

CONTAMINATED LAND REMEDIATION STRATEGY AND VERIFICATION PLAN

Site Address

Land Adjacent 35 Hilton Street
Bury
BL9 6LT

Client

Rizwan Suleman

Report Reference

REM-2025-000028

Prepared by

STM Environmental Consultants Ltd

Date

03/11/2025



**CONSULTING GEO-ENVIRONMENTAL
ENGINEERS AND SCIENTISTS**

Phase 1 Contaminated Land Desk Studies, Geo-Environmental Site Investigations, Environmental Due Diligence, Flood Risk Assessments, Surface Water Management Strategies (SuDS), Ecology, Noise and Air Quality Assessments, Environmental Management Systems, GIS & Data Management Systems

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2. DOCUMENT CONTROL



CONTAMINATED LAND RISK ASSESSMENT Remediation Strategy and Verification Plan



Site Address	Land Adjacent 35 Hilton Street Bury BL9 6LT
Site Coordinates	380940, 411745
Prepared for	Rizwan Suleman
Version No	1.0
STM Reference	REM-2025-000028
Date	03/11/2025
Report Author	Rima Hassan (BSc) Environmental Consultant
Draft Report Checked by	Rebecca Andrew (MSci) Environmental Consultant
Report Authorised By	Simon Makoni (BSc, MSc Env. Eng.) Director

3. DISCLAIMER

This report and any information or advice which it contains, is provided by STM Environmental Consultants Ltd (STM) and can only be used and relied upon by Rizwan Suleman (Client). Any party using or placing reliance upon any information contained in this report, do so at their own risk.

STM has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant when undertaking works of this nature. However, STM gives no warranty, representation or assurance as to the accuracy or completeness of any information, assessments or evaluations presented within this report.

It should be noted that this report has been produced for environmental purposes only. It should not in any way be construed to be or used to replace a geotechnical survey, structural survey, asbestos survey, buried services survey, unexploded ordnance survey or Invasive Plant Survey.

This report excludes consideration of potential hazards arising from any activities at the Site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities.

4. INTRODUCTION

STM Environmental Consultants Ltd. (STM) were commissioned by Rizwan Suleman (Client) to undertake a prepare a Remediation Strategy and Verification Plan for a site located at Land Adjacent 35 Hilton Street, Bury, BL9 6LT (Site).

This report has been produced to the discharge of Condition 5 attached to planning permission 69459 for the erection of 2no. terraced dwellings. The decision notice and proposed development plans are available in [Appendix 1](#) and [Appendix 2](#) respectively.

Condition 5 states as follows:

*“Where remediation/protection measures is/are required, a detailed **Remediation Strategy** shall be submitted to, and approved in writing by, the Local Planning Authority.”*

This document sets out the Remediation Strategy and Verification Plan for the site. It should be read in combination with the Phase 1 Desk Study Report (Ref: PH1-2025-000084) which was produced for the site by STM in July 2025 and the Coal Mining Risk Assessment by the Mining Remediation Authority in July 2025.

5. BACKGROUND

5.1 Summary of Phase 1 Desk Study

The Phase 1 Desk Study produced for the site found that the site has been subject to potential onsite sources of contamination were identified as a Coal Mining Area and potential Made Ground. No offsite PCLUs were identified in the search

The qualitative risk assessment identified potentially significant potential pollutant linkages with respect to human health receptors. Therefore, the Phase 1 recommended that a further assessment of the risks associated with potential Coal Mine gases at the site be carried out. Depending on the findings of the Coal Mining Risk Assessment, a Phase 2 Intrusive Investigation may be required.

5.1.1 Summary of Coal Mining Risk Assessment

The Coal Mining Risk Assessment (CMRA) review of geological, mining, and borehole records found no evidence of shallow mine workings, mine entries, or surface hazards within 100m. However, the report assessed a Medium risk from potential mine gas emissions and spontaneous combustion in local coal seams, requiring precautionary measures during groundworks.

6. REMEDIATION STRATEGY

In light of the medium risk of mine gas emissions identified in the CMRA, the Client has opted to implement ground gas protection measures, in lieu of carrying out a Phase 2 intrusive investigation.

