*** be laid to give 1200mm of cover from finished ground level working to kerb races, other permanent identification of the limits of the road or to an agreed line and level. Substantial increases or decreases to this 1200mm depth of cover will result in the sewer being re-laid at your expense. Water mains and services will ***generally*** be laid with a minimum of 750mm depth of cover however some mains and services usually those installed over 50 years ago may have less ground cover.

4. If surface levels are to be decreased / increased significantly the effects on existing water supply apparatus will be carefully considered and if any alterations are necessary, the costs of the alterations will be recharged to you in full. Outlets on fire hydrants must be no more than 300mm below the new levels and all surface boxes must be adjusted as part of the scheme.

5. To enable future repair works to be carried out without hindrance; any pipe, cable, duct, etc. installed parallel to a water main or service pipe should not be installed directly over or within 300mm of a water main or service pipe or 1000mm of a waste water asset. Where a pipe, cable, duct, etc. crosses a main or service it should preferably cross perpendicular or at an angle of no less than 45o and with a minimum clearance of 150mm. These requirements apply to activities within an existing highway and are relevant to the installation of pipes, cables, ducts, etc. up to and including 250mm in diameter *(see illustration below)*. Necessary protection measures for installations greater than 250mm in diameter and/or in private land will need to be agreed on an individual basis. Installations within a new development site must comply with the National Joint Utilities Group publication Volume 2: NJUG Guidelines On The Positioning Of Underground Utilities Apparatus For New Development Sites.

6. All excavation works near to YW apparatus should be by hand digging only.

7. Backfilling with a suitable material to a minimum 300mm above YW apparatus is required.

8. Adequate support must be provided where any works pass under YW apparatus.

9. Jointing chambers, lighting columns and other structures must be installed in such a way that future repair or maintenance works to YW apparatus will not be hindered.

10. Apparatus such as; railings, sign posts, etc. must not be placed in such a way that they prevent access to or full operation of controlling valves, hydrants or similar apparatus. YWS surface boxes must not be covered or buried. Any adjustment, alteration or replacement of manhole covers must be agreed on site prior to the commencement of the works with a YWS Inspector who may be contacted via our Call Centre on 0845 124 24 24.

11. Explosives shall not be used within 100 metres of any Yorkshire Water Services apparatus or installations.

12. Vibrating plant should not be used directly over any apparatus. Movement or operation by vehicles or heavy plant is not to be permitted in the immediate vicinity of YWS plant or apparatus unless there has been prior consultation and, if necessary, adequate protection provided without cost to YWS.

13. ***Under no circumstances*** should thrust boring or similar trenchless techniques commence until the actual position of the Company's mains/services along the proposed route have been confirmed by trial holes.

14. Any alterations to the highway should be notified following the procedures outlined in the New Road and Street Works Act 1991 Code of Practice; Measures Necessary Where Apparatus Is Affected By Major Works (Diversionary Works).

15. You will be held responsible for any damage or loss to YWS apparatus during and after completion of work, caused by yourselves, your servant or agent. Any damage caused or observed to YWS plant or apparatus should be immediately reported to YWS. Should YW incur any costs as a result of non-compliance with the above, all costs will be rechargeable in full.

16. You should ensure that nothing is done on the site to prejudice the safety or operation of YWS employees, plant or apparatus.

17. In accordance with the New Roads and Street Works Act 1991, Chapter 22, Part 3, Section 80. The location of any identified YW asset *"which is not marked, or is wrongly marked, on the records made available"* should be communicated back to Yorkshire Water. The location of the apparatus should be identified on copies of the supplied plans which should be returned to Yorkshire Water (Asset Records Team) with photographic supporting evidence where possible.

18. The Government has decided that responsibility for private sewers serving two or more properties and lateral drains (the section of pipe beyond the boundary of a single property, connecting it to the public sewer) will be transferred to the water companies on Oct 1 2011.

Private pumping stations will also transfer during the period 1 October 2011 – 1 Oct 2016. Records of these assets may not yet be shown on the existing mains record drawing(s). If you encounter any of these assets you must inform Yorkshire Water Services Ltd (YWS).

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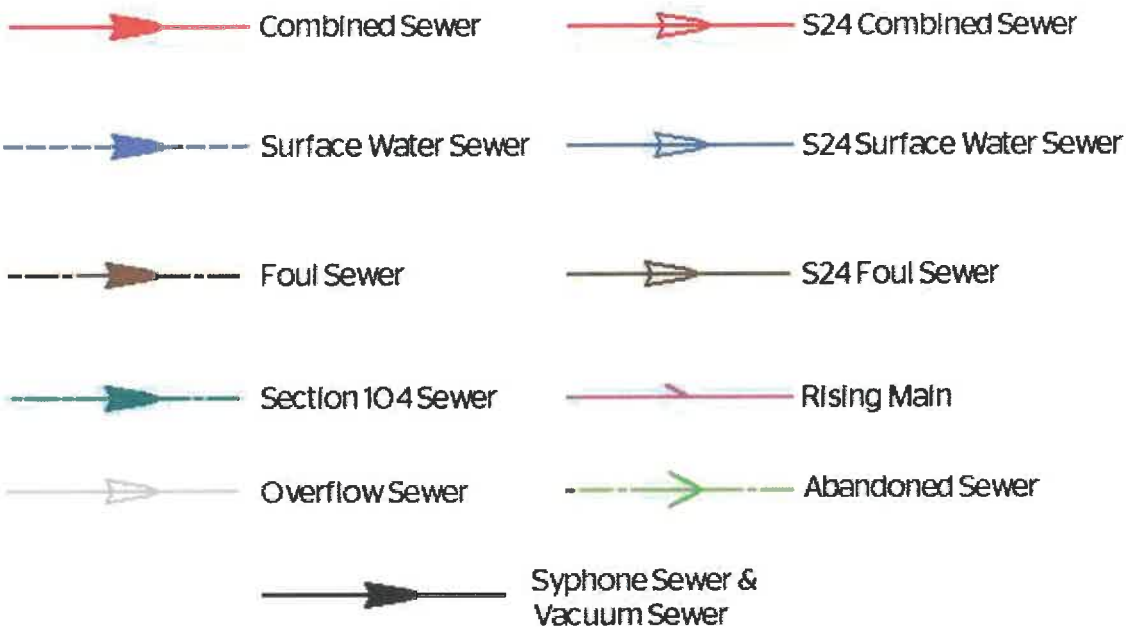
20. This information is for guidance only and the position and depth of any YW apparatus is approximate only. Likewise, the nature and condition of any YW apparatus cannot be guaranteed. YW has no responsibility for recording the locations of privately owned apparatus. As of 1 October 2011, there may be some lateral drains and/or public sewers which are not documented on YW records but may still be present. For the avoidance of doubt, this information is not a substitute for appropriate professional and/or legal advice. YW accepts no responsibility for any inaccuracy or omissions in this information. The actual position of YW apparatus must be determined on site by excavating trail holes by hand. YW requires a minimum of two working days' written notice of the intention to excavate any trial holes before any excavation can be undertaken. If there are any queries in this respect please contact Yorkshire Water on 0845 124 24 24.

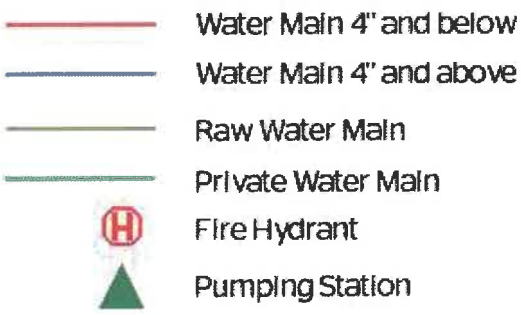
Property Identfier

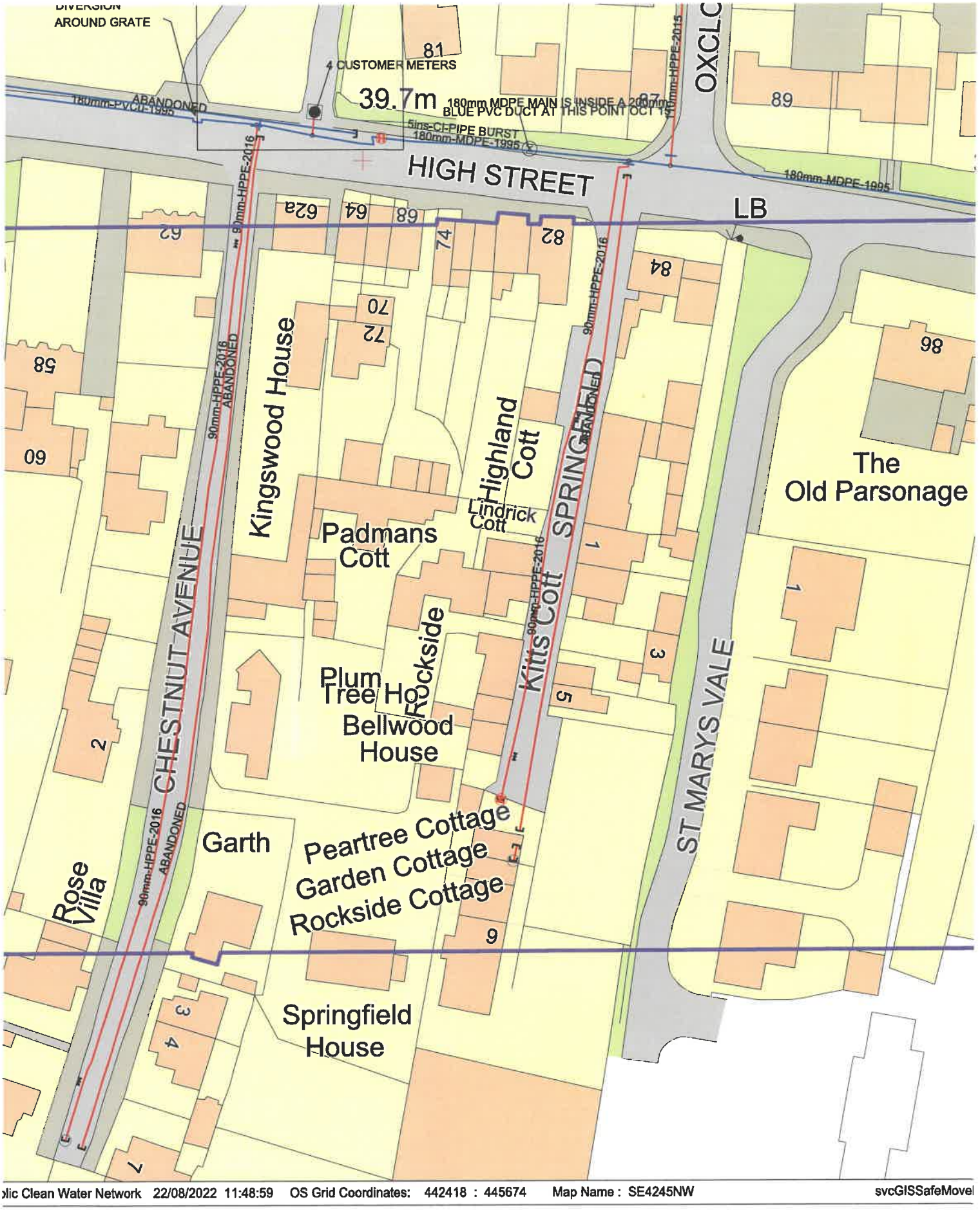
Sewer Legend



Please note that the direction of flow arrows may not always appear depending on the scale of the map.

Water Legend





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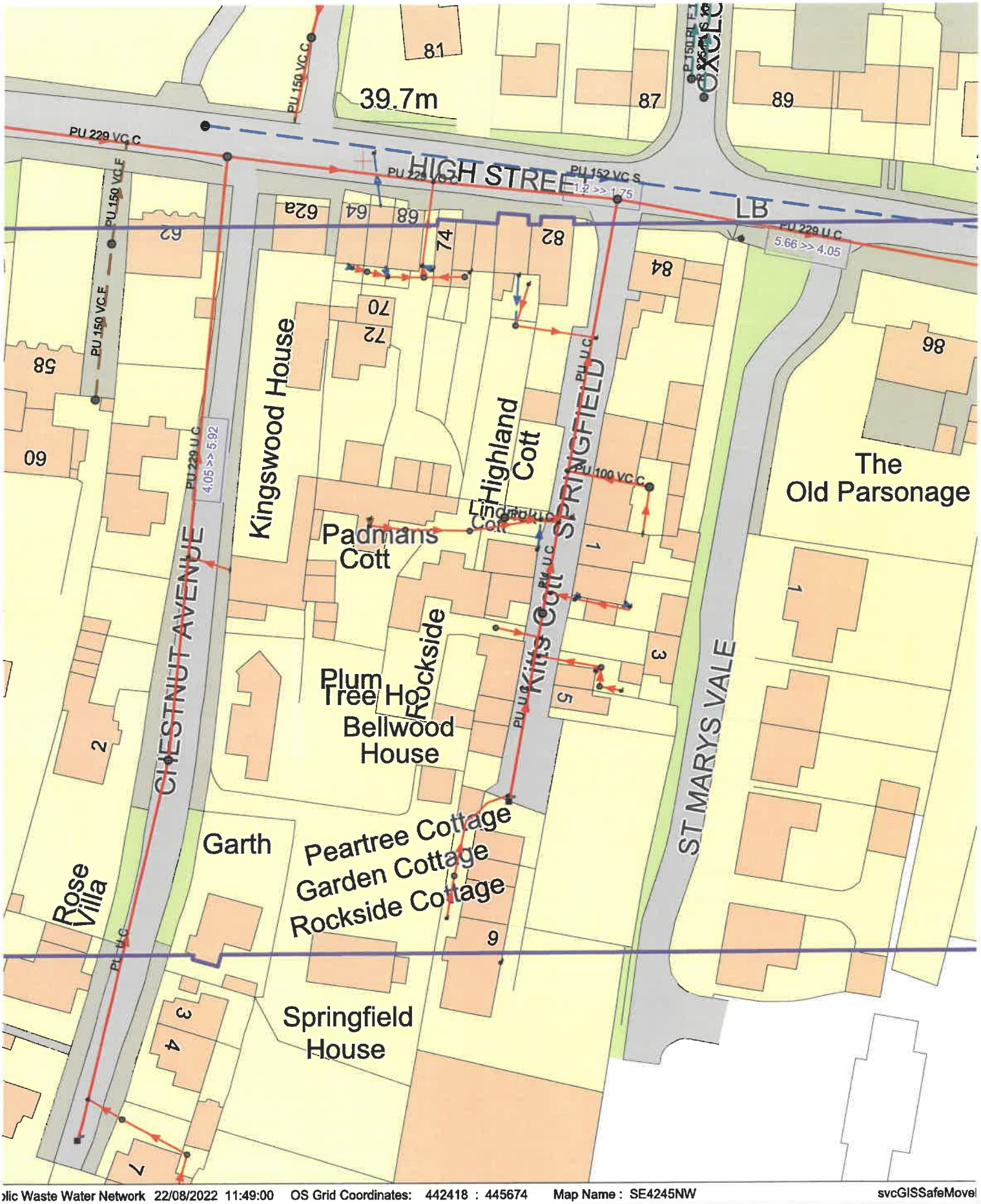

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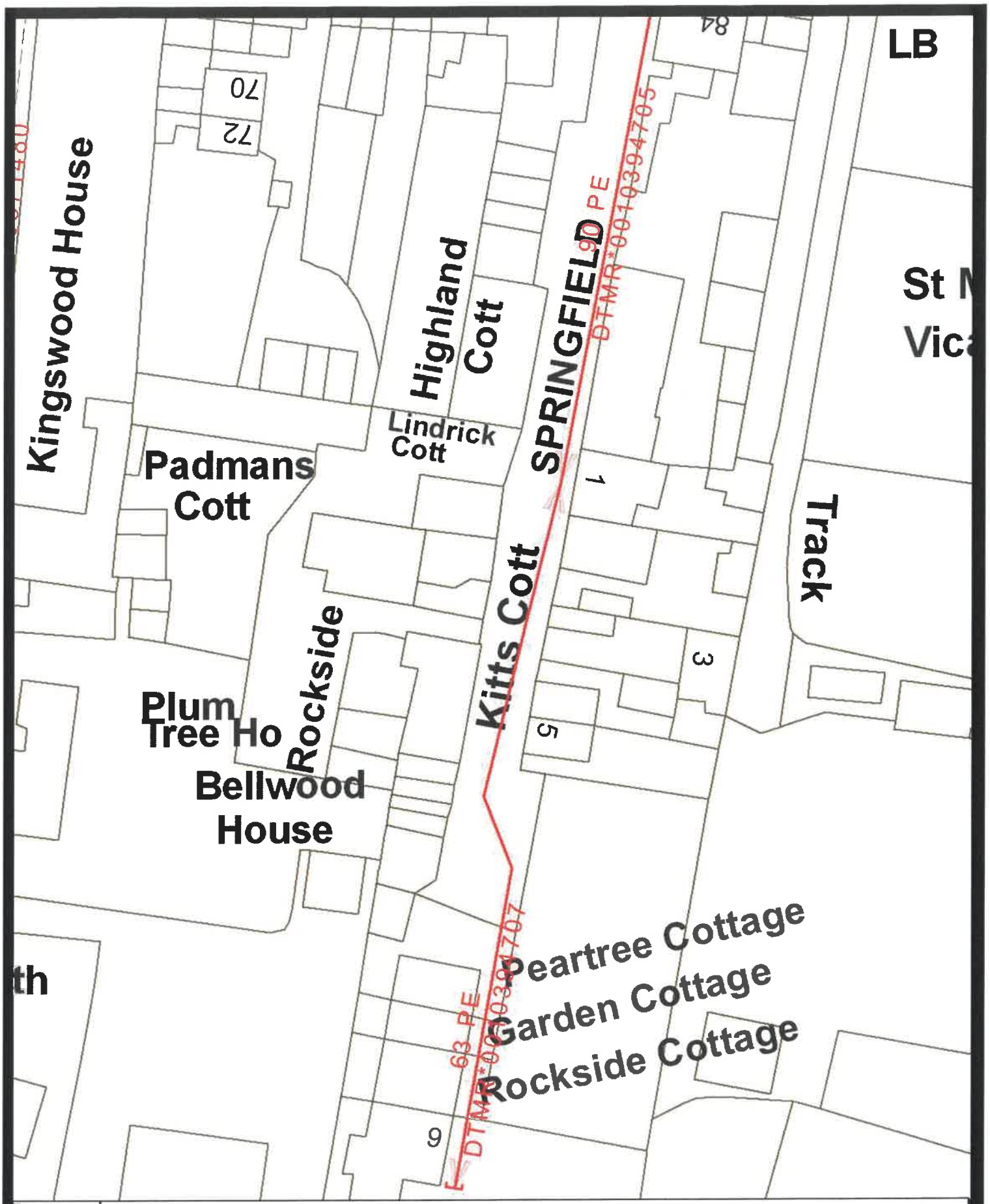

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User ID:	
Date:	22/08/2022
Grid Ref:	442512,445770

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1:1250: 0 5 10 20
1:2500: 0 10 20 40
Scale in metres

This plan shows those pipes owned by Northern Gas Networks or the relevant Gas Distribution Network in their roles as Licensed Gas Transporters (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Northern Gas Networks, the relevant Gas Distribution Network, or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

Low Pressure
Medium Pressure
Intermediate Pressure
Regional High Pressure
Abandoned Pipe 1
Abandoned Pipe 2

Some examples of Plant Items:
Valve, Depth of Cover, Syphon, Diameter Change, Material Change

Northern Gas Networks

Internal Use Only

NORTHERN POWERGRID

Assume all Northern Powergrid assets are live, unless proved otherwise

Please establish the on-site position of Northern Powergrid assets prior to the commencement of site works

For specialist assistance or enquiries, please use one of the following options:

General enquiries- 0800 011 3332

- Option 1 -Electricity emergency or power cut
- Option 2- Electricity bill enquiries
- Option 3- New connection, disconnection, meter enquiry, increased load, service alteration
- Option 4- Request for Safedig Plans
- Option 5- Other general enquiries; including request for site visit, safe working heights

Public safety emergency line -(0800 151 3255)

- Reports of exposed underground cables, grounded overhead conductors etc.

Network connections or diversions - 0800 011 3433

- Maximum load enquiries, connection quotation

Wayleave enquiries- Northeast (0191 229 4604) or Yorkshire (01977 605 104)

- Queries relating to ownership of assets, wayleave agreements

If site works are to be performed more than 3 months after you have received safe dig plans from Northern Powergrid, it is advisable that you request a more up to date copy.

Call Centre Phone Numbers: If the area is located in: North East call 0800 668877, Yorkshire or North Lincs call 0800 375675.

Northern Powergrid Holdings Company

The position of our equipment is shown on the plan as accurately as possible, it may have changed since the plan was produced. Therefore the position of our equipment and those services which may not be shown should be established on site. Electricity cables not owned by Northern Powergrid Holdings Company may be laid in this area and may not be shown on this plan. Where private cables are shown, the information should not be regarded as accurate and should be used for guidance purposes only. In all cases, accurate information should be obtained from the owner of such cables prior to the commencement of work on site.

Reference should be made to HSE Guidance, HS(G)47 '*Avoiding Danger from Underground Services*' and GS6 '*Avoidance of Danger from Overhead Power Lines*'.

Legend:

Underground Cables:

132kV	20kV	LV Mains
66kV	11kV	LV Service
33kV	6kV	LV Service Assumed Route
25kV	3kV	LV Service Logical Connection
Left In Situ	Aux	

Overhead Conductors:

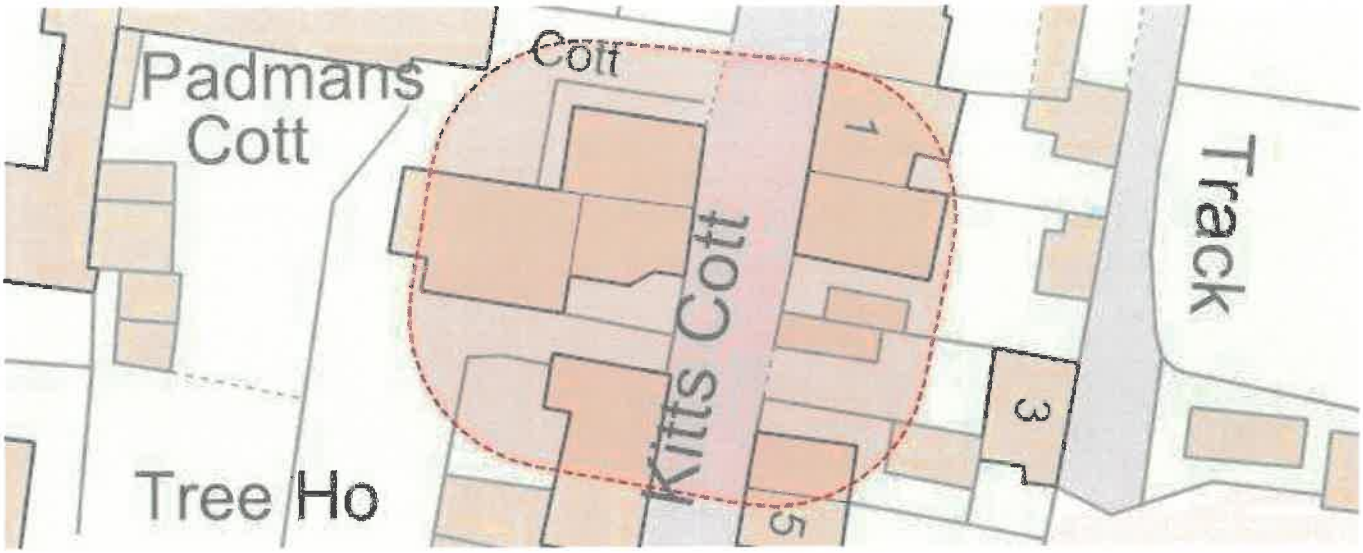
132kV	20kV	LV Mains
66kV	11kV	LV Service
33kV	6kV	Aux
25kV	3kV	

Date Printed: Scale: 1:

Safedig application summary SD911993

Scheme Reference: Kitts Cottage

Chosen Area



Job Details

Job start date: 22/11/2022
Job finish date: Don't know
Plans required for: Onsite Works
Working on behalf of: Home Owner
Main on site activity: Mechanical Excavation
Main workplace: Private land
Additional notes:

Contact Details

Name: Mr R Glew
Company: MAS Design Consultants
Address: Kitts Cottage
Springfield
Boston Spa
Wetherby
LS23 6EB
GB
Telephone: 01943878398
Email: info@masdesignconsultants.com

NORTHERN POWERGRID

Date: 22/08/2022

Mr Willis
Kitts Cottage
Springfield
Boston Spa
LS23 6EB

Tel: 0191 229 4294
Northern Powergrid Records Information Centre
New York Road
Shiremoor
Newcastle Upon Tyne
NE27 0LP

Dear Mr Willis

Enquiry No: SD911993
Scheme Reference: Kitts Cottage

Thank you for using Northern Powergrid's online Safedig service for your planned works.

Your plan has been generated using our most up to date information. Due to the nature of the information we hold and how often works on the network are carried out, we can only guarantee this plan at the time of generation. We will do our best to notify you if we update the information in your indicated area, but you should endeavour to obtain an up to date plan whenever you commence your works.

The map that has been provided to you will show all the relevant Northern Powergrid electricity cables that are in your indicated dig site, we have included some of the surrounding area as well in case your dig extends further than you previously thought. At any point you may re-apply for your plan to increase the indicated area using the previously submitted details. This plan will be valid for 30 days from the point at which it became available to you.

The enclosed mains records only give the approximate location of known Northern Powergrid apparatus in the area. Great care is therefore needed and all cables and overhead lines must be assumed to be live.

Please note that while all efforts are made to ensure the accuracy of the data, no guarantee can be given. We would refer you to the Health & Safety Executive's publication HS(G)47 "Avoiding Danger From Underground Services" which emphasises that:

- Plans must only be used as a guide in the location of underground cables. The use of a suitable cable-tracing device is essential and careful hand digging of trial holes must be carried out to positively identify and mark the exact route of the cable. You should also bear in mind that a cable is unmistakably located only when it has been safely exposed.
- Cable depths are not generally indicated on our records and can vary considerably even when shown.
- Great caution must be exercised at all times when using mechanical plant. Careful trial digging should always be carried out on the whole route of the planned excavation to ascertain if cables exist.

The Health & Safety executive have another publication, GS6 "Avoidance of Danger from Overhead Electric Lines" that you should be aware of if your work is near overhead powerlines. Both of these documents provide comprehensive guidance for observance of statutory duties under the Electricity at Work Regulations 1989 and the Health & Safety at Work Act 1974. Our provision of these records is based upon the assumption that people using them will have sufficient competence to interpret the information given. Any damage or injury caused will be the responsibility of the organization concerned who will be charged for any repairs.

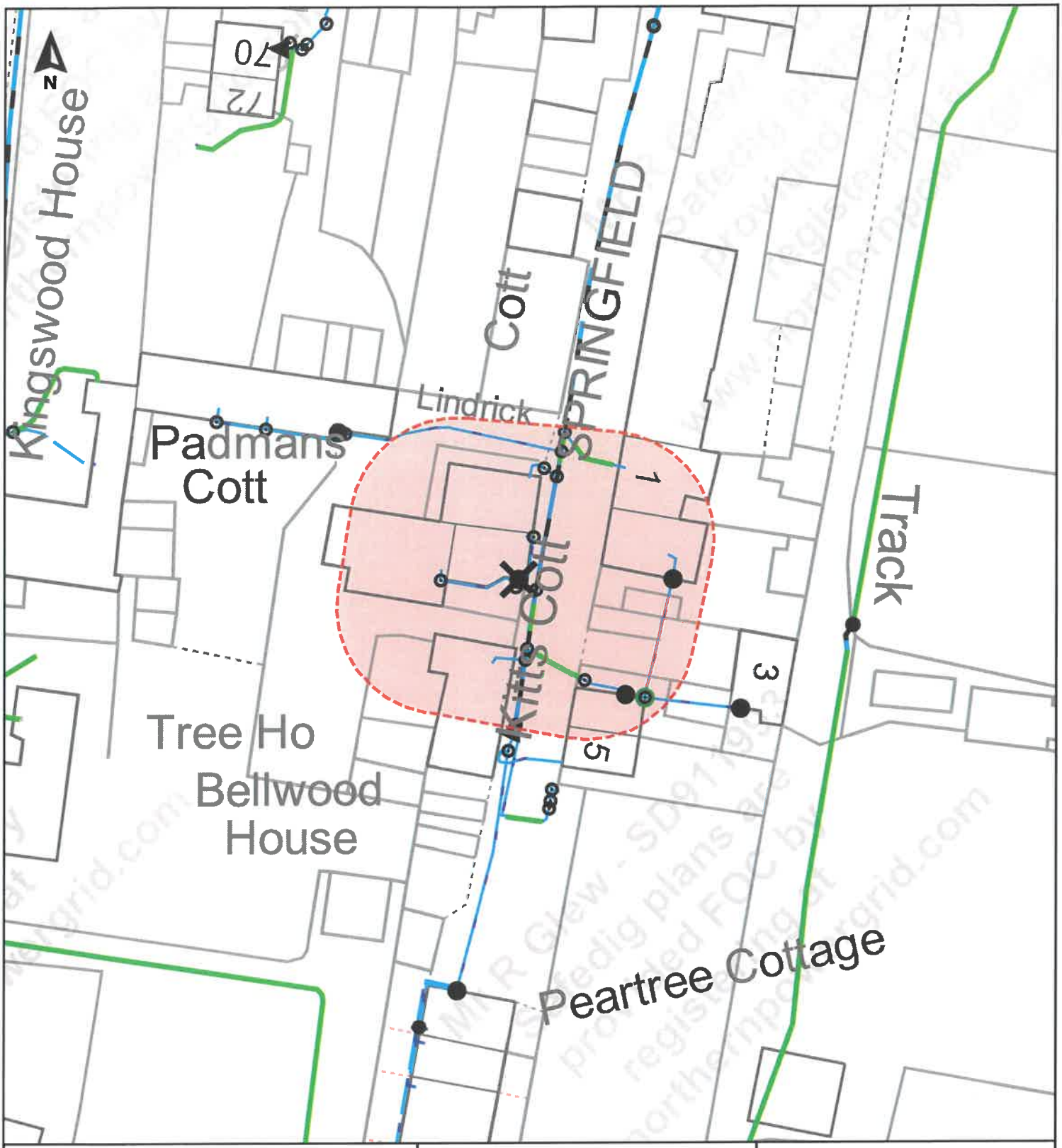
Please note ground cover must not be altered either above our cables or below overhead lines, in addition no trees should be planted within 3 metres of existing underground cables or 10 metres of overheadlines. All our apparatus is legally covered by a wayleaves agreement, lease or deed or alternatively protected under

the Electricity Act 1989. Should any alteration/diversion of our Company's apparatus be necessary to allow your work to be carried out, budget costs can be provided by writing to Network Connections, Alix House, Falcon Court, Stockton On Tees, TS18 3TU.

Tel:0800 0113433

Yours faithfully,

Safedig Team
Northern Powergrid



Terms and Conditions

Electric cables and/or overhead line information shown on the record plans are to be used in accordance with the Health & Safety Executive's Booklet HS(G)47, "Avoiding Danger from Underground Services" and Guidance Note GS 6, "Avoidance of Danger from Overhead Electric Lines".
Record plans do not always show out of commission cables or service cables from Northern Powergrid\'s mains to adjoining or cross road properties.
Plans do not show local authority owned public lighting or sign cables. The information is provided as a service by NorthernPowergrid and does not impart any legal obligation on their part.
Persons using it are reminded of their responsibility to execute works safely to avoid damaging Northern Powergrid\'s apparatus.

Further advice or assistance is available from the Records Information Centre on 0191 2294296
In an emergency or outside normal working hours contact our customer information centre on 0800 668877
Cable depths shown were correct at the time cables were laid however alterations to ground levels or cable disposition may have taken place.

Legend:

Underground Cables:

132kV	20kV
66kV	11kV
33kV	6kV
25kV	3kV
Left In Situ	Aux
LV Mains	LV Service
LV Service Assumed Route	
LV Service Logical Connection	
Duct Route	

Overhead Conductors:

132kV	20kV
66kV	11kV
33kV	6kV
25kV	3kV
LV Mains	Aux
LV Service	

0 5 10 15 20m

NORTHERN POWERGRID

Job Reference : SD911993

Kitts Cottage

Scale : 1:500

Date : 22/08/2022

Grid Coordinates : 442512 445773

Produced For :
Mr R Glew

UK Health Security Agency

Report of address search for radon risk

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Address searched: Kitts Cottage, Springfield, Boston Spa, Wetherby, LS23 6EB
Date of report: 22 August 2022

Guidance for existing properties

Is this property in a radon Affected Area? - No

A radon Affected Area is defined as where the radon level in at least one property in every hundred is estimated to exceed the Action Level.

The estimated probability of the property being above the Action Level for radon is: 0-1%

The probability result is only valid for properties above ground. All basement and cellar areas are considered to be at additional risk from high radon levels.
The result may not be valid for buildings larger than 25 metres.
If this site if for redevelopment, you should undertake a GeoReport provided by the British Geological Survey.

This report informs you of the estimated probability that this particular property is above the Action Level for radon. This does not necessarily mean there is a radon problem in the property; the only way to find out whether it is above or below the Action Level is to carry out a radon measurement in an existing property.

Radon Affected Areas are designated by the UK Health Security Agency. UKHSA advises that radon gas should be measured in all properties within Radon Affected Areas.

If you are buying a currently occupied property in a Radon Affected Area, you should ask the present owner whether radon levels have been measured in the property. If they have, ask whether the results were above the Radon Action Level and if so, whether remedial measures were installed, radon levels were re-tested, and the results of re-testing confirmed the effectiveness of the measures.

Further information is available from UKHSA or https://www.ukradon.org

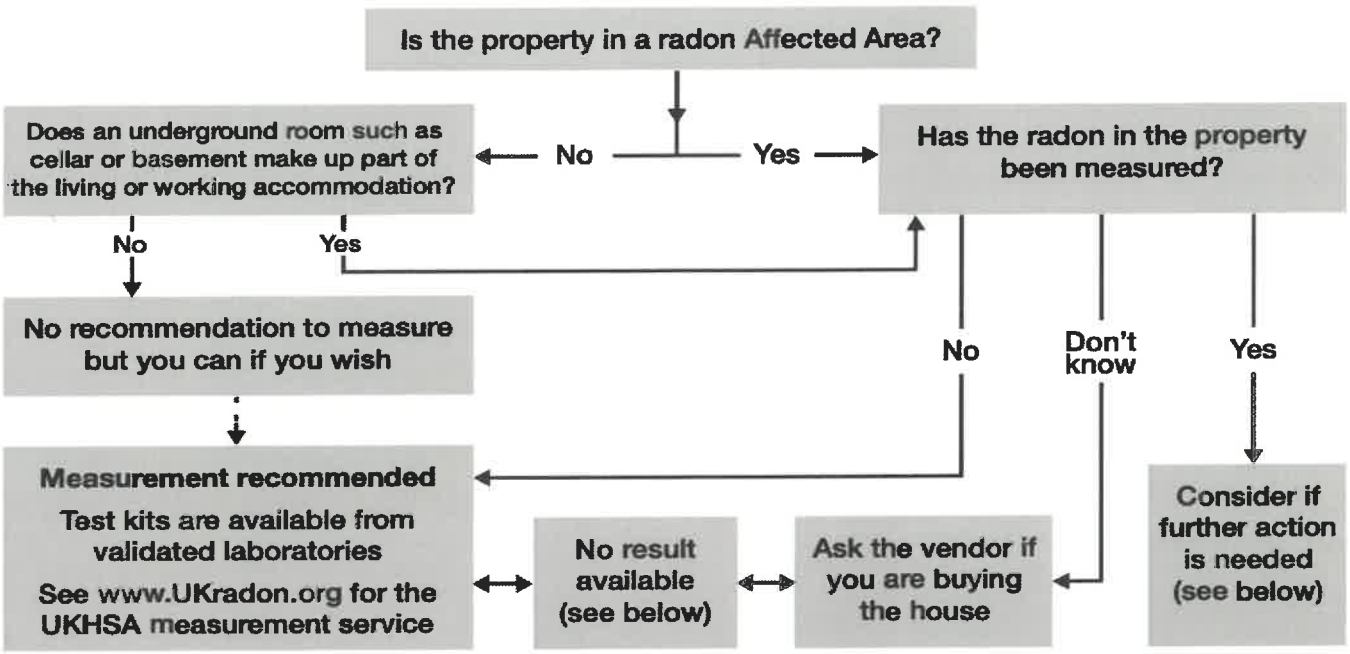
Guidance for new buildings and extensions to existing properties

What is the requirement under Building Regulations for radon protection in new buildings and extensions at the property location? - None

If you are buying a new property in a Radon Affected Area, you should ask the builder whether radon protective measures were incorporated in the construction of the property.

See the Radon and Building Regulations for more details.

UKHSA guidance for occupiers and prospective purchases



Existing radon test results: There is no public record of individual radon measurements. Results of previous tests can only be obtained from the seller. Radon levels can be significantly affected by changes to the building or its use, particularly by alterations to the heating and ventilation which can also be affected by changes in occupier. If in doubt, test again for reassurance.

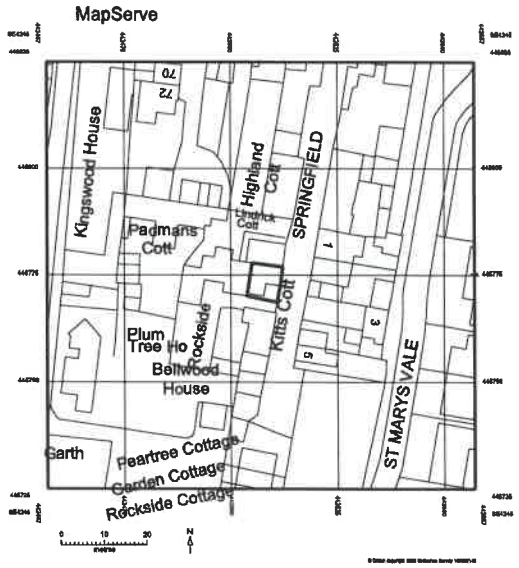
Radon Bond: This is simply a retained fund, the terms of which are negotiated between the purchaser and the vendor. It allows the conveyance of the property to proceed without undue delay. The purchaser is protected against the possible cost of radon reduction work and the seller does not lose sale proceeds if the result is low. Make sure the agreement allows enough time to complete the test, get the result and arrange the work if needed.

High Results: Exposure to high levels of radon increases the risk of developing lung cancer. If a test in a home gives a result at or above the Action Level of 200 Becquerels per cubic metre of air (Bq/m3), formal advice will be given to lower the level. Radon reduction will also be recommended if the occupants include smokers or ex-smokers when the radon level is at or above the Target Level of 100 Bq/m3; these groups have a higher risk. Information on health risks and radon reduction work is available from UKHSA. Guidance about radon reduction work is also available from some Local Authorities, the Building Research Establishment and specialist contractors.

UKHSA designated radon website:	https://www.ukradon.org
Building Research Establishment:	http://www.bre.co.uk/page.jsp?id=3137

6.2 Land Registry Plan

6.3 Drawings



NOTE:
CONTRACTOR TO VERIFY ALL SIZES ON SITE BEFORE COMMENCEMENT.

NOTE:
PLEASE DO NOT SCALE FROM THIS DRAWING.

Party Wall Act
Notices under the Party Wall Act are to be served by the building owner or appropriate body appointed by the building owner.
For further clarification on the Party Wall etc Act 1996 contact:
Cairn Wharf Consultancy Ltd,
2 Boroughgate, Off Bay Horse Court, Otley, LS21 1SB
M 07739 576181
cw@cairnwharf.com
For further information on the Party Wall etc Act 1996:
http://www.communities.gov.uk/documents/planningandbuilding/pdf/133214.pdf

Building Contract
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CDM 2015 Regulations
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REV		
Rev.D	Updated drawings to suit structural engineers information.	16.12.24
Rev.C	Increased the thickness of the stud wall between bedroom 2 and wet room to house concealed cistern to suit clients comments.	22.07.24
Rev.B	Added head to front elevation ground floor side extension window. Changed new extension windows to flush painted casement windows.	31.03.23
Rev.A	Ammended scheme to address planners previously raised issues.	09.12.22

MAS DESIGN CONSULTANTS LTD 01943878398
www.masdesignconsultants.com
1 Oxford Street, Guiseley, Leeds, LS20 9AX.

EXISTING

EXTENT OF PROJECT:

PROPOSAL: DEMOLITION OF EXISTING EXTENSION. PROPOSED TWO STOREY SIDE EXTENSION: FORMING W.C / KITCHEN / BATHROOM AND SECOND BEDROOM. PROPOSED FRONT WEATHER CANOPY.

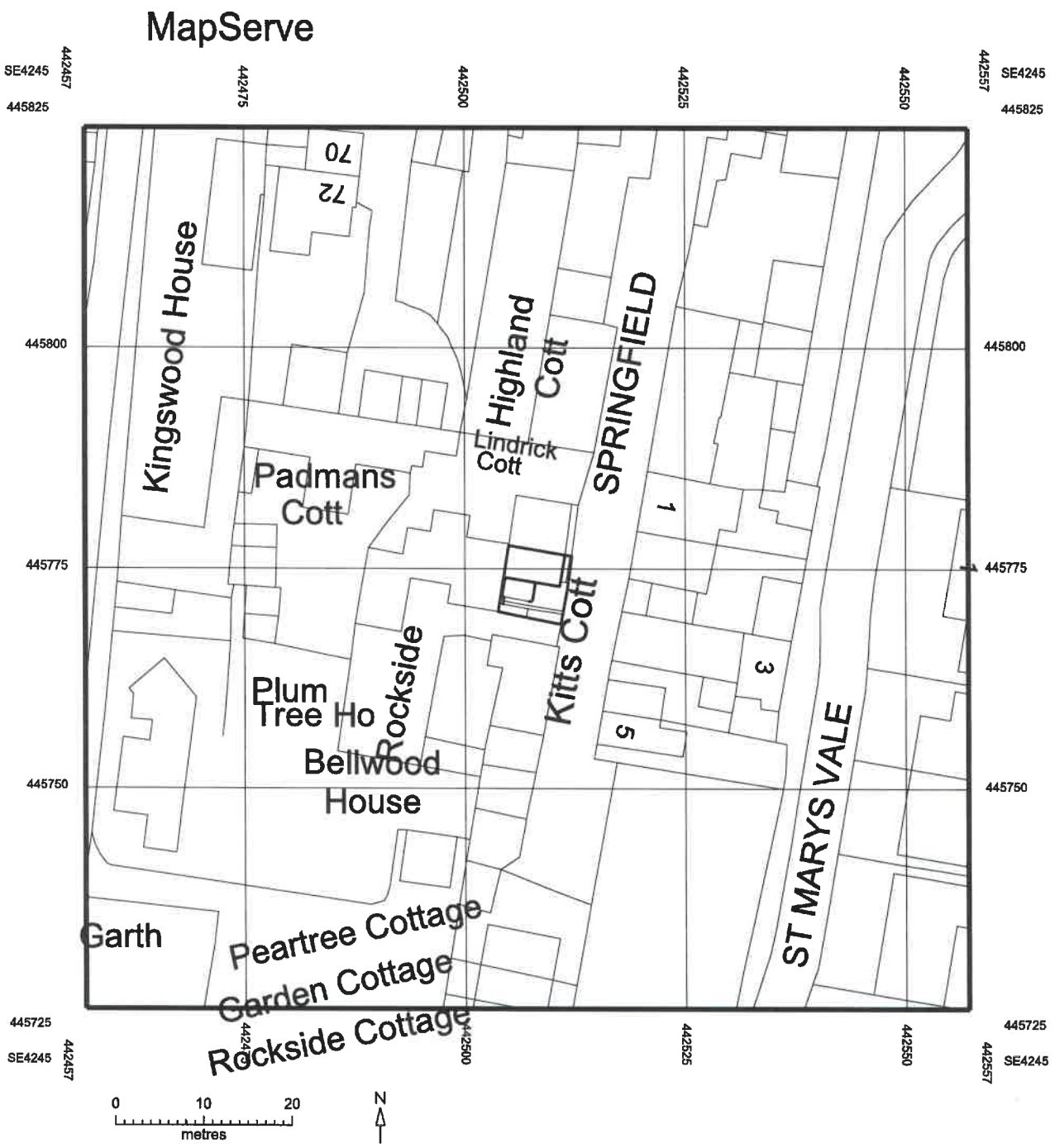
CLIENT DETAILS:

MR R GLEW.
KITTS COTTAGE,
SPRINGFIELD, BOSTON SPA,
WETHERBY.
LS23 6EB.

DRAWING TITLE:

EXISTING LOCATION PLAN.

PAPER	SCALE	DATE	DRAWING No	REV
A3	1:1250	09/22	M3869/01/001	D



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Rev.A	Ammended scheme to address planners previously raised issues.	09.12.22

MAS DESIGN CONSULTANTS LTD 01943 871398
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1 Oxford Street, Guiseley, Leeds, LS20 9AX.

EXISTING

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CLIENT DETAILS:

MR R GLEW.
KITTS COTTAGE,
SPRINGFIELD, BOSTON SPA,
WETHERBY.
LS23 6EB.

DRAWING TITLE:

EXISTING BLOCK PLAN.

PAPER	SCALE	DATE	DRAWING No	REV
A3	1:500	09/22	M3869/01/002	D

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CLIENT DETAILS:

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KITTS COTTAGE,
SPRINGFIELD, BOSTON SPA,
WETHERBY.
LS23 6EB.

DRAWING TITLE:

EXISTING BLOCK PLAN.

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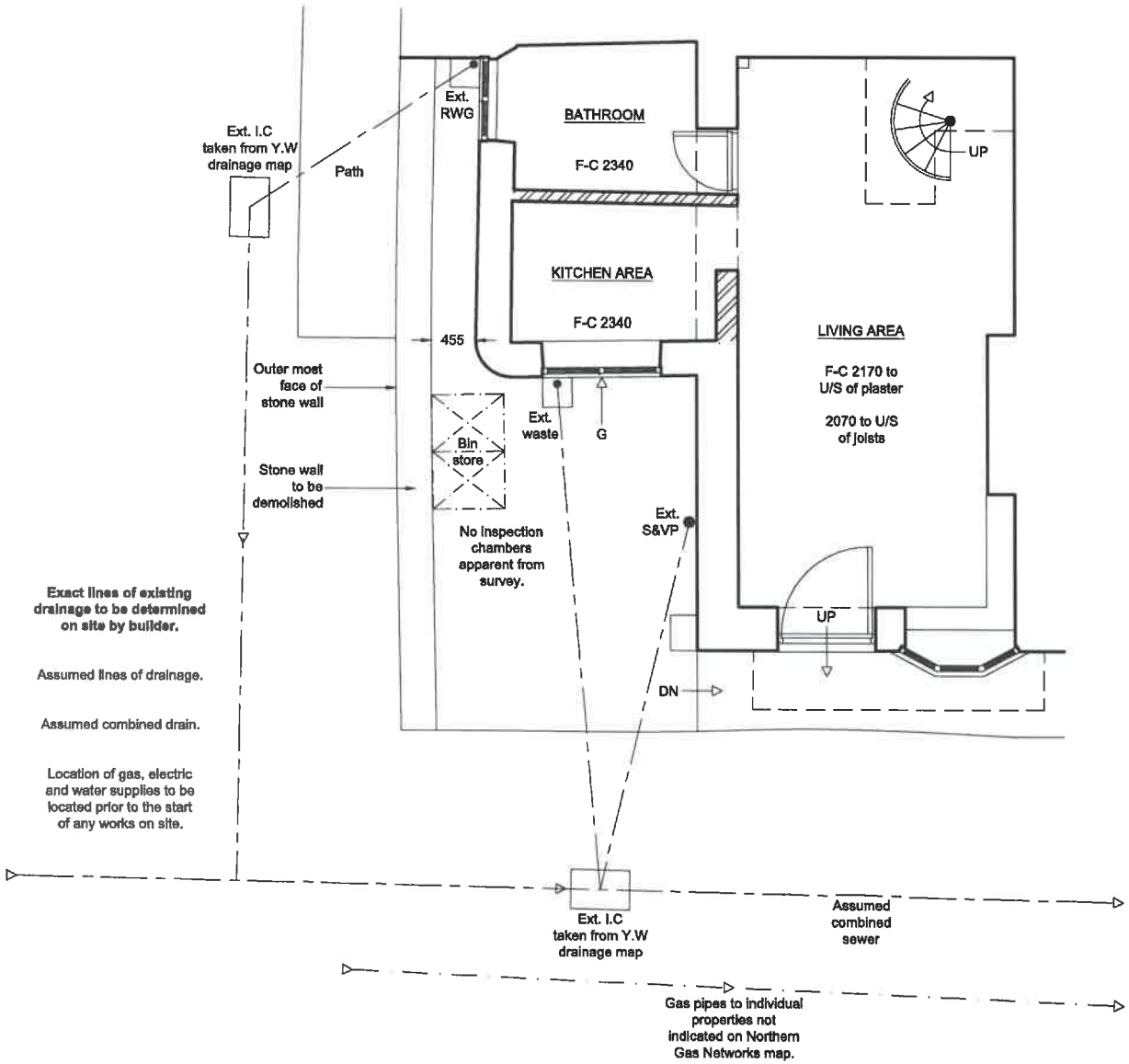
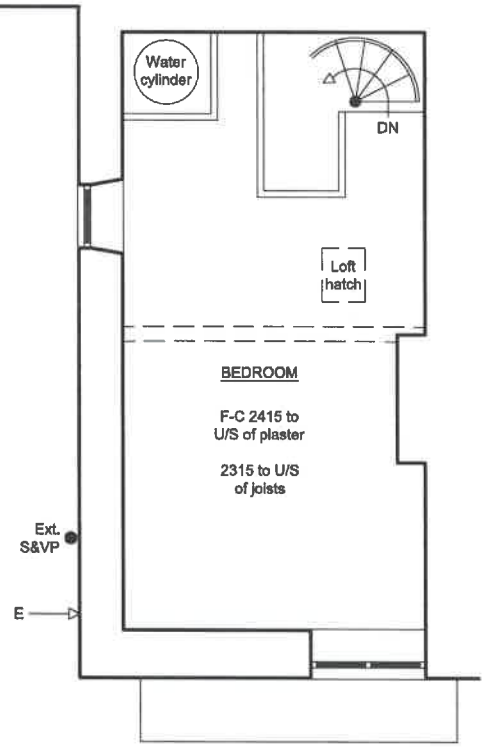


EXISTING GROUND FLOOR PLAN



EXISTING FIRST FLOOR PLAN

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LS23 6EB.

DRAWING TITLE:

EXISTING FLOOR PLANS.

PAPER	SCALE	DATE	DRAWING No	REV
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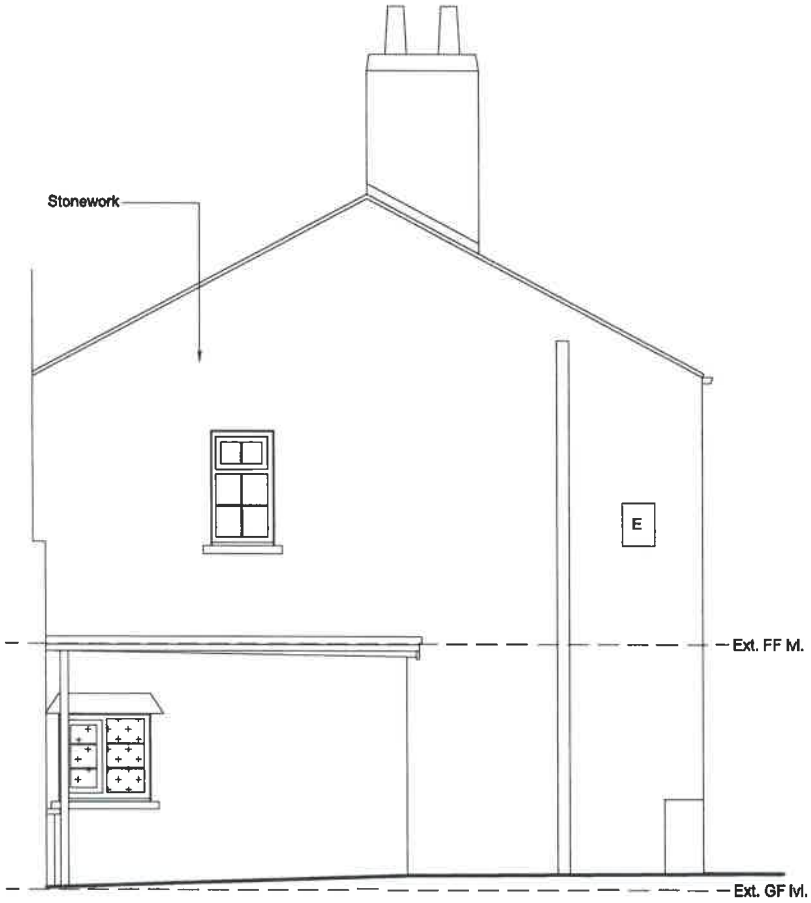
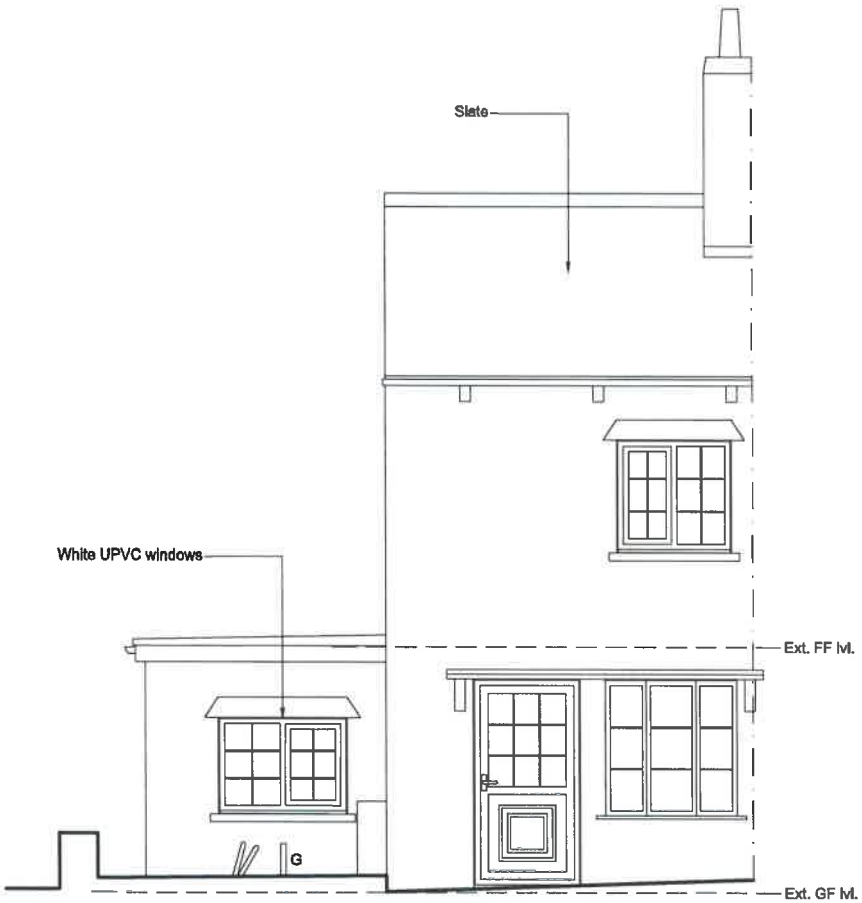


EXISTING SIDE ELEVATION



EXISTING FRONT ELEVATION

NOTE:
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EXISTING

EXTENT OF PROJECT:

PROPOSAL: DEMOLITION OF EXISTING EXTENSION. PROPOSED TWO STOREY SIDE EXTENSION: FORMING W.C / KITCHEN / BATHROOM AND SECOND BEDROOM. PROPOSED FRONT WEATHER CANOPY.

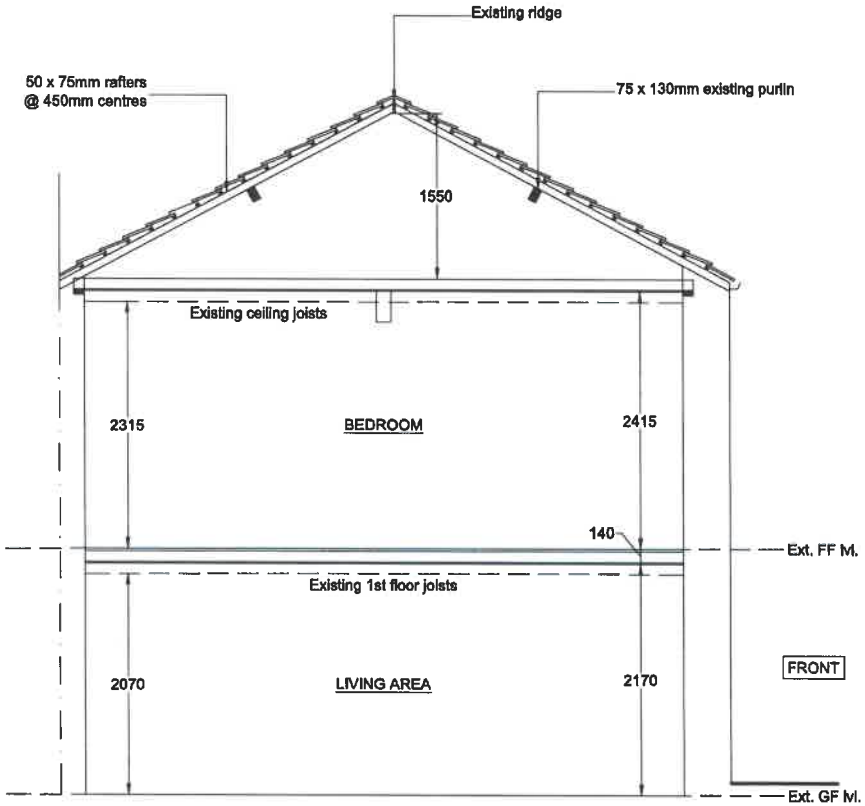
CLIENT DETAILS:

MR R GLEW.
KITTS COTTAGE,
SPRINGFIELD, BOSTON SPA,
WETHERBY.
LS23 6EB.

DRAWING TITLE:

EXISTING ELEVATIONS.

PAPER	SCALE	DATE	DRAWING No	REV
A3	1:50	09/22	M3869/01/201	D



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EXISTING BLOCK PLAN.

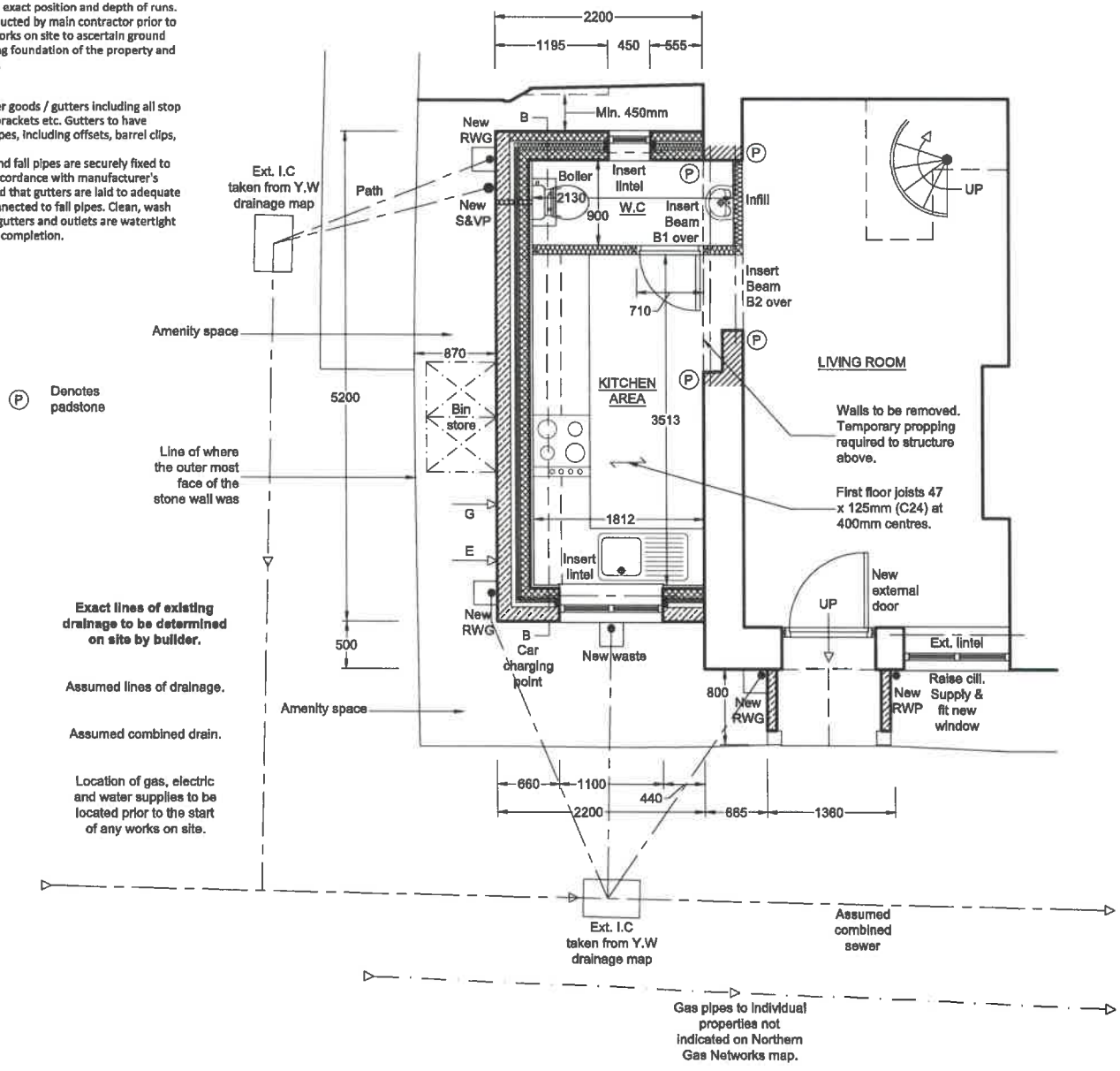
PAPER	SCALE	DATE	DRAWING No	REV
A3	1:200	09/22	M3869/04/003	D

EXTERNAL SITE PREPARATION

Any existing structures to be demolished and any footings to be completely removed.
On completion of site strip ensure that site of proposed extensions are level, and completely free from all vegetation, soil and organic matter. Excavate to reduced levels.
Existing drainage system to be exposed by main contractor to confirm exact position and depth of runs. Trial holes to be conducted by main contractor prior to commencement of works on site to ascertain ground conditions and existing foundation of the property and adjoining neighbours.

RAINWATER GOODS

Install uPVC rain water goods / gutters including all stop ends, outlets, union brackets etc. Gutters to have 65mm round downpipes, including offsets, barrel clips, sockets and shoes.
Ensure that gutters and fall pipes are securely fixed to sound substrate in accordance with manufacturer's recommendations and that gutters are laid to adequate falls and properly connected to fall pipes. Clean, wash down and ensure all gutters and outlets are watertight and unobstructed on completion.



PROPOSED GROUND FLOOR PLAN
(SHOWING STRUCTURE ABOVE)

DRAINAGE:

Exact position of drains to be established on site and agreed with the Local Building Inspector.

All new drainage to be 100mm diameter and to have a minimum fall of 1:40 unless otherwise indicated and in accordance with BS EN 752:2008

All new drainage connections to have a minimum fall of 1:40 and discharge to local authority sewer as detailed on proposed drainage layout.

Foul and surface water systems as detailed on 1821.04.101

Existing combined drain to outfall to local LA sewer.

All above ground foul and surface water drainage to be flexible jointed uPVC pipes complying with B.S.4660 to sizes and falls as indicated on drainage layout. Invert levels to be set to provide adequate falls for self-cleansing in accordance with Building Regulation Part H and BS EN 12056-2:2000

All 100mm diameter SVP to be to extend a minimum 900mm above any ventilation opening within 3000mm and fitted with bird proof cage.

All 100m diameter stub stacks fitted with Durgo values to terminate at least 150mm above WHB level.

All SVPS to have roddable access point at base.

All below ground drainage to be Hepworth Supersleve 100mm diameter and 150mm diameter vitrified clay pipe work and matching fittings. Surface water; 100mm diameter fall 1 in 100. Foul water 150mm diameter 1 in 40 fall and surrounded in 150mm pea gravel.

All pipe work with less than 900mm cover to be encased in 150mm concrete. This applied to all drainage passing under paths, drives, roads, buildings or within 1000mm of external load bearing walls. Movement joints to be positioned in concrete and encasement at natural pipe joints. All pipes passing through walls and under floors to be encased in concrete 150mm thick all round and protected from loadings with pre cast concrete lintels built into walls. Pipes passing under non-load bearing strata i.e. gardens, with less than 600mm cover should have at least 100mm granular backfill encased with concrete and paving slabs positioned over prior to backfill.

All pipes to be bedded 100mm granular backfill (maximum aggregate 10mm) with 100mm selected backfill above pipe (maximum aggregate 40mm) and 2 further layers of selected backfill as above, hand rammed in layers to give a minimum 300mm above crown of pipe before normal backfill. Bedding material should conform to BS EN 1610. Foul water drains to be laid at a lower level where adjoining or crossing the line of Surface Water drains. New drainage runs to connect directly into existing network on site and mains drains to combine edge of boundary. Contractors to allow for all charges etc.; for new connections to existing sewers to Yorkshire Water requirements. All tested and approved by Building control before covering up. All work to comply with requirements of Part H of the Building Regulations.

Inspections Chambers: Inspection chambers with inverts level less than 900mm to be to be Hepworth1 Polypropylene sectional with medium duty single seal covers & frames. Inspection chambers required at changes in drain connection / gradient. Inspection chambers to BS 8301 & sizes to be in accordance with Local Authority schedule of manhole sizes. Manholes below 900mm to be constructed of 215mm thick Class B Engineering brickwork off 150mm thick concrete base.

Gully Traps to SVP's and Waste Connection: To be as above, i.e. back inlet type roddable with removable traps and on concrete pads / bases.

Yard Gullies: Yard gullies to be trapped, with removable traps to permit rodding access.

Rodding Eyes: Provide rodding eyes at head of drain runs where necessary. Terminate drains with a slow bend up to a suitable cast iron cover.

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DRAWING TITLE:

PROPOSED GROUND FLOOR PLAN.

PAPER	SCALE	DATE	DRAWING No	REV
A3	1:50	09/22	M3869/04/101	D

FIRE PROTECTION

All elements of structure to have a minimum period of fire resistance of 30 minutes.

Linked smoke alarm system to be designed and installed by specialist subcontractor. To be ceiling mounted and fitted to ground and first floor landing areas. Smoke alarms to be fitted at least 300mm from walls and lighting fittings and to comply with BS 5446 and BS 5839. Supply and install heat detector to kitchen.

Test certificates will be required upon completion for the emergency lighting and fire alarm systems.

Provide 30min fire doors (FD30) to all habitable rooms and stores as shown on plan to protected fire escape route.

SANITARY FITTINGS

Sanitary fittings to be fitted in accordance with BS EN 12056-2:2000, with the following minimum waste pipe sizes:

Sinks 40mm diameter waste, 75mm deep seal trap

Washbasins 32mm diameter waste, 75mm deep seal trap

Showers 40mm diameter waste, 75mm deep seal trap

Smaller waste pipes sizes to be increased if standard distances to SVP are exceeded.

As outlined in Part G, Schedule 1 ensure a supply of wholesome water to the property. Wholesome water means water complying with the requirements of regulations made under Section 67 (Standards of wholesomeness) of the Water Industry Act 1991. The regulations made under this Section at the time of publication of this Approved Document are for England the Private Water Supplies Regulations 2009 (SI 2009/3101), for Wales the Private Water Supplies (Wales) Regulations (SI 2010/66) and, for England, the Water Supply (Water Quality) Regulations 2000 (SI 2000/3184 as amended), and, for Wales, the Water Supply (Water Quality) Regulations 2001 (SI 2001/3911 as amended).

VENTILATION

Provide extract ventilation to bathroom at rate of not less than 15 litres per second with 15mins overrun.

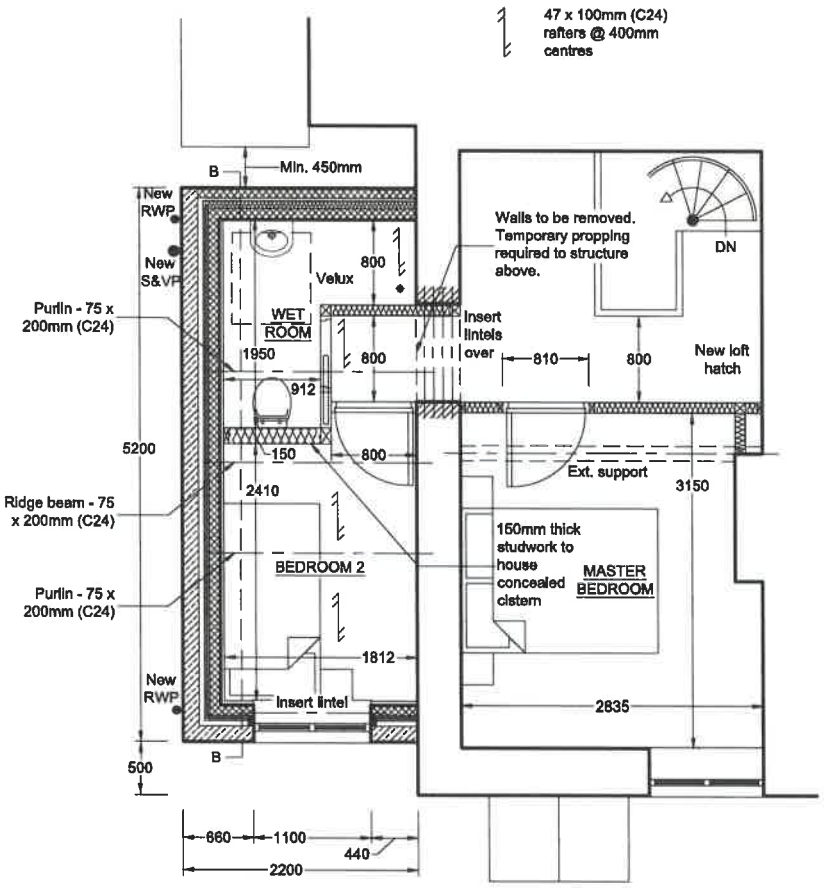
Provide extract ventilation to the utility at rate of not less than 30 litres per second.

Purge ventilation to habitable rooms to be 1/20th of floor area. Based on footprint and number of bedrooms, provide trickle vents with a total area of not less than 400mm/m² floor area (4000mm² to non - habitable rooms).

ROOF LIGHTS

Install 1no. 740 x 980mm conservation Velux rooflight to pitched roof complete with flashing kits, located as indicated with trimmers cut from rafters to head & foot, to be installed fully in accordance with manufacturer's instructions.

Rafters doubled up to trim out rooflight opening.



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A3	1:50	09/22	M3869/04/102	D

DOORS AND WINDOWS

All new windows to be flush painted timber casement windows.

New main entrance door to be timber.

Windows to be fully weather sealed, glazed with EPDM gaskets, locked with Espagnolette locking system and key dead locks.

Maintain 750mm high x 450mm wide escape windows - equalling o/a clear opening of 0.33m² and cill height between 800 - 1100mm from finished floor level .

All new internal timber doors to ground floor & first floor to have minimum 750mm clear openings.

GLAZING

Windows to be Pilkington 'K' glass double glazed in accordance with BS 6262-4:2005, with 16mm argon filed air gap and soft low E coating, manufactured to BS 952-1:1995, factory fitted with double-sided security tape.

All glazing between FFL and 800mm in critical glazing locations to be toughened / laminated safety glass in accordance with Part K4 of the Building Regulations, BS EN 12600 and BS 6206.

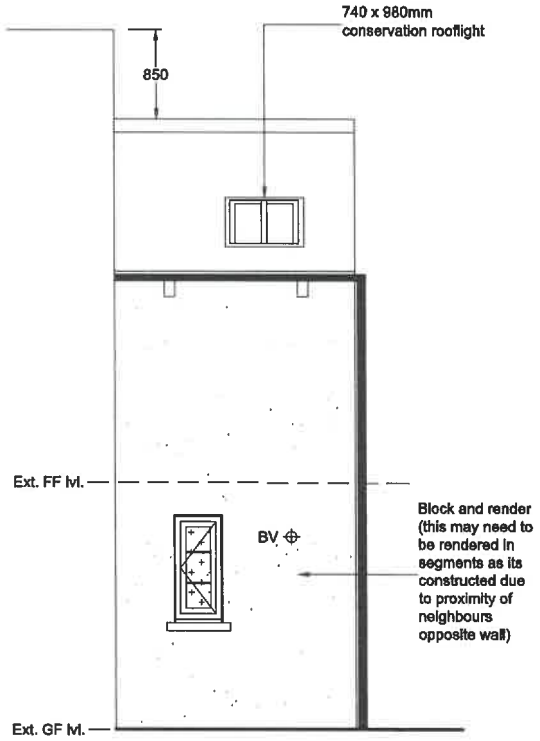
All glazing between FFL and 1500mm in doors, in critical glazing locations to be toughened safety glass in accordance with Part K4 of the Building Regulations, BS EN 12600 and BS 6206.

All glazing to archive minimum U-value of 1.4 W/m² K.

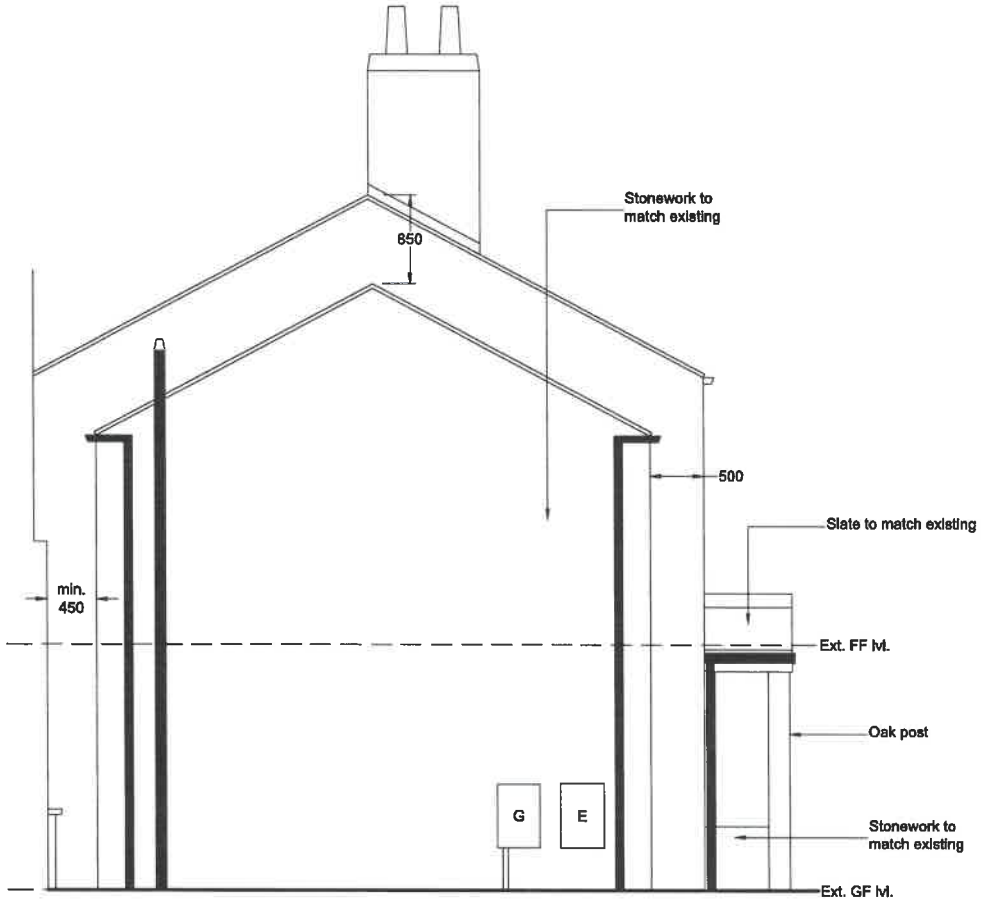
Obscure glazing to W.C window.

Provide window restrictors where necessary.

Barrier / guarding / containment glazing where required in accordance with building regulations and British standards.



PROPOSED REAR ELEVATION



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EXTERNAL EXTENSION WALLS - STONE CAVITY WALL CONSTRUCTION

New external walls to be constructed below ground level in Tarmac Durox Foundation Blocks foundation blocks complying with BS 6073-2:2008 and BS EN 1996-2:2006 to full width of wall over. New load bearing masonry to be constructed with 7.3N solid concrete blocks, with M4 mortar.

External cavity walls above ground level to be 1 no. internal leaf of Tarmac Toplight 7 100mm Blockwork 7.3 N mm² with 150mm cavity, with 1 layer of 150mm Supergiass Superwall 32 Cavity Wall Batt secured with retaining clips and cut to return at all window openings. All precast units to in accordance with BS EN 15435:2008 and BS 6073-2:2008. **To achieve 0.18 W/m2K.**

With external leaf of coursed stone to match with existing.

Internally finished with 12.5mm Gyproc plasterboard with dri wall adhesive to British Gypsum's specification. Fit with tapered joints and a skim finish.

To be finished down to finished floor with a 2 coat 15mm Carlite plasterwork in accordance with BS EN 15435:2008 and BS 6073-2:2008.

New walls to be joined to existing with stainless steel wall starter system. Horizontal ties provided at 225mm vertical centres. Provide debonding sleeves at movement joint locations, with 10mm compressible filler strip and polysulphide seal.

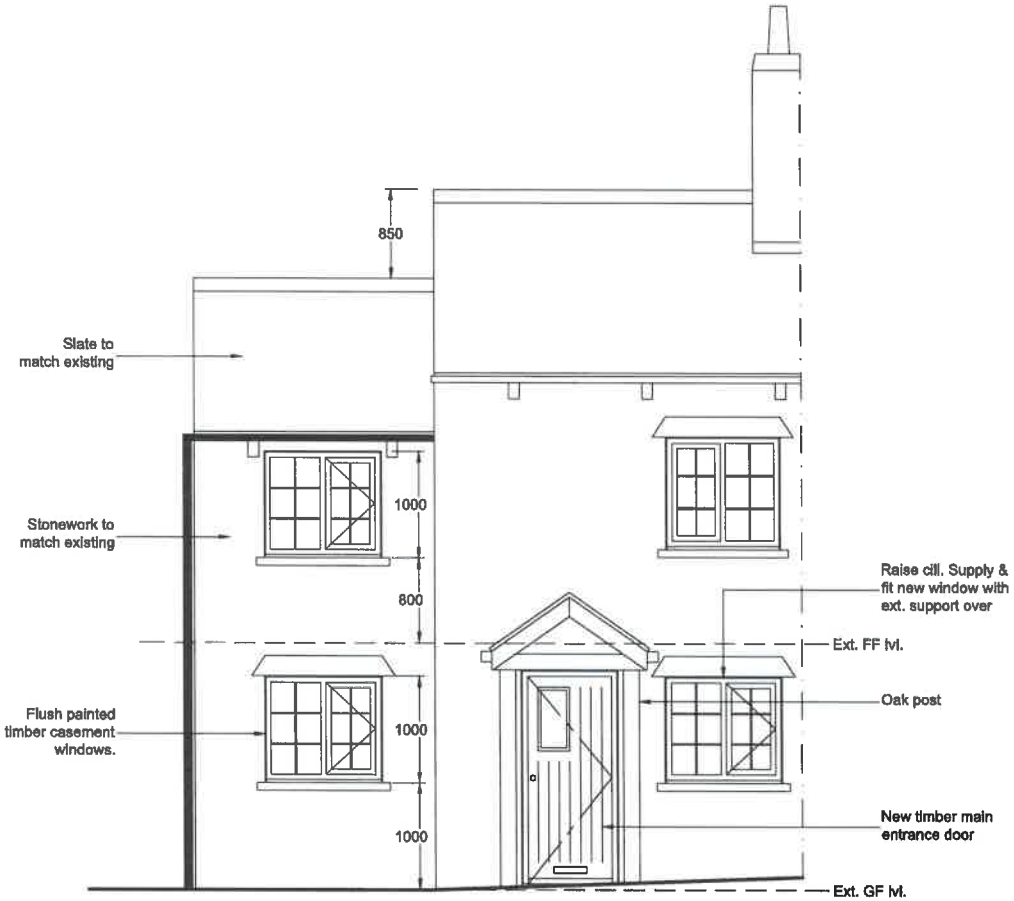
Stainless steel ties to be provided at cavity wall locations. Ties at 750mm horizontal centres and 450mm vertical centres. Staggered each course. Ties to be spaced at 225mm vertical centres within 200mm of reveals. To be installed in accordance with manufacturer's recommendations.

Provide suitable Thermabate insulated cavity closers to all external window and door openings. Installed in accordance with manufacturer's recommendations. Close all cavities at roof level and around window openings.

External cavity wall openings to have proprietary insulated stainless steel IG, Catnic or similar approved lintels to suit span of openings between 1200mm and 2000mm with 150mm minimum end bearing. To be installed as per engineers design and in accordance with manufacturers specifications.

Provide horizontal polyethylene DPC's of appropriate width sited minimum 150mm above FGL to all walls and polyethylene cavity trays to window cills, door thresholds and above external lintels to window and door openings, to extend 50mm minimum beyond ends of lintel or the reveal cavity closer. Cavities to extend a minimum of 150mm below the DPC. Cavity trays to have weep holes at 400mm centres.

All work to comply with Part A Building Regulations Document.



PROPOSED FRONT ELEVATION

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Rev.D	Updated drawings to suit structural engineers information.	18.12.24
Rev.C	Increased the thickness of the stud wall between bedroom 2 and wet room to house concealed cistern to suit clients comments.	22.07.24
Rev.B	Added head to front elevation ground floor side extension window, Changed new extension windows to flush painted casement windows.	31.03.23
Rev.A	Ammended scheme to address planners previously raised issues.	09.12.22
REV		

MAS DESIGN CONSULTANTS 01943878388
www.masdesignconsultants.com
1 Oxford Street, Guiseley, Leeds, LS20 9AX.

PROPOSED

EXTENT OF PROJECT:

PROPOSAL: DEMOLITION OF EXISTING EXTENSION. PROPOSED TWO STOREY SIDE EXTENSION: FORMING W.C / KITCHEN / BATHROOM AND SECOND BEDROOM. PROPOSED FRONT WEATHER CANOPY.

CLIENT DETAILS:

MR R GLEW.
KITTS COTTAGE,
SPRINGFIELD, BOSTON SPA,
WETHERBY.
LS23 6EB.

DRAWING TITLE:

PROPOSED FRONT ELEVATION.

PAPER	SCALE	DATE	DRAWING No	REV
A3	1:50	09/22	M3869/04/202	D

EXTERNAL EXTENSION WALLS - RENDERED CAVITY WALL CONSTRUCTION

New external walls to be constructed below ground level in Tarmac Durox Foundation Blocks foundation blocks complying with BS 6073-2:2008 and BS EN 1996-2:2006 to full width of wall over. New load bearing masonry to be constructed with 7.3N solid concrete blocks, with M4 mortar.

External cavity walls above ground level to be 2 no. internal leaf of Tarmac Toplight 100mm Blockwork 7.3 N mm² with 100mm cavity, partially filled with Kingspan Kooltherm K108 cavity board, 75mm thick, taped on the joints, secured with retaining clips and cut to return at all window openings. Ensure there are no gaps between the insulation boards, with external leaf of 102.5mm brick to match with existing. All precast units to in accordance with BS EN 15435:2008 and BS 6073-2:2008. To **achieve 0.18 W/m2K.**

Internally finished with 12.5mm Gyproc plasterboard with dri wall adhesive to British Gypsum's specification. Fit with tapered joints and a skim finish.

To be finished down to finished floor with a 2 coat 15mm Carlite plasterwork in accordance with BS EN 15435:2008 and BS 6073-2:2008.

Prepare the substrate to receive a render finish as per manufacturers recommendations to maximise bond and help reduce cracking of the substrate. Movement joints and bed joint reinforcement to be included as per manufacturers specific requirements. Apply one coat of through coloured Weberpral M render. Scrape back to a finished thickness of 15-25mm to chosen finish. Surfaces to be prepared and product applied as per manufacturer's guidelines.

New walls to be joined to existing with stainless steel wall starter system. Horizontal ties provided at 225mm vertical centres. Provide debonding sleeves at movement joint locations, with 10mm compressible filler strip and polysulphide seal.

Stainless steel ties to be provided at cavity wall locations. Ties at 750mm horizontal centres and 450mm vertical centres. Staggered each course. Ties to be spaced at 225mm vertical centres within 200mm of reveals. To be installed in accordance with manufacturer's recommendations.

Provide suitable Thermabate insulated cavity closers to all external window and door openings. Installed in accordance with manufacturer's recommendations. Close all cavities at roof level and around window openings.

External cavity wall openings to have proprietary insulated stainless steel IG, Catnic or similar approved lintels to suit span of openings between 1200mm and 2000mm with 150mm minimum end bearing. To be installed as per engineers design and in accordance with manufacturers specifications.

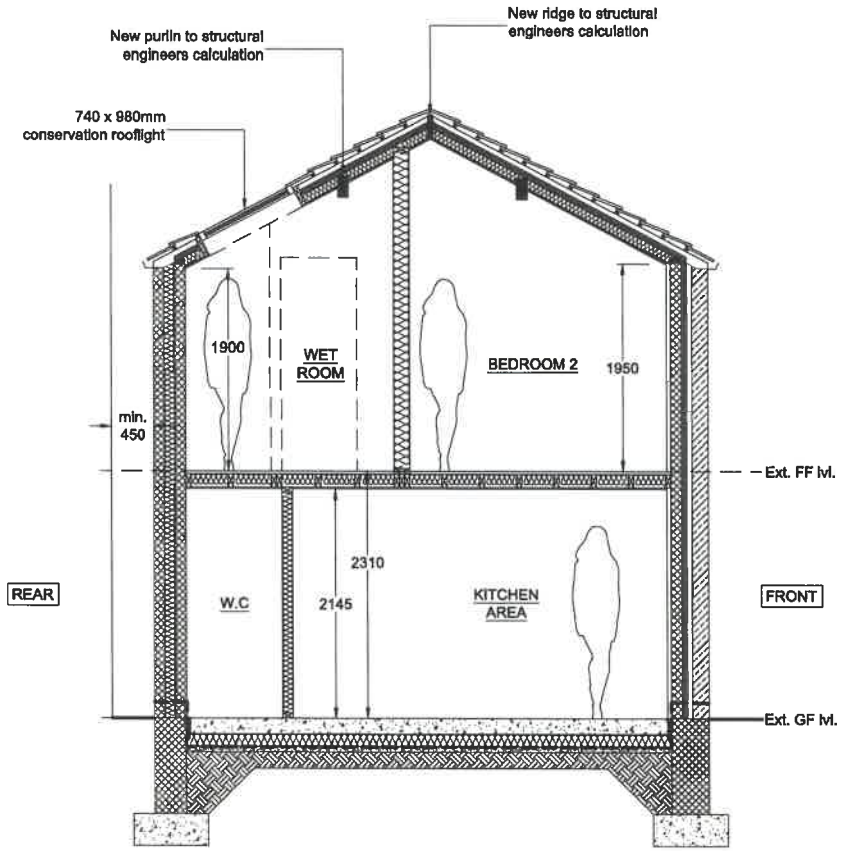
Provide horizontal polyethylene DPC's of appropriate width sited minimum 150mm above FGL to all walls and polyethylene cavity trays to window cills, door thresholds and above external lintels to window and door openings, to extend 50mm minimum beyond ends of lintel or the reveal cavity closer. Cavities to extend a minimum of 150mm below the DPC. Cavity trays to have weep holes at 400mm centres.

All work to comply with Part A Building Regulations Document.

GROUND FLOOR: SOLID FLOOR

New ground floor slab to be 150mm thick grade C25/30 with A252 mesh in top with 40mm cover.

Slab to be laid on 2000 gauge Visqueen DPC / GAS membrane lapped with DPC. (Min. radon protection required in accordance with Part C Building Regulations) over 100mm thick Kingspan Kooltherm K103 Floorboard, 50mm sand blinding, on minimum 150mm well compacted type 1 hardcore.



PROPOSED SECTION B-B

Existing walls, lintels and foundations to be exposed and checked for adequacy to support additional loads.

GROUND FLOOR: SOLID FLOOR CONT.

Slabs to have 35mm thick expandable insulation filler to all perimeters to prevent thermal bridging. If required provide duct channels to concrete screed.

Allow depth of client specified floor finish.

All floor to achieve min. U-value of 0.18 W / m² K.

FOUNDATIONS

On completion of site strip ensure that site of proposed extension is level, and completely free from all vegetable soil and organic matter. Excavate to reduced levels.

Trial holes to be conducted by main contractor prior to commencement of works on site to ascertain ground conditions and existing garage foundations.

Size and depth of all concrete foundations to be agreed on site with the Building Inspector and Structural engineer, and to comply with Building Regulation A1-2, F2 and BS EN 1997-1:2004.

All foundations to be cast on undisturbed ground, that is smooth and free from ridges, cracks, loose material, ruts or other defects. All open excavations to be kept free of standing water at all times. Any soft spots encountered to be removed and replaced with well compacted hardcore, or mass concrete fill.

Foundation bases to be cast onto firm clay of minimum 75kN/m2 allowable ground bearing capacity.

Foundations to be minimum 600 x 225mm, at minimum 900mm below existing ground level, or to same level as existing foundations (whichever is greater) New foundations to be tied to existing foundations with 3no. H16 dowel bars, 400mm long, resin fixed 200mm into existing footings, and cast into new footing. If existing footings are higher than new footings, locally underpin the existing footing with new footing.

Engineering advice to be sort if existing foundations above min depth or affected by trees and shrubs.

Foundations to be made deeper where required if adjacent to existing trees as per NHBC chapter 4.2 with the agreement of the building control officer.

New strip foundations to be mass concrete grade C25/30.

All alternative non strip foundations and retaining walls to be to an approved design by Structural engineer.

Foundation to be taken below any drainage channels. Min 150 x 100mm concrete lintels to span opening.

For details refer to **Structural Design drawings and specification.**

CONCRETE MIXES

Footing & ground slab	Concrete grade - C25/30
	Min. cement - 320kg/m3
	Max. water / cement - 0.55
	Max. aggregate - 20mm

FIRST FLOOR

New floor structure to comprise 21mm softwood T&G boards on 47 x 125mm C24 SW floor joists at max. 400mm centres, supported by internal blockwork walls on perimeter wall plates fixed on Catnic hangers.

Provide 30 x 5 x 1200mm galvanized ms gable restraint straps at 2000mm centres turned down inner leaf of cavity wall fixed to at least 3 joists with solid strutting between.

Full depth noggins fixed at midspan.

Double joists to be provided under all stud walls running parallel to floor joists and baths.

New joists to be supported on existing masonry walls with 47 x 150mm timber wall plate, fixed to face of masonry with M10 resin anchors or thunderbolts at 450mm centres.

Floor to be insulated with min 100mm Rockwool sound insulation quilt between joists of 10/kg/m³ density finished with 12.5mm plasterboard with a skimmed finish to the underside.

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PROPOSED SECTION B-B.

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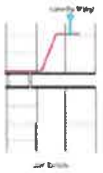
A3	1:50	09/22	M3869/04/301	D

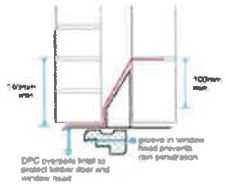
CAVITY TRAYS

Provide continuous horizontal cavity tray around the building perimeter, minimum of 150mm above the finished ground or paving level.

Joints to have 100mm laps and laid on a bed of mortar.



Provide cavity trays above window, door openings and air bricks. The upstand should be returned into the inner leaf. Position weep holes at max of 450mm intervals.



INTERNAL WALLS

All new, non-load bearing partition walls to be comprise 75 x 50mm studwork at max. 400mm centres with 75mm mineral wool sound insulation quilt between studs density not less than 10kg/m³ finished both sides with 12.5mm Wallboard to receive 5mm plaster finish. All boards to be staggered and joints skimmed and fixed in accordance with the manufactures instructions. **To achieve min 30min fire rating.**

New load bearing walls to be single leaf Tarmac Toplight 100mm Blockwork 7.3 N mm²dense concrete blockwork to required thickness: built off foundation wall and footing, or off slab subject to engineer design.

To be finished with 2 coat 13mm Carlite plasterwork in accordance with BS EN 15435:2008 and BS 6073-2:2008.

New steel beam(s) to be installed to form openings all to Structural Engineer's design and specification.

To be supported on internal blockwork wall and inner leaf of external wall on padstones.

New openings in load bearing masonry walls to have concrete lintels, reinforced with 1no 13mm dia. mild steel bar per 100mm thickness. Depths and minimum end bearings are as follows unless otherwise stated:

Max. clear Span.	Depth Min.	End Bearing
1200mm	150mm	100mm
1800mm	225mm	150mm
2400mm	300mm	215mm

TILING

Use slate to match existing in colour and texture (headlap distances to suit manufacturers guidance) (to be fixed in accordance with manufacturers guidance)

Fix with 10 gauge 65mm x 3.75mm flat headed aluminium alloy nails to 38 x 25 treated SW battens on Kingspan Nilvent Breathable membrane underlay laid to allow water to drain to B.S. 13707:2013. Tiles to be installed as per manufactures guidance.Battens to suit tile dimensions in accordance with BS 5534 2014. Tiles to be fixed or clipped at eaves and verge to suit prevailing wind conditions.

Provide 25mm eaves vents to ensure roof ventilation.

ROOF GENERAL

All roofs to achieve min. U-value of 0.15 W / m² K.

Roof voids to have min. 25mm eaves ventilation with ridge tile vents.

Ridge system should be a dry fix system or mechanically fixed and wet system. System to be installed in accordance with BS8612.

TWO STOREY EXTENSION ROOF

75 x 200mm C24 ridge beam. 75 x 200mm C24 purlin.

47 x 100mm C24 treated softwood rafters at 400mm centres.

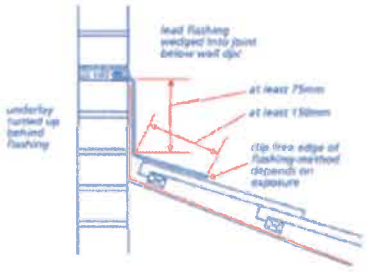
Rafters to be supported at ridge and with birdsmouthed rafter fixings.

50 x 100mm timber wall plate to be provided at eaves, bedded on mortar and strapped to inside face of blockwork at maximum 1200mm centres, and at all window & door reveals, with 1200mm long bent over straps. Minimum 5no. 5mm screws and plugs per strap.

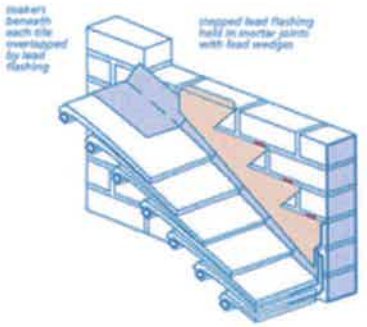
Install **50mm** K107 Kingspan kooltherm pitched roof board between the rafters and **97.5mm** K118 Kingspan kooltherm insulated plasterboard below with 3mm skim finish.

Min. 25mm air gap to top of insulation to be maintained.

Roof to have minimum 25mm eaves ventilation with ridge ventilation.



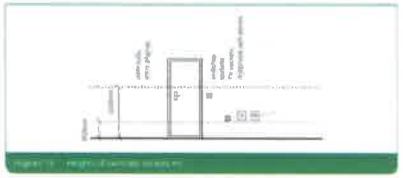
All abutments should be weatherproofed with code 4 lead flashings, and code 3 soakers. Flashings should be no more than 1500mm in length and dressed 25mm into a mortar joint.



Where a pitched roof abuts the wall at an angle, a stepped cavity tray linked to a stepped flashing should be used.

CEILINGS

New flat ceilings to be 12.5mm Vapour check plasterboard fixed at 450mm centres with drywall screws to ceiling joists. To receive 3mm skim finish.



LATERAL RESTRAINTS

Roof and floor joists running parallel to external walls to be strapped with 30 x 5mm galvanised straps at maximum 1200mm centres. U.N.O. Straps fixed bent over top of blockwork with 100mm bend, tightly fitted to blockwork face in cavity and fixed across 3 joists with noggins between. Pack gap tightly between first joist and blockwork.

ELECTRICAL

All work to be carried out by service provider and in conjunction with appointed building contractor. Client to liaise with service provider over new meters.

All electrical work to be executed by an NIC EIC approved contractor in accordance with Part P and produce an installations certificate to BS 7671:2008+A2:2013.

Design, supply and install full electrical layout to specification carried out by a client appointed electrical engineer. Positions of switches, sockets and light fittings to Part M Diagram 1.5 of Building regulations. Consumer units to be mounted so that switches are 1350 - 1450mm above floor level.

100% of all lights are required to be low energy light fittings.

All electrical work required to meet the requirements of Part P (Electrical safety) of the building Regulations. This work must be designed, installed, inspected and tested by a person competent to do so. The local authority should be satisfied that Part P of the Building Regulations has been met and the installer may be required to submit an installation certificate BS 7671:2008+A2:2013.

PART R

A position should be identified for at least one network termination point should be identified for each dwelling. Suitable ducting should be provided to connect all such network termination points to an appropriate access points.

HEATING AND HOT WATER SYSTEMS

All work to be carried out by service provider and in conjunction with appointed building contractor. Client to liaise with service provider over new meters. Provide new gas supply; including for new mains supply box to new external wall; all work to be carried out by service provider and in conjunction with appointed building contractor. Client to liaise with service provider over new meters. Boiler to supply domestic hot water and the heating system comprising steel panel finned radiators with thermostatic valves to all new rooms.

Provide new independent heating and hot water system to be combination boiler, site in utility room; serving radiators controllable in each room with thermostatic radiator valves and fully pumped with bypass programmer.

Specialist approved subcontractor to provide an independent heating and hot water system including all radiators to be controllable in each room with thermostatic radiator valves and fully pumped with bypass programmer. As per Part M, boiler controls need to be reasonably accessible to people who have reduced reach. Boiler efficiency should be assessed when extending the heating system and upgrading the system may be required to a 92% efficient boiler.

Client to appoint HETAS approved specialist subcontract to install log burner within new extension.

TMV to be fitted to baths to limit the temperature of the water to 48°C max.

All gas work to be executed by a Gas Safe registered contractor and certificates to be submitted to Building inspector for approval.

All works to comply with relevant sections of the Building Regulations Part G, J and L1B.

SECURITY - DWELLINGS

All doors should be manufactured to a design that has been shown to meet the security requirements of British Standards publication PAS 24:2012 or greater.

All doors should comply with Part Q1 in terms of fitting and design.

All windows should be manufactured to a design that has been shown to meet the security requirements of British Standards publication PAS 24:2012 or greater.

PART M

New doors to be in accordance with the clear effective door widths in Section 7 Table 4.

New switches and sockets to be located between 450 & 1200mm above floor level.

PART Q

Secure doorsets should either be:

Manufactured to a design that has been shown by test to meet the security requirements of British standards publication PAS 24:2012, or

Designed and manufactured in accordance with the following:-

The doorset should be manufactured from solid of laminated timber with a minimum density of 600kg/m³

Door rails, stiles and muntins should be at least 44mm thick. After rebating, frame components should retain at least 32mm of timber. Any panel within the doorset should be at least 15mm thick. The panel should be securely held in place. Beading should be mechanically fixed and glued in position. The smaller dimension of each panel - which can be either the width or height of the panel - should be 230mm or less.

Locks, hinges and letter plates:

The main doors for entering a dwelling (usually the front doorset) should be fitted with a multipoint locking system that meets the requirements of:

- PAS 3621 (key locking on both sides), or
- PAS 8621 (non - key locking on the internal face)or
- PAS 10621 (non- key locking on the internal face, but with an external locking override facility).

If it is not practical or desirable to install a multipoint locking system, a mortice lock that conforms with one of the following standards can be fitted instead. With a surface- mounted rim lock that conforms to the same standard:

- BS 3621 (key locking on both sides), or
- BS 8621 (non - key locking on the internal face)or
- BS 10621 (non- key locking on the internal face, but with an external locking override facility).

Between the locking points for the mortice lock and surface-mounted rim lock, the distance should be 400-600mm.

The non - primary doors for entering a dwelling (for example, back door or garage interconnecting doors) should be fitted with a multipoint locking system that meets the requirements of:

- PAS 3621 (key locking on both sides), or
- PAS 8621 (non - key locking on the internal face)or
- PAS 10621 (non- key locking on the internal face, but with an external locking override facility).

If it is not practical or desirable to install a multipoint locking system, a mortice lock that conforms with one of the following standards can be fitted instead. With two mortice bolts:

- BS 3621 (key locking on both sides), or BS 8621 (non - key locking on the internal face) or
- - BS 10621 (non- key locking on the internal face, but with an external locking override facility).

The morticed bolts should have a minimum projection of 20mm, should be at least 100mm from the top and bottom corners of the door, and should avoid any door construction joints.

Hinges accessible from outside should incorporate hinge bolts.

Letter plates, where provided, should:

a. have a maximum aperture of 260mm x 40mm, and

b. incorporate a flap or other features designed to hinder anyone attempting to remove keys with sticks and / or insert their hand.

The main doors for entering a dwelling (usually the front door) should have a door viewer unless other means existing to see callers, such as clear glass within the door or a window net to the doorset. The same doorset should also have a chain or door limiter. If not appropriate alternative caller - identification measures such as electronic audio - visual door entry system can be used to identify visitors.

Glazing:

Any glazing which, if broken would permit someone to insert their hand and release the locking device on the side of the door should be a minimum of class P1A in accordance with BS EN 356:2000. Double - glazed units need to incorporate only one pane of class P1A glass.

Design of secure windows:

Ground floor, basement and other accessible windows (including easily accessible rooflights) should be secure windows in accordance with the following:-

Windows should be made to a design that has been shown by test to meet the security requirements of British Standards publication PAS 24:2012.

It should be noted the following standards for windows are also acceptable:-

- STS 204 Issue 3:2012
- LPS 1175 Issue 7:2010 security rating 1
- LPS 2018 Issue 1:2015 security rating A.

Installation and fixing of secure windows

Frames should be mechanically fixed to the structure of the building in accordance with the manufacturer's installation instructions.

GENERAL NOTES

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All materials must comply with current British Standards in situations used.

All materials to be used and fixed strictly in accordance with the manufacturer's recommendations and instructions.

All DPC and damp proof membranes are to provide a continuous barrier against moisture and be fully in accordance with the Building regulations.

These notes are to be read in conjunction with the working drawings and any discrepancies between these notes and the drawings to be referred to MAS Design.

All new work to be fully bonded in with existing and all cavities maintained where appropriate.

Double up joists under any and all baths/showers.

All joints between fixed building components to be installed to App. doc. Part L1 B Section 2 to prevent cold bridging and infiltration and to suppress air movement through the structure. Design should be built to accredited construction details to ensure compliance with Part L of the Building regulations. All joints to be sealed with silicone sealant mastic. All holes for services to be cut with correct size hole cutter and sealed using expanded foam filler to prevent air movements.

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All dimensions must be checked by the contractor and any discrepancies noted in writing to MAS Design Consultants Ltd.

All works must be carried out in accordance with current Building Regulations, Codes of Practice and Planning Officers requirements.

All materials must comply with current British Standards in situations used.

REV		
Rev.D	Updated drawings to suit structural engineers information.	18.12.24
Rev.C	Increased the thickness of the stud wall between bedroom 2 and wet room to house concealed cistern to suit clients comments.	22.07.24
Rev.B	Added head to front elevation ground floor side extension window. Changed new extension windows to flush painted casement windows.	31.03.23
Rev.A	Ammended scheme to address planners previously raised issues.	09.12.22

MAS DESIGN 07943871308
www.masdesignconsultants.com
1 Oxford Street, Guiseley, Leeds, LS20 9AX.

PROPOSED

EXTENT OF PROJECT:

PROPOSAL: DEMOLITION OF EXISTING EXTENSION. PROPOSED TWO STOREY SIDE EXTENSION: FORMING W.C / KITCHEN / BATHROOM AND SECOND BEDROOM. PROPOSED FRONT WEATHER CANOPY.

CLIENT DETAILS:

MR R GLEW,
KITTS COTTAGE,
SPRINGFIELD, BOSTON SPA,
WETHERBY.
LS23 6EB.

DRAWING TITLE:

BUILDING REGULATIONS NOTES.

PAPER	SCALE	DATE	DRAWING No	REV
A3	NTS	09/22	M3869/04/302	D

6.4 Planning Approval or Permitted Development Enquiry Results

Leeds CITY COUNCIL

Decision Notice

Town and Country Planning Act 1990

Grant of Full Planning Permission

Applicant:	Mr R Glew	Application Number:	23/00549/FU
Agent:	MAS Design Consultants Ltd Mr Mark Scatchard 1 Oxford Street Guiseley Leeds LS20 9AX	Date Accepted: Date of Decision:	1 February 2023 3 April 2023

Proposed Development At: Kitts Cottage 14 Springfield Boston Spa Wetherby LS23 6EB

Proposal: Alterations including demolition of existing extension; two storey side extension with rooflight to rear; new canopy to front; demolition of stone wall to side

Plans and specifications that this decision is based on:

Plan Type	Plan Reference	Received
Site Location Plan/Red Line/OS Plan	M3869/01/001REV A	01.02.2023
Block Plan/Layout Plan	M3869/04/003REV A	01.02.2023
Proposed Elevations and Floor Plans	M3869/04/201REV A	01.02.2023
Sections/Cross Sections	M3869/04/301REV A	01.02.2023
Proposed floor plan(s)	M3869/04/101REV B	31.03.2023
Proposed floor plan(s)	M3869/04/102REV B	31.03.2023
Proposed Elevations and Floor Plans	M3869/04/202REV B	31.03.2023

Full planning permission granted in accordance with the approved plans and specifications and subject to the condition(s) set out below:-

1) The development hereby permitted shall be begun before the expiration of three years from the date of this permission.

Imposed pursuant to the provisions of Section 91 of the Town and Country Planning Act 1990 as amended by Section 51 of the Planning and Compulsory Purchase Act 2004.

2) The development hereby permitted shall be carried out in accordance with the approved plans listed in the Plans and Specifications above.

David Feeney

David Feeney
Chief Planning Officer

Merrion House 110 Merrion Centre Leeds LS2 8BB

For the avoidance of doubt and in the interests of proper planning.

3) Construction of stonework shall not take place until sample panels of the stonework have been approved in writing by the Local Planning Authority. The panels shall be erected on site to establish the details of the type, bonding and coursing of stone and colour and type of jointing material for the different elevations of the extensions. The stonework shall be constructed in strict accordance with the sample panels, which shall not be demolished prior to completion of the development. If in good condition exiting stonework is to be removed from the existing single storey extension and carefully salvaged and reused.

In the interests of visual amenity and to ensure that the stonework harmonises with the character of the area.

4) Construction of the roof/s shall not take place until details and samples of all external roofing materials have been submitted to and approved in writing by the Local Planning Authority. The roofs shall be constructed from the approved materials.

In the interests of visual amenity.

5) The development hereby permitted shall not be brought into use until details of all gutters, downpipes and all other external plumbing have been submitted to and approved in writing by the Local Planning Authority; the use of plastic or similar materials for such items will not be acceptable. These items shall then be provided in accordance with the approved details prior to the occupation of the development and retained for the lifetime of the development.

In the interests of the local character, visual amenity and historical accuracy.

6) Prior to the installation of new windows precise details of new windows shall have first been submitted to and agreed in writing by the Local Planning Authority. The new windows shall thereafter be provided in accordance with the approved details prior to the occupation of the development and retained for the lifetime of the development.

In the interests of the local character and visual amenity.

7) The existing profiled stone window sills to side elevation and single storey extension are to be carefully salvaged and re-used in new window openings.

In the interests of the character and visual amenity of the area and to support climate change mitigation aims.

David Feeney

David Feeney
Chief Planning Officer

Merrion House 110 Merrion Centre Leeds LS2 8BB

Leeds CITY COUNCIL

Decision Notice

Town and Country Planning Act 1990

Grant of Full Planning Permission

8) Notwithstanding the provisions of the Town and Country Planning (General Permitted Development) Order 2015 (or any Orders revoking and re-enacting that Order with or without modification) planning permission shall be obtained before any windows are inserted in the side elevation of the proposed two storey side extension.

As the insertion of windows could lead to problems of overlooking.

9) The development hereby permitted shall not be occupied until full details of hard landscape works have been submitted to and approved in writing by the Local Planning Authority. Hard landscape works shall include

(a) proposed finished levels and/or contours,
(b) boundary details,means of enclosure and retaining structures,
(c) hard surfacing areas,
(d) minor artefacts and structures (e.g. furniture, refuse or other storage units, signs, lighting etc.),

All hard landscaping works shall be carried out in accordance with the approved details, approved implementation programme and British Standard BS 4428:1989 Code of Practice for General Landscape Operations. The developer shall complete the approved landscaping works and confirm this in writing to the Local Planning Authority prior to the date agreed in the implementation programme.

To ensure the provision and establishment of acceptable landscaping.

For information:-

1) The Council engages with all applicants in a positive and proactive way through specific pre-application enquiries and the detailed advice available on the Council's website and further discussion where appropriate to produce an acceptable development. For this particular application, positive discussions took place which resulted in further information being submitted to allow the application to be approved.

2) This notice of decision does not grant consent or imply any grant of consent for the applicant to enter onto any adjoining land, to either construct or subsequently to maintain the proposed development.

David Feeney

David Feeney
Chief Planning Officer

Merrion House 110 Merrion Centre Leeds LS2 8BB

Leeds CITY COUNCIL

Decision Notice

Town and Country Planning Act 1990

Grant of Full Planning Permission

3) This permission does not absolve the applicant(s) from the requirements for compliance with a Building Regulation approval, or the duty of compliance with any requirements of any Statutory Body, Public Utility or Authority.

The applicant is advised that where any of the following apply, The Party Wall Act 1996 provisions are relevant, and you may well need to serve notice and get agreement from adjoining owners/neighbour(s) to carry out the work;

- work carried out directly to an existing party wall or structure
- new building at or astride the boundary line between properties
- excavation within 3 or 6 metres of a neighbouring building or structure depending on the depth of the hole or proposed foundations.

David Feeney

David Feeney
Chief Planning Officer

Merrion House 110 Merrion Centre Leeds LS2 8BB

Leeds CITY COUNCIL

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Unless the hours of working have been restricted by a condition of this permission, our recommended hours of noise generating activities during construction are:

- Monday to Friday from 8am to 6pm;
- Saturday from 8am to 1pm;
- Sunday and Bank Holidays – no noisy working.

To minimise the possibility of complaints, we suggest keeping your neighbours informed in advance of any particularly noisy works or large deliveries.

In respect of housing development, the applicant's attention is drawn to part Q1 of the 2010 Building Regulations and Approved Document Q1 (Unauthorised Access) 2015. Specifically that the standards for doors and windows (including locks and other hardware) shall be sufficiently robust and capable of resisting physical attack by a burglar, so as to include euro 'anti-snap' locks or equivalent standard.

Applicants are requested to remove any site notices related to this application from outside the property to which the application relates.

Important Information about Your Planning Permission

Town and Country Planning (Development Management Procedure) (England) Order 2015

This decision notice only relates to the grant of planning permission. It does not give any approval or consent which may be needed under any legislation, enactment, bye-laws, order or regulation other than the Town and Country Planning Act 1990 as amended. You may need other approvals, consents or licenses for the development eg building regulations approval.

This permission is granted in strict accordance with the approved plans. It should be noted however that:

(a) A variation from the approved plans following commencement of the development is likely to constitute unauthorised development and may be liable to enforcement action.
(b) Variation to the approved plans will require the submission of a new planning application.

David Feeney

David Feeney
Chief Planning Officer

Merrion House 110 Merrion Centre Leeds LS2 8BB

Leeds CITY COUNCIL

Decision Notice

Town and Country Planning Act 1990

Grant of Full Planning Permission

This planning permission is granted subject to conditions. Please read the conditions carefully and make sure that you understand what is required to comply with them. It is the responsibility of the owner(s) and the person(s) implementing the development to ensure that the approved plans and these conditions are complied with throughout the development and beyond. Failure to comply with any of the conditions may result in enforcement action.

Conditions which require work to be carried out or details to be approved prior to commencement are very important and are called '**conditions precedent**'.

This means:

(a) If a condition precedent is not complied with, the whole of the development might be unauthorised and you may be liable to enforcement action.

(b) Where a condition precedent is breached and the development is unauthorised, the only way to rectify this is by the submission of a new application to obtain a fresh planning permission.

A fee of £116 per request or £34 if the request relates to a householder application is payable to discharge condition(s). The request needs to identify the planning application number and the condition(s) concerned; a form is available from our website www.leeds.gov.uk/planningforms titled Approval of Details application form.

Appeals to the Secretary of State

If you are aggrieved by the decision of your local planning authority to grant permission for the proposed development subject to conditions, then you can appeal to the Secretary of State under section 78 of the Town and Country Planning Act 1990 as amended.

If you want to appeal, you must do so within **six months** of the date of this notice, unless a valid Enforcement Notice exists for the same or substantially the same development. In this case the period for appeal is **28 days** from the date of this notice. You should use a form which you can obtain from www.gov.uk/appeal-householder-planning-decision or by email from enquiries@pins.gsi.gov.uk or by phoning 0303 444 5000.

The Secretary of State can allow a longer period for giving notice of an appeal, but will not normally be prepared to do so unless there are special circumstances which excuse the delay in giving notice of appeal.

David Feeney

David Feeney
Chief Planning Officer

Merrion House 110 Merrion Centre Leeds LS2 8BB

Leeds CITY COUNCIL

Decision Notice

Town and Country Planning Act 1990

Grant of Full Planning Permission

You must send one copy of the completed form to planning.appeals@leeds.gov.uk or Appeals Administration, Planning Services, Leeds City Council, Merrion House, 110 Merrion Centre, Leeds, LS2 8BB as well as to the Planning Inspectorate at the address on the form.

If you intend to submit an appeal that you would like examined by inquiry, you should notify the Local Planning Authority (planning.appeals@leeds.gov.uk) and the Planning Inspectorate (inquiryappeals@planninginspectorate.gov.uk) of your intention to appeal a minimum of 10 working days before the appeal is submitted to the Planning Inspectorate.

The notification form and further guidance is available at
www.gov.uk/government/publications/notification-of-intention-to-submit-an-appeal

David Feeney

David Feeney
Chief Planning Officer

Merrion House 110 Merrion Centre Leeds LS2 8BB

6.5 Building Regulation Approval

Leeds CITY COUNCIL

Decision Notice

NOTICE OF DECISION

BUILDING ACT 1984

Applicant: Richard Glew
Agent: MAS Design Consultants Ltd
1 Oxford Street
Guiseley
Leeds
LS20 9AX

Deposit Date: 6 April 2023
Date of Decision: 12 April 2023
Application Number: 23/01618/PAS/EA

For: Two storey side extension and internal alterations
At: Kitts Cottage 14 Springfield Boston Spa

APPROVAL OF BUILDING PLANS WITH CONDITIONS

Under Section 16 of the Building Act 1984 **approval** is given providing that the plans are modified or the additional information detailed below is supplied to comply with Schedule One of the Building Regulations:-

Conditions attached to full plans approval

1 **Timber Purlins and Ridge Beam Calculations Conditional**: Structural calculations and details of the proposed timber purlins and ridge beam and supporting roof structure are to be submitted to, and approved by, the City Council prior to placement on site.

2 **Steelwork Calculations Conditional**: Structural calculations and details of the proposed steelwork and supporting structure are to be submitted to, and approved by, the City Council prior to placement on site.

Details of Plans

M3869/01/001B, 002B, 003B, 101B, 201B, 301B & M3869/04/003B, 101B, 102B, 201B, 202B, 301B, 302B

This approval is only for the purposes of the requirements of the Building Regulations 2000 and Sections 19, 21, 24 and 25 of the Building Act 1984. It is not an approval under the Town and Country Planning Acts or for any other statutory provision for example Housing Act Licensing provisions.

LABC

David Feeney

David Feeney
Chief Planning Officer

Please note: if work is not commenced within three years of the date of deposit, the approval will cease under the provisions of the Building Act 1984, Section 32.

You must give at least 48 hours notice to Leeds City Council Building Control before any work can commence.

LABC

David Feeney
David Feeney
Chief Planning Officer

Building Control Services
Merrion House
110 Merrion Centre
Leeds LS2 8BB

MAS Design Consultants Ltd
1 Oxford Street
Guiseley
Leeds
LS20 9AX

Ask for **Mr Andrew Bates**
Direct Line **0113 37 87915**
Central Switchboard (0113) 2348080
Fax **(0113) 2478230**
Minicom (0113) 2474305
EMail **building.control@leeds.gov.uk**

Application Number: 23/01618/PAS/EA

Date: 19 May 2023

Dear Client

Application:	23/01618/PAS
For:	Two storey side extension and internal alterations
Site At:	Kitts Cottage 14 Springfield Boston Spa
Applicant	Richard Glew

I confirm that the information submitted, as required by condition on the above application, has been assessed and is satisfactory.

The following condition(s) is/are discharged.

1 **Timber Purlins and Ridge Beam Calculations Conditional**: Structural calculations and details of the proposed timber purlins and ridge beam and supporting roof structure are to be submitted to, and approved by, the City Council prior to placement on site.

2 **Steelwork Calculations Conditional**: Structural calculations and details of the proposed steelwork and supporting structure are to be submitted to, and approved by, the City Council prior to placement on site.

If you require any further information please do not hesitate to contact me

Yours faithfully

Mr Andrew Bates
Building Control Surveyor

6.6 Structural Calculations

WALLS SHADED GREY ARE ASSUMED TO BE 100mm SOLID MASONRY, SUPPORTED ON A SUITABLE FOUNDATION BELOW. WHERE NEW STRUCTURAL ELEMENTS ARE SUPPORTED ON EXISTING WALLS, THE MAIN CONTRACTOR IS TO CHECK THE ADEQUACY OF THE EXISTING MASONRY AND FOUNDATION ONCE THE FINISHES HAVE BEEN REMOVED.	

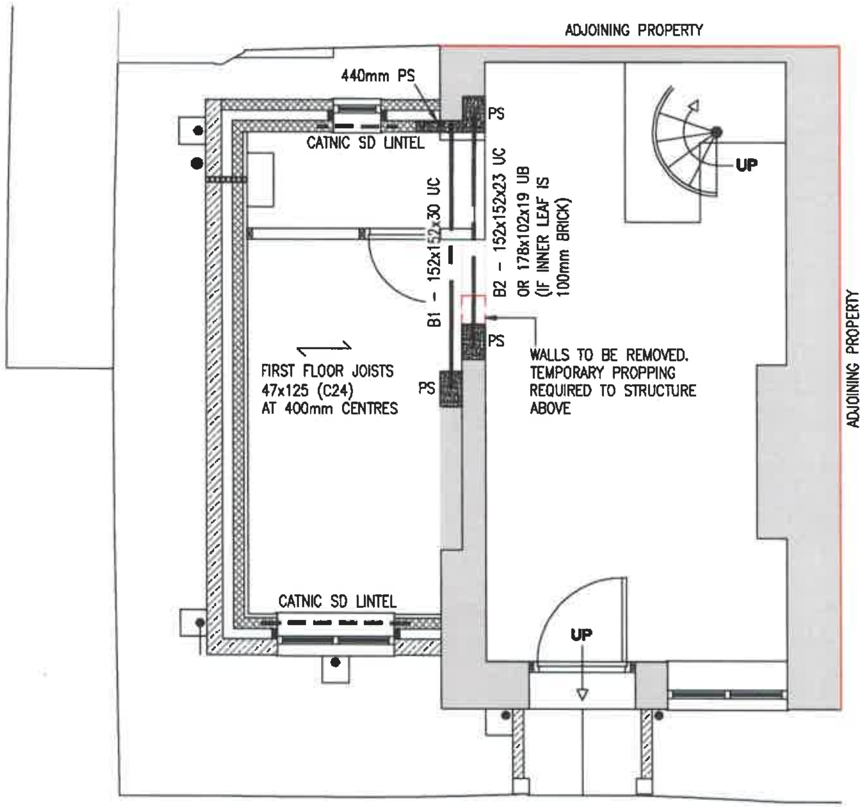
REAR EXTENSION

GROUND FLOOR CONSTRUCTION
150mm THICK REINFORCED CONCRETE GROUND BEARING SLAB WITH A252 MESH IN TOP (SEE NOTES)

FOUNDATIONS
600x225mm MASS CONCRETE STRIP FOOTINGS UNDER ALL NEW MASONRY (SEE NOTES)

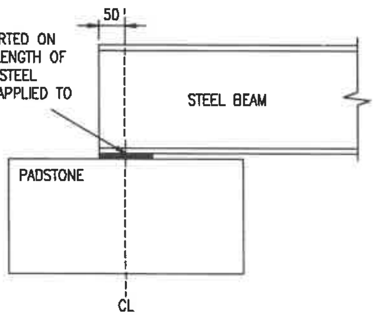
CATNIC SD LINTEL – DENOTES CATNIC STANDARD DUTY CAVITY WALL LINTEL (OR SIMILAR) REF: CG90/100 OR ALTERNATIVE TO SUIT WALL THICKNESS

PADSTONE WIDTHS ARE TO SUIT MASONRY THICKNESS



PROPOSED GROUND FLOOR PLAN
(SHOWING STRUCTURE ABOVE)

WHERE STEEL BEAMS ARE SUPPORTED ON PADSTONES PARALLEL WITH THE LENGTH OF THE BEAM, USE 100x100x10mm STEEL SHIMS TO ENSURE THE LOAD IS APPLIED TO THE CENTRE OF THE PADSTONE.



TYPICAL PADSTONE DETAIL
(SCALE 1:10)

CONSTRUCTION NOTES

GENERAL

DO NOT SCALE OFF THIS DRAWING, OR TAKE DIGITAL DIMENSIONS FROM THIS DRAWING. ALL DIMENSIONS SHOWN TO BE CONFIRMED ON SITE BY THE MAIN CONTRACTOR

THE MAIN CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE EXISTING STRUCTURE AT ALL TIMES DURING ERECTION AND SHALL ALLOW FOR ALL NECESSARY TEMPORARY PROPPING. PROPS TO BE INSTALLED TO MANUFACTURERS GUIDELINES. FOR LARGE OPENINGS AND FOR OPENINGS REQUIRING STEEL GOAL POST FRAMES OR PICTURE FRAMES, PROPS ARE TO BE HORIZONTALLY LACED AND DIAGONALLY BRACED WITH PROPRIETARY SCAFFOLDING FIXINGS.

EXISTING FLOOR SPANS, EXISTING BEAMS AND LOAD BEARING WALLS NOTED ON THE DRAWINGS ARE ASSUMED ONLY, AND ARE BASED ON A VISUAL INSPECTION. STRUCTURAL ELEMENTS ARE TO BE CONFIRMED ON SITE BY THE MAIN CONTRACTOR ONCE THE EXISTING FINISHES HAVE BEEN REMOVED. THIS SHOULD BE CARRIED OUT PRIOR TO STRUCTURAL ALTERATIONS COMMENCING OR ORDERING MATERIALS. THE ENGINEER IS TO BE CONTACTED IF NECESSARY TO APPRAISE THE EXISTING STRUCTURE.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTS DRAWINGS AND THE STRUCTURAL CALCULATIONS PROVIDED BY PJM DESIGNS LIMITED

U.N.O. – DENOTES UNLESS NOTED OTHERWISE

STEELWORK

U.N.O. ALL STEELWORK TO BE MINIMUM GRADE S275 JR OR J0H

U.N.O. ALL STEELWORK TO HAVE 30 MINUTES FIRE PROTECTION WITH 15mm FIRELINE BOARD AND SKIM

U.N.O. ALL STEELWORK TO BE PAINTED WITH TWO COATS OF ZINC PHOSPHATE PRIMER TO A MINIMUM THICKNESS OF 80 MICRONS. WHERE STEELWORK IS IN CONTACT WITH EXTERNAL WALLS OR WITHIN EXTERNAL WALL CAVITIES, AN ADDITIONAL TWO COATS OF BITUMEN PAINT IS TO BE APPLIED TO A MINIMUM THICKNESS OF 200 MICRONS.

U.N.O. ALL STEEL BEAMS TO BEAR ON TO MINIMUM 330lg X 100wd X 140dp CONCRETE PADSTONES (DENOTED: PS) SET ON M4 MORTAR. ANY LEVELLING REQUIRED TO STEELWORK TO BE DONE USING 100x100mm STEEL PACKERS.

BEAMS INSTALLED BELOW EXISTING MASONRY TO BE PRELOADED USING DRIVEN STEEL FOLDING WEDGES TO REDUCE THE RISK OF CRACKING ON RELEASE OF PROPS. FOLLOWING PRELOADING, SLATE PACK AND FILL THE GAP BETWEEN THE BEAM AND MASONRY ABOVE WITH A STIFF MORTAR MIX. SUPPORTING PADSTONES AND WALLS TO BE CURED FOR A MINIMUM OF 7 DAYS PRIOR TO LOADING.

U.N.O. WHERE BEAMS ARE SUPPORTING MASONRY WALLS, BEAMS ARE TO BE CENTRAL ON WIDTH OF MASONRY.

U.N.O. ALL WELDS TO BE 6mm FILLET WELD TO FULL PROFILE.
U.N.O. ALL BOLTS TO BE GRADE 8.8

STEELWORK CONNECTION DETAILS ARE DESIGN INTENT ONLY. FINAL DETAILS BY STEEL FABRICATOR

MASONRY WALLS

U.N.O. NEW WALLS TO BE JOINED TO EXISTING WITH STAINLESS STEEL WALL STARTER SYSTEM. HORIZONTAL TIES PROVIDED AT 225mm VERTICAL CENTRES. PROVIDE DEBONDING SLEEVES AT MOVEMENT JOINT LOCATIONS, WITH 10mm COMPRESSIBLE FILLER STRIP AND POLYSULPHIDE SEAL.

U.N.O. NEW LOAD BEARING MASONRY TO BE CONSTRUCTED WITH 7.3N SOLID CONCRETE BLOCKS, WITH M4 MORTAR

STAINLESS STEEL TIES TO BE PROVIDED AT CAVITY WALL LOCATIONS. TIES AT 750mm HORIZONTAL CENTRES AND 450mm VERTICAL CENTRES U.N.O. STAGGERED EACH COURSE. TIES TO BE SPACED AT 225 VERTICAL CENTRES WITHIN 225mm OF REVEALS.

PITCHED ROOF STRUCTURE

NEW ROOF JOISTS TO BE MINIMUM 47x[illegible]mm GRADE C24 JOISTS AT 400mm CENTRES. DOUBLE JOISTS PROVIDED AT SIDES OF VELUX WINDOWS. 50x100 TIMBER WALL PLATE TO BE PROVIDED AT EAVES, BEDDED ON MORTAR AND STRAPPED TO INSIDE FACE OF BLOCKWORK AT MAXIMUM 1200mm CENTRES, AND AT ALL WINDOW & DOOR REVEALS, WITH 1200mm LONG BENT OVER STRAPS. MINIMUM [illegible] SCREWS AND PLUGS PER STRAP

SUSPENDED TIMBER FLOOR STRUCTURES

NEW FIRST FLOOR JOISTS TO BE MINIMUM 47x125mm GRADE C24 JOISTS AT 400mm CENTRES. FULL DEPTH NOGGINS FIXED AT MIDSPAN. DOUBLE JOISTS TO BE PROVIDED UNDER ALL STUD WALLS RUNNING PARALLEL TO FLOOR JOISTS.

NEW JOISTS TO BE SUPPORTED ON EXISTING MASONRY WALLS WITH 47x150 TIMBER WALL PLATE, FIXED TO FACE OF MASONRY WITH M10 RESIN ANCHORS OR THUNDERBOLTS AT 450mm CENTRES.

LATERAL RESTRAINTS

ROOF AND FLOOR JOISTS RUNNING PARALLEL TO EXTERNAL WALLS TO BE STRAPPED WITH 30x5mm GALVANISED STRAPS AT MAXIMUM 1200mm CENTRES U.N.O. STRAPS FIXED BENT OVER TOP OF BLOCKWORK WITH 100mm BEND, TIGHTLY FITTED TO BLOCKWORK FACE IN CAVITY AND FIXED ACROSS 3 JOISTS WITH NOGGINS BETWEEN. PACK GAP TIGHTLY BETWEEN FIRST JOIST AND BLOCKWORK.

CONCRETE GROUND BEARING SLABS

NEW GROUND FLOOR SLAB TO BE 150mm THICK GRADE C35/30 WITH A252 MESH IN TOP WITH 40mm COVER, ON VISQUEEN DPC/GAS MEMBRANE LAPPED WITH DPC, ON SAND BLINDING, ON MINIMUM 150mm WELL COMPACTED TYPE 1 HARDCORE. SLABS TO HAVE EXPANDABLE FILLER TO ALL PERIMETERS. INSULATION/DPC AND FINISHES TO ARCHITECTS DETAILS.

FOUNDATIONS

U.N.O. NEW STRIP FOUNDATIONS TO BE MASS CONCRETE GRADE C35/30 U.N.O. FOUNDATIONS TO BE MINIMUM 600x225mm, AT MINIMUM 1000mm BELOW EXISTING GROUND LEVEL, OR TO SAME LEVEL AS EXISTING FOUNDATIONS (WHICHEVER IS GREATER). NEW FOUNDATIONS TO BE TIED TO EXISTING FOUNDATIONS WITH 2No. H16 DOWEL BARS, 400mm LONG, RESIN FIXED 200mm INTO EXISTING FOOTINGS, AND CAST INTO NEW FOOTING. IF EXISTING FOOTINGS ARE HIGHER THAN NEW FOOTINGS, LOCALLY UNDERPIN THE EXISTING FOOTING WITH THE NEW FOOTING.

ALL FOUNDATIONS TO BE CAST ON UNDISTURBED GROUND, THAT IS SMOOTH AND FREE FROM ROOTS, CRACKS, LOOSE MATERIAL, RUTS OR OTHER DEFECTS. ALL OPEN EXCAVATIONS TO BE KEPT FREE OF STANDING WATER AT ALL TIMES. ANY SOFT SPOTS ENCOUNTERED TO BE REMOVED AND REPLACED WITH WELL COMPACTED HARDCORE, OR MASS CONCRETE FILL.

FOUNDATION BASES TO BE CAST ONTO FIRM CLAY OF MINIMUM 75kN/m2 ALLOWABLE GROUND BEARING CAPACITY.

FOUNDATIONS TO BE MADE DEEPER WHERE REQUIRED IF ADJACENT TO EXISTING TREES AS PER NHBC CHAPTER 4.2, WITH THE AGREEMENT OF THE BUILDING CONTROL OFFICER

CONCRETE MIXES

FOOTING & GROUND SLAB — CONCRETE GRADE – C35/30
MINIMUM CEMENT – 300kg/m3
MAXIMUM WATER/CEMENT – 0.55
MAXIMUM AGGREGATE – 20mm

EXISTING STRUCTURE

IT IS ASSUMED THAT THE EXISTING LOAD BEARING WALLS ARE SOLID MASONRY CONSTRUCTION OF MINIMUM 100mm WIDTH, AND OF SOUND STRUCTURAL CONDITION, AND FREE FROM ANY DEFECTS. WHERE NEW STRUCTURAL ELEMENTS ARE SUPPORTED ON EXISTING MASONRY WALLS, THE MAIN CONTRACTOR IS TO CHECK THE ADEQUACY OF THE EXISTING MASONRY.

IT IS ASSUMED THAT THE EXISTING FOUNDATIONS ARE TRADITIONAL STRIP FOOTINGS, WITH A MINIMUM WIDTH OF 600mm AND OF SOUND STRUCTURAL CONDITION, BEARING ONTO FIRM CLAY OF ALLOWABLE BEARING CAPACITY 75kN/m2 AND FREE FROM ANY DEFECTS. THE MAIN CONTRACTOR IS TO CHECK THE ADEQUACY OF THE EXISTING FOUNDATIONS.

REV	AMENDMENT	DATE
B	REVERTED TO PREVIOUS REVISION	12.12.24
A	UPDATED TO ARCHITECT'S PLANS. BEAMS B1 & B2 OMITTED. CONCRETE LINTELS ADDED.	21.06.23

PROJECT: KITTS COTTAGE, SPRINGFIELD, BOSTON SPA

CLIENT: MR R. GLEW

DRAWING TITLE: PROPOSED GROUND FLOOR PLAN

PJM DESIGNS

PJM DESIGNS LIMITED
SUITE 6, WEST CHEVIN BUSINESS CENTRE
WEST CHEVIN ROAD
OTLEY, LS21 3HA
07815 214474
info@pjmdesigns.co.uk

DRAWING NUMBER	DATE	STATUS
23052-01	19.05.23	C
	SCALE: 1:50 @ A3	REV: B

WALLS SHADED GREY ARE ASSUMED TO BE 100mm SOLID MASONRY, SUPPORTED ON A SUITABLE FOUNDATION BELOW. WHERE NEW STRUCTURAL ELEMENTS ARE SUPPORTED ON EXISTING WALLS, THE MAIN CONTRACTOR IS TO CHECK THE ADEQUACY OF THE EXISTING MASONRY AND FOUNDATION ONCE THE FINISHES HAVE BEEN REMOVED.

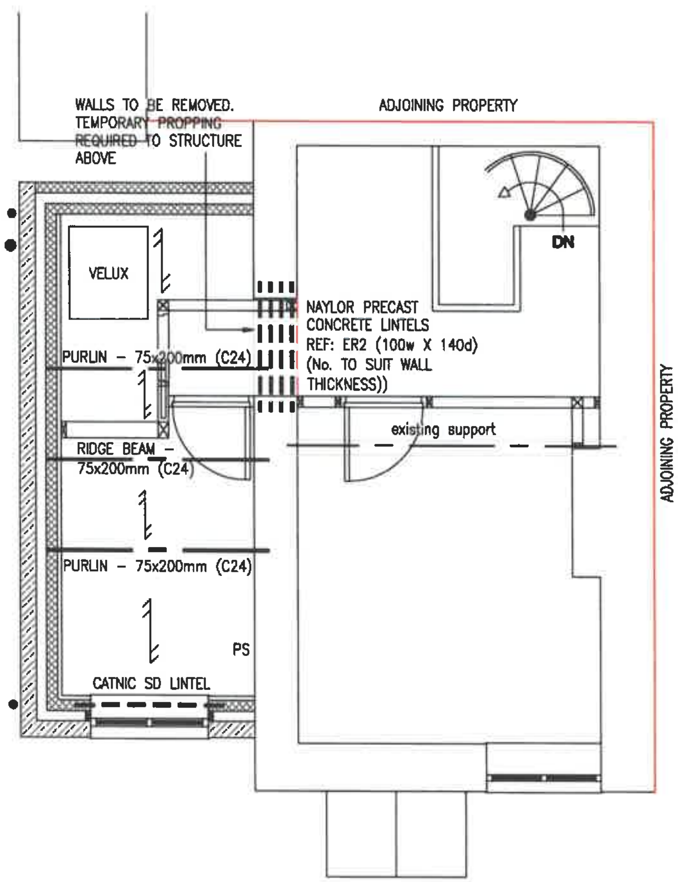
KEY

ROOF JOISTS 47x100 (C24) AT 400mm CENTRES

DOUBLE UP ROOF JOISTS AROUND VELUX WINDOW

PADSTONE WIDTHS ARE TO SUIT MASONRY THICKNESS

SEE TYPICAL PADSTONE DETAIL ON DRAWING 23052-01



PROPOSED FIRST FLOOR PLAN

(SHOWING STRUCTURE ABOVE)

CONSTRUCTION NOTES

GENERAL

DO NOT SCALE OFF THIS DRAWING, OR TAKE DIGITAL DIMENSIONS FROM THIS DRAWING. ALL DIMENSIONS SHOWN TO BE CONFIRMED ON SITE BY THE MAIN CONTRACTOR

THE MAIN CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE EXISTING STRUCTURE AT ALL TIMES DURING ERECTION AND SHALL ALLOW FOR ALL NECESSARY TEMPORARY PROPPING. PROPS TO BE INSTALLED TO MANUFACTURERS GUIDELINES. FOR LARGE OPENINGS AND FOR OPENINGS REQUIRING STEEL GOAL POST FRAMES OR PICTURE FRAMES, PROPS ARE TO BE HORIZONTALLY LACED AND DIAGONALLY BRACED WITH PROPRIETARY SCAFFOLDING FORMS.

EXISTING FLOOR SPANS, EXISTING BEAMS AND LOAD BEARING WALLS NOTED ON THE DRAWINGS ARE ASSUMED ONLY, AND ARE BASED ON A VISUAL INSPECTION. STRUCTURAL ELEMENTS ARE TO BE CONFIRMED ON SITE BY THE MAIN CONTRACTOR ONCE THE EXISTING FINISHES HAVE BEEN REMOVED. THIS SHOULD BE CARRIED OUT PRIOR TO STRUCTURAL ALTERATIONS COMMENCING OR ORDERING MATERIALS. THE ENGINEER IS TO BE CONTACTED IF NECESSARY TO APPRAISE THE EXISTING STRUCTURE.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTS DRAWINGS AND THE STRUCTURAL CALCULATIONS PROVIDED BY PJM DESIGNS LIMITED

U.N.O. – DENOTES UNLESS NOTED OTHERWISE

STEELWORK

U.N.O. ALL STEELWORK TO BE MINIMUM GRADE S275 JR OR J0H

U.N.O. ALL STEELWORK TO HAVE 30 MINUTES FIRE PROTECTION WITH 15mm FIRELINE BOARD AND SKIM

U.N.O. ALL STEELWORK TO BE PAINTED WITH TWO COATS OF ZINC PHOSPHATE PRIMER TO A MINIMUM THICKNESS OF 80 MICRONS. WHERE STEELWORK IS IN CONTACT WITH EXTERNAL WALLS OR WITHIN EXTERNAL WALL CAVITIES, AN ADDITIONAL TWO COATS OF BITUMEN PAINT IS TO BE APPLIED TO A MINIMUM THICKNESS OF 200 MICRONS.

U.N.O. ALL STEEL BEAMS TO BEAR ON TO MINIMUM 330lg x 100wd x 140dp CONCRETE PADSTONES (DENOTED: PS) SET ON M4 MORTAR. ANY LEVELLING REQUIRED TO STEELWORK TO BE DONE USING 100x100mm STEEL PACKERS.

BEAMS INSTALLED BELOW EXISTING MASONRY TO BE PRELOADED USING DRIVEN STEEL FOLDING WEDGES TO REDUCE THE RISK OF CRACKING ON RELEASE OF PROPS. FOLLOWING PRELOADING, SLATE PACK AND FILL THE GAP BETWEEN THE BEAM AND MASONRY ABOVE WITH A STIFF MORTAR MIX. SUPPORTING PADSTONES AND WALLS TO BE CURED FOR A MINIMUM OF 7 DAYS PRIOR TO LOADING.

U.N.O. WHERE BEAMS ARE SUPPORTING MASONRY WALLS, BEAMS ARE TO BE CENTRAL ON WIDTH OF MASONRY.

U.N.O. ALL WELDS TO BE 6mm FILLET WELD TO FULL PROFILE.
U.N.O. ALL BOLTS TO BE GRADE 8.8

STEELWORK CONNECTION DETAILS ARE DESIGN INTENT ONLY. FINAL DETAILS BY STEEL FABRICATOR

MASONRY WALLS

U.N.O. NEW WALLS TO BE JOINED TO EXISTING WITH STAINLESS STEEL WALL STARTER SYSTEM. HORIZONTAL TIES PROVIDED AT 225mm VERTICAL CENTRES. PROVIDE DEBONDING SLEEVES AT MOVEMENT JOINT LOCATIONS, WITH 10mm COMPRESSIBLE FILLER STRIP AND POLYSULPHIDE SEAL.

U.N.O. NEW LOAD BEARING MASONRY TO BE CONSTRUCTED WITH 7.3N SOLID CONCRETE BLOCKS, WITH M4 MORTAR

STAINLESS STEEL TIES TO BE PROVIDED AT CAVITY WALL LOCATIONS. TIES AT 750mm HORIZONTAL CENTRES AND 450mm VERTICAL CENTRES U.N.O. STAGGERED EACH COURSE. TIES TO BE SPACED AT 225 VERTICAL CENTRES WITHIN 225mm OF REVEALS.

PITCHED ROOF STRUCTURE

NEW ROOF JOISTS TO BE MINIMUM 47x100mm GRADE C24 JOISTS AT 400mm CENTRES. DOUBLE JOISTS PROVIDED AT SIDES OF VELUX WINDOWS. 50x100 TIMBER WALL PLATE TO BE PROVIDED AT EAVES, BEDDED ON MORTAR AND STRAPPED TO INSIDE FACE OF BLOCKWORK AT MAXIMUM 1200mm CENTRES, AND AT ALL WINDOW & DOOR REVEALS, WITH 1200mm LONG BENT OVER STRAPS. MINIMUM 4No. 6mm SCREWS AND PLUGS PER STRAP

SUSPENDED TIMBER FLOOR STRUCTURES

NEW FIRST FLOOR JOISTS TO BE MINIMUM 47x125mm GRADE C24 JOISTS AT 400mm CENTRES. FULL DEPTH NOGGINS FIXED AT MIDSPAN. DOUBLE JOISTS TO BE PROVIDED UNDER ALL STUD WALLS RUNNING PARALLEL TO FLOOR JOISTS.

NEW JOISTS TO BE SUPPORTED ON EXISTING MASONRY WALLS WITH 47x150 TIMBER WALL PLATE, FIXED TO FACE OF MASONRY WITH M10 RESIN ANCHORS OR THUNDERBOLTS AT 450mm CENTRES.

LATERAL RESTRAINTS

ROOF AND FLOOR JOISTS RUNNING PARALLEL TO EXTERNAL WALLS TO BE STRAPPED WITH 30x5mm GALVANISED STRAPS AT MAXIMUM 1200mm CENTRES U.N.O. STRAPS FIXED BENT OVER TOP OF BLOCKWORK WITH 100mm BEND, TIGHTLY FITTED TO BLOCKWORK FACE IN CAVITY AND FIXED ACROSS 3 JOISTS WITH NOGGINS BETWEEN. PACK GAP TIGHTLY BETWEEN FIRST JOIST AND BLOCKWORK.

CONCRETE GROUND BEARING SLABS

NEW GROUND FLOOR SLAB TO BE 150mm THICK GRADE C25/30 WITH A252 MESH IN TOP WITH 40mm COVER, ON VISQUEEN DPC/GAS MEMBRANE LAPPED WITH DPC, ON SAND BLINDING, ON MINIMUM 150mm WELL COMPACTED TYPE 1 HARDCORE. SLABS TO HAVE EXPANDABLE FILLER TO ALL PERIMETERS. INSULATION/DPC AND FINISHES TO ARCHITECTS DETAILS.

FOUNDATIONS

U.N.O. NEW STRIP FOUNDATIONS TO BE MASS CONCRETE GRADE C25/30 U.N.O. FOUNDATIONS TO BE MINIMUM 600x225mm, AT MINIMUM 900mm BELOW EXISTING GROUND LEVEL, OR TO SAME LEVEL AS EXISTING FOUNDATIONS (WHICHEVER IS GREATER). NEW FOUNDATIONS TO BE TIED TO EXISTING FOUNDATIONS WITH 3No. H16 DOWEL BARS, 450mm LONG, RESIN FIXED 200mm INTO EXISTING FOOTINGS, AND CAST INTO NEW FOOTING. IF EXISTING FOOTINGS ARE HIGHER THAN NEW FOOTINGS, LOCALLY UNDERPIN THE EXISTING FOOTING WITH THE NEW FOOTING.

ALL FOUNDATIONS TO BE CAST ON UNDISTURBED GROUND, THAT IS SMOOTH AND FREE FROM ROCKS, CRACKS, LOOSE MATERIAL, ROOTS OR OTHER DEFECTS. ALL OPEN EXCAVATIONS TO BE KEPT FREE OF STANDING WATER AT ALL TIMES. ANY SOFT SPOTS ENCOUNTERED TO BE REMOVED AND REPLACED WITH WELL COMPACTED HARDCORE, OR MASS CONCRETE FILL.

FOUNDATION BASES TO BE CAST ONTO FIRM CLAY OF MINIMUM 75kN/m2 ALLOWABLE GROUND BEARING CAPACITY.

FOUNDATIONS TO BE MADE DEEPER WHERE REQUIRED IF ADJACENT TO EXISTING TREES AS PER NHBC CHAPTER 4.2. WITH THE AGREEMENT OF THE BUILDING CONTROL OFFICER

CONCRETE MIXES

FOOTING & GROUND SLAB	CONCRETE GRADE – C25/30 MINIMUM CEMENT – 300kg/m3 MAXIMUM WATER/CEMENT – 0.65 MAXIMUM AGGREGATE – 20mm

EXISTING STRUCTURE

IT IS ASSUMED THAT THE EXISTING LOAD BEARING WALLS ARE SOLID MASONRY CONSTRUCTION OF MINIMUM 100mm WIDTH, AND OF SOUND STRUCTURAL CONDITION, AND FREE FROM ANY DEFECTS. WHERE NEW STRUCTURAL ELEMENTS ARE SUPPORTED ON EXISTING MASONRY WALLS, THE MAIN CONTRACTOR IS TO CHECK THE ADEQUACY OF THE EXISTING MASONRY.

IT IS ASSUMED THAT THE EXISTING FOUNDATIONS ARE TRADITIONAL STRIP FOOTINGS, WITH A MINIMUM WIDTH OF 600mm AND OF SOUND STRUCTURAL CONDITION, BEARING ONTO FIRM CLAY OF ALLOWABLE BEARING CAPACITY 75kN/m2 AND FREE FROM ANY DEFECTS. THE MAIN CONTRACTOR IS TO CHECK THE ADEQUACY OF THE EXISTING FOUNDATIONS.

REV	AMENDMENT	DATE
B	REVERTED TO PREVIOUS REVISION	12.12.24
A	PADSTONE DETAIL ADDED.	21.06.23

PROJECT: KITTS COTTAGE, SPRINGFIELD, BOSTON SPA

CLIENT: MR R. GLEW

DRAWING TITLE: PROPOSED FIRST FLOOR PLAN

PJM DESIGNS

PJM DESIGNS LIMITED
SUITE 6, WEST CHEVIN BUSINESS CENTRE
WEST CHEVIN ROAD
OTLEY, LS21 3HA
07915 214474
info@pjmdesigns.co.uk

DRAWING NUMBER: 23052-02

DATE: 19.05.23 | SCALE: 1:50 @ A3 | STATUS: C | REV: B

CONSTRUCTION NOTES

GENERAL

DO NOT SCALE OFF THIS DRAWING, OR TAKE DIGITAL DIMENSIONS FROM THIS DRAWING.
ALL DIMENSIONS SHOWN TO BE CONFIRMED ON SITE BY THE MAIN CONTRACTOR

THE MAIN CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE EXISTING STRUCTURE AT ALL TIMES DURING ERECTION AND SHALL ALLOW FOR ALL NECESSARY TEMPORARY PROPPING. PROPS TO BE INSTALLED TO MANUFACTURERS GUIDELINES. FOR LARGE OPENINGS AND FOR OPENINGS REQUIRING STEEL GOAL POST FRAMES OR PICTURE FRAMES, PROPS ARE TO BE HORIZONTALLY LACED AND DIAGONALLY BRACED WITH PROPRIETARY SCAFFOLDING FIXINGS.

EXISTING FLOOR SPANS, EXISTING BEAMS AND LOAD BEARING WALLS NOTED ON THE DRAWINGS ARE ASSUMED ONLY, AND ARE BASED ON A VISUAL INSPECTION. STRUCTURAL ELEMENTS ARE TO BE CONFIRMED ON SITE BY THE MAIN CONTRACTOR ONCE THE EXISTING FINISHES HAVE BEEN REMOVED. THIS SHOULD BE CARRIED OUT PRIOR TO STRUCTURAL ALTERATIONS COMMENCING OR ORDERING MATERIALS. THE ENGINEER IS TO BE CONTACTED IF NECESSARY TO APPRAISE THE EXISTING STRUCTURE.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTS DRAWINGS AND THE STRUCTURAL CALCULATIONS PROVIDED BY PJM DESIGNS LIMITED

U.N.O. – DENOTES UNLESS NOTED OTHERWISE

STEELWORK

U.N.O. ALL STEELWORK TO BE MINIMUM GRADE S275 JR OR JOH

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FOUNDATIONS TO BE MADE DEEPER WHERE REQUIRED IF ADJACENT TO EXISTING TREES AS PER NHBC CHAPTER 4.2. WITH THE AGREEMENT OF THE BUILDING CONTROL OFFICER

CONCRETE MIXES

FOOTING & GROUND SLAB	CONCRETE GRADE – C25/30 MINIMUM CEMENT – 320kg/m3 MAXIMUM WATER/CEMENT – 0.55 MAXIMUM AGGREGATE – 20mm

EXISTING STRUCTURE

IT IS ASSUMED THAT THE EXISTING LOAD BEARING WALLS ARE SOLID MASONRY CONSTRUCTION OF MINIMUM 100mm WIDTH, AND OF SOUND STRUCTURAL CONDITION, AND FREE FROM ANY DEFECTS. WHERE NEW STRUCTURAL ELEMENTS ARE SUPPORTED ON EXISTING MASONRY WALLS, THE MAIN CONTRACTOR IS TO CHECK THE ADEQUACY OF THE EXISTING MASONRY.

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REV	AMENDMENT	DATE
.	.	

PROJECT: KITTS COTTAGE, SPRINGFIELD, BOSTON SPA

CLIENT: MR R. GLEW

DRAWING TITLE: CONSTRUCTION NOTES

PJM DESIGNS
PJM DESIGNS LIMITED
SUITE 5, WEST CHEVIN BUSINESS CENTRE
WEST CHEVIN ROAD
OTLEY, LS21 3AA
07815 214474
info@pjmdesigns.co.uk

DRAWING NUMBER:	DATE:	STATUS:
23052–10	19.05.23	C
	SCALE: N.T.S	REV: .

PJM DESIGNS

STRUCTURAL CALCULATIONS

Job Ref:	23052
Project:	Structural alterations & extension
Site Address:	Kitts Cottage, Springfield
Client:	Mr R. Glew
Revision:	
Date:	19.05.2023

PJM Designs Limited | Suite 5, West Chevin Business Centre, West Chevin Road, Otley, LS21 3HA
Tel: 07915 214474 | email: info@pjmdesigns.co.uk

PJM DESIGNS	Job Ref:	23052
	Project:	Structural alterations & extension
	Site Address:	Kitts Cottage, Springfield
	Sheet No.	i
	Revision:	
	Date:	19.05.2023

DEFINITIONS

Engineer:	PJM Designs Limited.
Client:	The individual or organisation that has instructed the design work.
Architect:	The individual or organisation appointed by the client to provide Architectural services (if applicable).
Contractor:	The main contractor in control of the construction phase.

DOCUMENT GUIDANCE

This document is to be read in conjunction with all relevant Architects and Engineers information. All documentation should be fully reviewed by the Contractor prior to commencement on site. Any deviations from the information provided are to be approved in writing by the Engineer.

The information provided in this document has been produced in accordance with the information provided to the Engineer. It is the responsibility of the principal designer to ensure any revised information is issued to the engineer to review and amend the structural information where necessary.

The information provided in this document should be approved by the appointed Building Control Officer prior to carrying out works on site or ordering materials. No liability is accepted for any changes that may be required as a result of work commencing on site prior to being approved.

For projects involving existing structures, a visual inspection will be carried out by the Engineer prior to works commencing. If any areas are covered with internal finishes during the inspection, certain assumptions may be made regarding the existing structure that will require confirmation when building work begins. Any such assumptions will be noted on the drawings provided. To avoid delays on site, it is advisable that existing finishes are removed as early as possible to confirm any assumptions made. Any assumptions e.g. existing floor and roof span directions, load bearing wall locations, existing foundations, or the condition of the existing structure are to be checked by a suitably qualified person on site once finishes have been removed. The engineer is to be contacted if required to review the exposed existing structure.

For new build structures, it is advised that a full ground investigation is carried out. For alterations to existing structures, where load paths are being altered, or additional loading is being applied to the existing foundations, trial holes are to be carried out to inspect the existing ground and existing footings for review by the Engineer and the Building Control Officer.

CDM 2015 REGULATIONS

The Construction Design and Management (CDM) Regulations 2015 apply in full to all construction works. On projects involving more than one contractor (including subcontractors), the client must appoint a Principle Designer and a Principle Contractor.

On projects involving an Architect, unless we are informed in writing, it is assumed the Architect is carrying out the duties of the Principal Designer. On projects not involving an Architect, PJM Designs Limited will be the Principal Designer unless informed in writing otherwise.

The Principal Contractor will be the Main Contractor appointed to carry out the construction works. The principal Contractor must produce a written Construction Phase Plan for the works, and include any method statements where appropriate. Further information on the CDM 2015 Regulations can be seen at http://www.hse.gov.uk/pubns/indg411.pdf

PARTY WALL ACT

If the project involves one of the following, it is likely that the client will need to serve a party wall notice on the adjoining owner:

- New building on or at the boundary of 2 properties
- Work to an existing party wall or party structure
- Excavation near to and below the foundation level of neighbouring buildings

Further information about the Act can be found in the explanatory booklet available to download from: https://www.gov.uk/party-wall-etc-act-1996-guidance

PJM DESIGNS

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Site Address:	Kitts Cottage, Springfield
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HEALTH AND SAFETY

All building work can be hazardous, particularly where large structural elements, deep excavations or alterations to existing structures are involved. Typical hazards related to structural works that are present on the majority of building projects are identified below. Where uncommon hazards are present on certain projects. These are to be identified on the drawings provided.

Hazard	Falls from Height
Risk of occurance	High
Consequences	Death/Serious Injury
Possible Mitigation Measures	Make sure ladders are in good condition, at a 1:4 angle and tied or footed. - Prevent people and materials falling from roofs, gable ends, working platforms and open edges using guardrails, midrails and toeboards. - Make sure fragile roof surfaces are covered, or secure working platforms with guard rails are used on or below the roof.
Hazard	Collapse of Excavations
Risk of occurance	High
Consequences	Death/Serious Injury
Possible Mitigation Measures	Stabilise loose earth with box shutters or raking shores. Restrict persons from accessing trenches deeper than 1.0m, or adjacent to unretained earth. Cover or barrier excavations to prevent people or vehicles from falling in.
Hazard	Underpinning works
Risk of occurance	High
Consequences	Death/Serious Injury, Damage to property
Possible Mitigation Measures	Underpinning is to be be carried out in maximum lengths of 1000mm in a 'hit and miss' sequence to be decided between contractor and engineer prior to work commencing.Full method statement to be provided.
Hazard	Collapse of structures
Risk of occurance	High
Consequences	Death/Serious Injury, Damage to property
Possible Mitigation Measures	Support structural elements (such as walls, beams, chimney breasts, floors and roofs) with props; ensure temporary props and bracing are installed by a competent person. Main contractor to allow for necessary temporary bracing and propping of the structure during erection. Main contractor to liaise with subcontractors where required. Method statements to be provided where necessary.
Hazard	Contact with live electric cables, water or gas supplies
Risk of occurance	High
Consequences	Death/Serious Injury
Possible Mitigation Measures	Utility providers to be consulted for records of any existing services on the site. Ground to be CAT scanned prior to excavations taking place. Any existing services to be marked on the proposed foundation plans and provided to all contractors working on the site.
Hazard	Damage to existing structure when installing steelwork
Risk of occurance	High
Consequences	Death/Serious Injury, Damage to property
Possible Mitigation Measures	Existing masonry to be saw cut prior to wall removals to prevent damage to remaining masonry. Steel beams installed below existing masonry to be preloaded using driven steel folding wedges to reduce the risk of cracking on release of props. Reduce imposed loading as much as possible to structure being propped.

PJM DESIGNS

Job Ref:	23052
Project:	Structural alterations & extension
Site Address:	Kitts Cottage, Springfield
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Hazard	Overloading of structural elements
Risk of occurance	Medium
Consequences	Death/Serious Injury, Damage to property
Possible Mitigation Measures	Maximum allowable imposed loadings to be adhered to. Refer to Design criteria. Main contractor to ensure information is provided to all subcontractors. Storage of materials on site not to exceed these limits.
Hazard	Lifting of structural elements
Risk of occurance	High
Consequences	Death/Serious Injury, Damage to property
Possible Mitigation Measures	Main contractor to ensure suitable equipement is used for lifting structural sections. Steel beams to be spliced where necessary to aid lifting and manouvering
Hazard	Exposure to building dusts
Risk of occurance	High
Consequences	Serious health issues
Possible Mitigation Measures	Prevent dust by using wet cutting and vacuum extraction on tools; use a vacuum cleaner rather than sweeping; use a suitable, well-fitting mask
Hazard	Exposure to asbestos
Risk of occurance	High
Consequences	Serious health issues
Possible Mitigation Measures	Asbestos survey to be carried out prior to opening up of existing finishes. Contractor to liaise with asbestos consultant for the safe removal of any affected areas.
Hazard	Electricity
Risk of occurance	High
Consequences	Death/Serious Injury.
Possible Mitigation Measures	Turn the electricity supply and other services off before drilling into walls. - Do not use excavators or power tools near suspected buried services
Hazard	Protecting members of the public
Risk of occurance	High
Consequences	Death/Serious Injury.
Possible Mitigation Measures	Secure the site; net scaffolds and use rubbish chutes.

PJM DESIGNS

Job Ref:	23052
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DESIGN CRITERIA

Use of Structure	Dwelling
Codes of Practice	BS EN 1990: Eurocode: Basis of Structural Design BS EN 1991: Eurocode 1: Actions on Structures BS EN 1992: Eurocode 2: Design of Concrete Structures BS EN 1993: Eurocode 3: Design of Steel Structures BS EN 1995: Eurocode 5: Design of Timber Structures BS EN 1996: Eurocode 6: Design of Masonry Structures BS EN 1997: Eurocode 7: Geotechnical Design
Allowable Imposed Loadings	Roof 0.6 kN/m^2 Floors 1.5 kN/m^2
Wind Loading	Refer to seperate wind calcuations
Steelwork	Structural Steelwork Grade S275 JR or JOH (Unless noted ortherwise on drawings)
Masonry	Load Bearing Blockwork 7.3 N/mm^2 (Unless noted ortherwise on drawings)
Timber	Grade C16 or C24 (refer to drawings)
Concrete	Mass Concrete Grade C25/30 (Unless noted ortherwise on drawings)
Ground Conditions	TBC Design ground bearing capacity 75 kN/m^2
Other	The member spans in these calculations are for design purposes only. Actual lengths must be obtained by the Contractor or Fabricator from accurate site measurements.

PJM DESIGNS

Job Ref:	23052
Project:	Structural alterations & extension
Site Address:	Kitts Cottage, Springfield
Sheet No.	2
Revision:	
Date:	19.05.2023

DESIGN LOADINGS

DEAD LOADS

Tiled Roof	1.2	kN/m^2
Flat Roof	0.6	kN/m^2
Timber Floor	0.5	kN/m^2
Timber Partition	0.5	kN/m^2
Block (100mm)	1.8	kN/m^2
Brick (100mm)	2.2	kN/m^2
Stone (200mm)	5.2	kN/m^2
Plaster	0.3	kN/m^2
Render	0.5	kN/m^2
Concrete	25.0	kN/m^3

LIVE LOADS

Roof	0.6	kN/m^2
Floor	1.5	kN/m^2

PJM DESIGNS

Job Ref:	23052
Project:	Structural alterations & extension
Site Address:	Kitts Cottage, Springfield
Sheet No.	3
Revision:	
Date:	19.05.2023

BEAM LOADINGS B1

Span = 2.52m

UNIFORM LOADS

Element	Load (kN/m²) D	Load (kN/m²) L	B/H (m)	Load (kN/m) D	Load (kN/m) L
Tiled Roof	1.2	0.6	1.0	1.20	0.60
Flat Roof	0.6	0.6			
Timber Floor	0.5	1.5	1.0	0.50	1.50
Timber Partition	0.5				
Block (100mm)	1.8				
Stone (200mm)	5.2		3.1	16.12	
Plaster	0.3		3.1	0.93	
Render	0.5				
TOTAL				**18.75**	**2.10**

PARTIAL LOADS

Element	Load (kN/m²) D	Load (kN/m²) L	B/H (m)	Load (kN/m) D	Load (kN/m) L	X1 (m)	X2 (m)
Tiled Roof	1.2	0.6					
Flat Roof	0.6	0.6					
Timber Floor	0.5	1.5					
Timber Partition	0.5						
Block (100mm)	1.8						
Brick (100mm)	2.2						
Plaster	0.3						
Render	0.5						

POINT LOADS

Element	Load (kN) D	Load (kN) L	X (m)
Beam B3	17.7	1.1	1.7

VARIABLE

	Load (kN/m²) D	Load (kN/m²) L	B/H (m)	Load (kN/m) D (max)	Load (kN/m) L (max)	X1 (m) Max	X2 (m) Min
Stone (200mm)	5.2		1.20	6.24		0.0	2.52

PJM DESIGNS

Job Ref:	23052
Project:	Structural alterations & extension
Site Address:	Kitts Cottage, Springfield
Sheet No.	4
Revision:	
Date:	19.05.2023

BEAM LOADINGS B2

Span = 2.2m

UNIFORM LOADS

Element	Load (kN/m²) D	Load (kN/m²) L	B/H (m)	Load (kN/m) D	Load (kN/m) L
Tiled Roof	1.2	0.6	1.9	2.28	1.14
Flat Roof	0.6	0.6			
Timber Floor	0.5	1.5	1.5	0.75	2.25
Timber Partition	0.5				
Block (100mm)	1.8				
Stone (200mm)	5.2		3.1	16.12	
Plaster	0.3		3.1	0.93	
Render	0.5				
TOTAL				**20.08**	**3.39**

PARTIAL LOADS

Element	Load (kN/m²) D	Load (kN/m²) L	B/H (m)	Load (kN/m) D	Load (kN/m) L	X1 (m)	X2 (m)
Tiled Roof	1.2	0.6					
Flat Roof	0.6	0.6					
Timber Floor	0.5	1.5					
Timber Partition	0.5						
Block (100mm)	1.8						
Brick (100mm)	2.2						
Plaster	0.3						
Render	0.5						

POINT LOADS

Element	Load (kN) D	Load (kN) L	X (m)

VARIABLE

	Load (kN/m²) D	Load (kN/m²) L	B/H (m)	Load (kN/m) D (max)	Load (kN/m) L (max)	X1 (m) Max	X2 (m) Min
Stone (200mm)	5.2		1.20	6.24		0.0	2.2

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BEAM LOADINGS B3

Span = 3.5m

UNIFORM LOADS

Element	Load (kN/m²) D	Load (kN/m²) L	B/H (m)	Load (kN/m) D	Load (kN/m) L
Tiled Roof	1.2	0.6	1.0	1.20	0.60
Flat Roof	0.6	0.6			
Timber Floor	0.5	1.5			
Timber Partition	0.5				
Block (100mm)	1.8				
Stone (200mm)	5.2				
Plaster	0.3				
Render	0.5				
TOTAL				**1.20**	**0.60**

PARTIAL LOADS

Element	Load (kN/m²) D	Load (kN/m²) L	B/H (m)	Load (kN/m) D	Load (kN/m) L	X1 (m)	X2 (m)
Tiled Roof	1.2	0.6					
Flat Roof	0.6	0.6					
Timber Floor	0.5	1.5					
Timber Partition	0.5						
Stone (200mm)	5.2		1.10	5.72		0.00	1.86
Stone (200mm)	5.2		1.20	6.24		1.86	3.50
Plaster	0.3						
Render	0.5						

POINT LOADS

Element	Load (kN) D	Load (kN) L	X (m)

VARIABLE

	Load (kN/m²) D	Load (kN/m²) L	B/H (m)	Load (kN/m) D (max)	Load (kN/m) L (max)	X1 (m)	X2 (m)
Tri Load						**Min**	**Max**
Stone (200mm)	5.2		1.00	5.20		0.0	1.86
Tri Load						**Max**	**Min**
Stone (200mm)	5.2		0.9	4.68		1.86	3.5

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BEAM LOADINGS PURLIN Span = 1.9m

UNIFORM LOADS

Element	Load (kN/m²) D	Load (kN/m²) L	B/H (m)	Load (kN/m) D	Load (kN/m) L
Tiled Roof	1.2	0.6	2.4	2.88	1.44
Flat Roof	0.6	0.6			
Timber Floor	0.5	1.5			
Timber Partition	0.5				
Block (100mm)	1.8				
Stone (200mm)	5.2				
Plaster	0.3				
Render	0.5				
TOTAL				**2.88**	**1.44**

PARTIAL LOADS

Element	Load (kN/m²) D	Load (kN/m²) L	B/H (m)	Load (kN/m) D	Load (kN/m) L	X1 (m)	X2 (m)
Tiled Roof	1.2	0.6					
Flat Roof	0.6	0.6					
Timber Floor	0.5	1.5					
Timber Partition	0.5						
Block (100mm)	1.8						
Brick (100mm)	2.2						
Plaster	0.3						
Render	0.5						

POINT LOADS

Element	Load (kN) D	Load (kN) L	X (m)

VARIABLE

	Load (kN/m²) D	Load (kN/m²) L	B/H (m)	Load (kN/m) D (max)	Load (kN/m) L (max)	X1 (m)	X2 (m)

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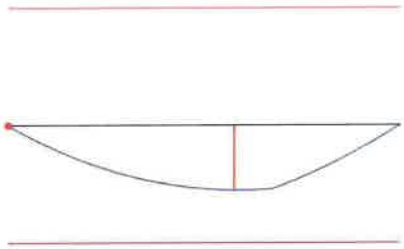
Axial with Moments (Member)
Beam B1: Span 1
Span 1 in Load Case 1

Member Loading and Member Forces

Loading Combination : 1 UT + 1.35 D1 + 1.5 L1

```
D1 UDLW -000.298                ( kN/m )
D1 UDLY -018.750                ( kN/m )
L1 UDLY -002.100                ( kN/m )
D1 PY   -017.700 1.700          ( kN,m )
L1 PY   -001.100 1.700          ( kN,m )
D1 PTRY -006.240 0.000 2.520 +000.000
```



Member Forces in Load Case 1 and Maximum Deflection from Load Case 3

Span No.	Axial Force (kN)	Shear Force (kN)		Bending Moment (kN.m)		Maximum Moment (kN.m @ m)	Maximum Deflection (mm @ m)
		End1	End2	End1	End2		
1	0.00C	51.76	-57.14	0.00	0.00	37.57 @ 1.485	4.90 @ 1.300

Classification and Effective Area (EN 1993: 2006)

Section (30.03 kg/m)	152x152 UC 30 [S 275]		
Class = Fn(b/T,d/t,f_y,N,M_y,M_z)	8.13, 19.02, 275, 0, 37.57, 0	(Axial: Non-Slender)	Class 1
Auto Design Load Cases	1		

Shear Capacity Check

$V_{y.Ed}/V_{pl.y.Rd}$	57.142 / 183.454 =	0.311	OK

Moment Capacity Check M.c.y.Rd

$V_{y.Ed}/V_{pl.y.Rd}$	1.083 / 183.454 =	0.006	Low Shear
$M_{c.y.Rd} = f_y.W_{pl.y}/\gamma_{M0}$	275 x 247.7/1	68.118 kN.m	
$M_{y.Ed}/M_{c.y.Rd}$	37.552 / 68.118 =	0.551	OK

Equivalent Uniform Moment Factor C1

C_1= fn(M_1, M_2, M_o, ψ,μ)	0.0, 0.1, 36.7, 0.845, 300.000	1.127	Uniform

Lateral Buckling Check M.b.Rd

Le = 1.0 L	1 x 2.52 =	2.52 m	
M_{cr}= Fn(C_1,L_e,I_z,I_t,I_w,E)	1.127, 2.520, 561.4, 10.52, 0.03075, 210000	207.668 kN.m	
λ_{LT}= $\sqrt{}$ W.f_y/M_{cr}	$\sqrt{}$ 247.7 x 275 / 207.668	0.573	
γ_{LT}= Fn(λ_{LT}, ϕ_{LT}, β, λ_{LT0})	0.573, 0.652, 0.750, 0.400	0.929	Curve b
γ_{LT}.mod = Fn(γ_{LT}.λ_{LT},k_c,f)	0.929, 0.573, 0.942, 0.974	0.954	6.3.2.3
$M_{b.Rd} = \chi$ $W_{pl.y}.f_y \leq M_{c.y.Rd}$	0.954 x 247.7 x 275 $\leq$ 68.118 =	64.989 kN.m	
$M_{y.Ed}/M_{b.Rd}$	37.569 / 64.989	0.578	OK

Deflection Check - Load Case 3

Deflection Limits (Existing Masonry)	In-span $\delta \leq$ 2520/500 = 5 mm Live (Case 2)	0.38 mm	OK
	In-span $\delta \leq$ 2520/360 = 7 mm D+L (Case 3)	4.9 mm	OK

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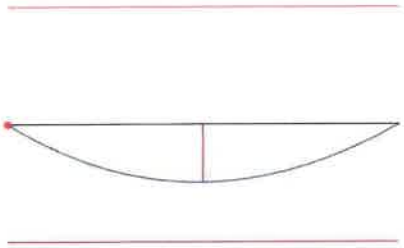
Axial with Moments (Member)
Beam B2: Span 1
Span 1 in Load Case 1

Member Loading and Member Forces

Loading Combination : 1 UT + 1.35 D1 + 1.5 L1

```
D1 UDLW -000.228                ( kN/m )
D1 UDLY -020.080                ( kN/m )
L1 UDLY -003.390                ( kN/m )
D1 PTRY -006.240 0.000 2.200 +000.000
```



Member Forces in Load Case 1 and Maximum Deflection from Load Case 3							
Span No.	Axial Force (kN)	Shear Force (kN)		Bending Moment (kN.m)		Maximum Moment (kN.m @ m)	Maximum Deflection (mm @ m)
		End1	End2	End1	End2		
1	0.00C	41.93	-38.84	0.00	0.00	22.22 @ 1.089	3.11 @ 1.089

Classification and Effective Area (EN 1993: 2006)

Section (22.95 kg/m)	152x152 UC 23 [S 275]		
Class = Fn(b/T,d/t,f_y,N,M_y,M_z)	11.19, 21.31, 275, 0, 22.22, 0	(Axial: Non-Slender)	Class 3
Effective Properties	Area=29.24 cm², $W_{pl.y}$=179.39(182) cm³, $W_{pl.z}$=76.18(80.2) cm³		
Auto Design Load Cases	1		

Shear Capacity Check

$V_{y.Ed}/V_{pl.y.Rd}$	41.928 / 158.276 =	0.265	OK

Moment Capacity Check M.c.y.Rd

$V_{y.Ed}/V_{pl.y.Rd}$	0.777 / 158.276 =	0.005	Low Shear
$M_{c.y.Rd} = f_y.W_{el.y}/\gamma_{M0}$	275 x 164.13/1 =	45.136 kN.m	
$M_{y.Ed}/M_{c.y.Rd}$	22.21 / 45.136 =	0.492	OK

Equivalent Uniform Moment Factor C1

C_1= fn(M_1, M_2, M_o, ψ,μ)	0.0, 0.0, 22.2, 1.000, 300.000	1.127	Uniform

Lateral Buckling Check M.b.Rd

Le = 1.0 L	1 x 2.2 =	2.2 m	
M_{cr}= Fn(C_1,L_e,I_z,I_t,I_w,E)	1.127, 2.200, 400.8, 4.635, 0.02118, 210000	167.122 kN.m	
λ_{LT}= √ $W_{.el.y}/M_{cr}$	√ 164.1 x 275 / 167.122	0.520	
γ_{LT}= Fn(λ_{LT}, ϕ_{LT}, β, λ_{LT0})	0.520, 0.622, 0.750, 0.400	0.952	Curve b
γ_{LT}.mod = Fn(γ_{LT}.λ_{LT},k_c,f)	0.952, 0.520, 0.942, 0.976	0.976	6.3.2.3
$M_{b.Rd} = \chi$ $W_{el.y}.f_y \leq M_{c.y.Rd}$	0.976 x 164.1 x 275 ≤ 45.136 =	44.047 kN.m	
$M_{y.Ed}/M_{b.Rd}$	22.217 / 44.047	0.504	OK

Deflection Check - Load Case 3

Deflection Limits (Existing Masonry)	In-span $\delta \leq$ 2200/500 = 4.4 mm Live (Case 2)	0.39 mm	OK
	In-span $\delta \leq$ 2200/360 = 6.1 mm D+L (Case 3)	3.11 mm	OK

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Axial with Moments (Member)
Beam B3: Span 1
Span 1 in Load Case 1

Member Loading and Member Forces

Loading Combination : 1 UT + 1.35 D1 + 1.5 L1

```
D1 UDLW -000.298                ( kN/m )
D1 UDLY -001.200                ( kN/m )
L1 UDLY -000.600                ( kN/m )
D1 PDLY -010.639 0.000 1.860 (kN,m,m)
D1 PDLY -010.234 1.860 3.500 (kN,m,m)
D1 PTRY +000.000 0.000 1.860 -005.200
D1 PTRY -004.680 1.860 3.500 +000.000
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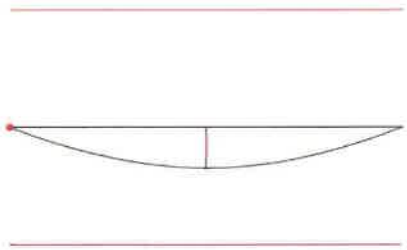

Member Forces in Load Case 1 and Maximum Deflection from Load Case 3							
Span No.	Axial Force (kN)	Shear Force (kN)		Bending Moment (kN.m)		Maximum Moment (kN.m @ m)	Maximum Deflection (mm @ m)
		End1	End2	End1	End2		
1	0.00C	24.73	-25.38	0.00	0.00	23.61 @ 1.750	5.97 @ 1.750

Classification and Effective Area (EN 1993: 2006)

Section (30.03 kg/m)	152x152 UC 30 [S 275]		
Class = Fn(b/T,d/t,f_y,N,M_y,M_z)	8.13, 19.02, 275, 0, 23.61, 0	(Axial: Non-Slender)	Class 1
Auto Design Load Cases	1		

Shear Capacity Check

$V_{y.Ed}/V_{pl.y.Rd}$	25.386 / 183.454 =	0.138	OK

Moment Capacity Check M.c.y.Rd

$V_{y.Ed}/V_{pl.y.Rd}$	0.327 / 183.454 =	0.002	Low Shear
$M_{c.y.Rd} = f_y.W_{pl.y}/\gamma_{M0}$	275 x 247.7/1	68.118 kN.m	
$M_{y.Ed}/M_{c.y.Rd}$	23.61 / 68.118 =	0.347	OK

Equivalent Uniform Moment Factor C1

C_1= fn(M_1, M_2, M_o, ψ,μ)	0.0, 0.0, 23.6, 0.759, 300.000	1.127	Uniform

Lateral Buckling Check M.b.Rd

Le = 1.0 L	1 x 3.5 =	3.5 m	
M_{cr}= Fn(C_1,L_e,I_z,I_t,I_w,E)	1.127, 3.500, 561.4, 10.52, 0.03075, 210000	128.552 kN.m	
λ_{LT}= $\sqrt{}$ W.f_y/M_{cr}	$\sqrt{}$ 247.7 x 275 / 128.552	0.728	
γ_{LT}= Fn(λ_{LT}, ϕ_{LT}, β, λ_{LT0})	0.728, 0.754, 0.750, 0.400	0.855	Curve b
γ_{LT}.mod = Fn(γ_{LT}.λ_{LT},k_c,f)	0.855, 0.728, 0.942, 0.971	0.881	6.3.2.3
$M_{b.Rd} = \chi$ $W_{pl.y}.f_y \leq M_{c.y.Rd}$	0.881 x 247.7 x 275 $\leq$ 68.118 =	59.996 kN.m	
$M_{y.Ed}/M_{b.Rd}$	23.61 / 59.996	0.394	OK

Deflection Check - Load Case 3

Deflection Limits (Existing Masonry)	In-span $\delta \leq$ 3500/500 = 7 mm Live (Case 2)	0.32 mm	OK
	In-span $\delta \leq$ 3500/360 = 9.7 mm D+L (Case 3)	5.97 mm	OK

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MasterKey : Timber Design
Axial Load With Moment Design to BS EN 1995-1-1:2004 + A1:2008
Purlin: Span 1

Summary Design Data

Eurocode National Annex	Using UK values
Strength class code	BS EN 338:2009
Design Cases Covered	1-3
Deflection Cases Covered	1.0 L1 + 1.0 L2, 1.0 D1 + 1.0 D2 + 1.0 L1 + 1.0 L2
Section Size	b = 72, h = 195, 195x72 in Strength Class C24
Section Properties (cm²,cm³,cm)	Area 140.4, $W_{el.y}$ 456.3, $W_{el.z}$ 168.5, i_y 5.63, i_z 2.08
Specification	1 : Internal use in continuously heated building Long Term loading
Integrated Design Critical Case	: All Spans Loaded (Ultimate: 1.35D1+1.35D2+1.5L1+1.5L2)
Member Details	N_{Ed} = 0.0 kN, L = 1.9 m, L_y = 1.9 m, L_z = 1.9 m, $L_{cr.y}$ = 1.0 L_y, $L_{cr.z}$ = 1.0 L_z Bearing length 75, Distance to Bearing 150 mm

Grade and Admissible Stresses (Strength Class C24)

$f_{m.y.d} = K_{mod}.K_{hy}.K_{sys}.f_{m.k}/\gamma_m$	0.70 x 1.00 x 1.00 x 24.00/1.3	12.92 N/mm²	
$f_{m.z.d} = K_{mod}.K_{hz}.K_{sys}.f_{m.k}/\gamma_m$	0.70 x 1.16 x 1.00 x 24.00/1.3	14.97 N/mm²	
$f_{c.90.d} = K_{mod}.K_{c.90}.K_{sys}.f_{c.90.k}/\gamma_m$	0.70 x 1.50 x 1.00 x 2.50/1.3	2.02 N/mm²	
$f_{v.d} = K_{mod}.K_{sys}.f_{v.k}/\gamma_m$	0.70 x 1.00 x 4.00/1.3	2.15 N/mm²	
E_{mean}	Instantaneous Deflection	11000 N/mm²	Deflection

Axial Load with Moments Check

Critical Design Location	X = 0.950		
$\sigma_{m.y.d} = M_y/W_{el.y}$	2.728 / 456.3 ≤ 12.92	5.98 N/mm²	OK
$U_{m.y} = \sigma_{m.y.d}/f_{m.y.d}$	5.980/12.923	0.463	OK
$U_{m.y}$	0.463	0.463	OK
$L_{eff}=L.K_{LTB}$	1.900x1.000	1.900	
$\sigma_{mcrit}=\pi\sqrt{(E_{05}.I_z.G_{05}.J)/(L_{eff}.W_y)}$	$\pi\sqrt{(7.40x606.53x0.46x1862.64)/(1.900x456.30)}$	71.383	
$\lambda_{r,elm}=\sqrt{(f_{mk}/\sigma_{mcrit})}$	√(24.00/71.38)	0.580	
k_{Crit}	$\lambda_{r,elm}$ < 0.75	1.000	
$\sigma_{m.y.d}/(k_{Crit}*f_{m.y.d})$	5.980/(1.000x12.923)	0.463	OK

Shear and Bearing Check

Critical Design Location	X = 0.000		
τ_n= 1.5 $V_{y.Ed}$ / Area / k_{cr}	1.5 x 5.746 / 140.4 / 0.67 ≤ 2.15	0.92 N/mm²	OK
$\sigma_{cax} = V_{y.Ed}$ / (b.l_y)	5.746 / (72 x 75) ≤ 2.02	1.06 N/mm²	OK

Deflection Check

Critical Load Case 005 : All Spans Loaded (Serviceability: 1.0D1+1.0D2+1.0L1+1.0L2)

$\delta = \delta_m + \delta_s$	In-span 1.74 ≤ L/250	1.74 mm	OK