This section outlines the remedial strategy that will be implemented as part of the development.

6.1 Objectives

The objective of the Remediation Strategy is to break the identified PPL thus ensuring that the site is suitable for the proposed end use.

6.2 Remediation Approach

In order for land to be considered contaminated, there must be a contaminant (or source), a receptor and a pathway (via which the contaminant can reach the receptor) present at the site. When these three components are identified at a site, a *pollutant linkage* is said to exist.

Pollutant Linkage (PL) = Contaminant → Pathway → Receptor

The PPL can be broken through either the removal of the Source, the Pathway or the Receptor.

The chosen option is to remove the pathway through the incorporation of gas protection measures into the building design. Consequently, all proposed new buildings at the site will require ground gas and vapour protection measures to ensure an adequate protection is provided.

6.3 Remediation Methodology

6.3.1 Installation of Gas Protection Measures

Given that ground gas monitoring has not been undertaken, the site has been assigned a conservative classification of Characteristic Situation 2. Gas protection measures will be incorporated into the buildings in order to mitigate potential ground gas and vapour risks.

The proposed buildings are classified as building type A meaning that a minimum gas protection score of 3.5 must be achieved in order to satisfy the requirements of a Characteristic Gas Situation 2 as outlined in BS8485.

The specific measures that will be implemented using a cast in situ monolithic reinforced ground bearing raft with minimal penetrations are summarised in Table 1 below.

Table 1: Cast in situ monolithic reinforced ground bearing raft

Element	BS8485 Solution Score	Type
Cast in situ monolithic reinforced ground bearing raft with minimal penetrations.	1.5	Structural barrier
Gas and vapour resistant membrane	2	Gas Membrane in accordance with BS8485
TOTAL SCORE ACHIEVED	3.5	

The gas protection membrane will have a minimum thickness of 0.4mm and shall have documentation to show that it is sufficiently impervious to gases. The membrane will be laid across the internal footprint of the building with all laps sealed. The membrane will then be sealed to the perimeter external walls.

In accordance with CIRIA 735, the gas protection membrane will be installed by appropriately certified and experienced installers and will be verified by a 3rd party independent verifier.

A foundation section drawing showing the gas protection measures that will be used is presented in [Appendix 3](#). The Client has confirmed that the gas protection membrane to be used will be the Visqueen Gas Barrier, or an equivalent approved product. The full product specification is presented in [Appendix 3](#).

6.4 Health and Safety

The following measures will be undertaken as a minimum for the protection of the health and safety of site workers:

- Provision of appropriate Personal Protective Equipment (PPE) including protective clothing, footwear, gloves and dust masks to all groundworkers on-site. These should not be removed from site, and advice should be given on when and how they are to be used;
- Minimising the amount of dust and mud generated on-site;
- Good practices relating to personal hygiene (i.e. washing and changing procedures) should be adhered to on-site, i.e. food and drink should only be consumed within designated areas on the site and smoking should be prohibited in all working areas.
- Provision of welfare facilities on the site;
- Health and Safety Inductions and daily briefings.

All site works will be carried out in accordance with Health and Safety Executive regulations and guidelines and the Contractor's Construction Health and Safety Plan. Particular should be made to the Health and Safety Executive (HSE) document "Protection of Workers and the General Public during the Development of Contaminated Land".

7. VERIFICATION STRATEGY

A Remediation Verification Report written by a competent environmental consultant will be submitted and will provide a complete record of the works that have been carried out on the site. The verification reports will as a minimum contain the following:

- Details of the installation including a detailed specification of membranes installed at the site and copies of receipts and certification of installers
- Detailed photographic evidence of installation of the gas membrane (photographs of both sides of membrane, upper surface and lower to identify the type, quality of seals/joints between rolls of membrane to ensure a 150mm overlap, presence of double-sided butyl tape and girth jointing tape etc).
- An updated risk assessment for the site, taking into account the works that have been implemented and any uncertainties and limitations that were encountered.

7.1 Conclusions

The proposed gas protection measures exceed the recommended score for the CGS2 scenario. As such it is considered that the proposed remedial measures will be sufficient to break the identified PPL and render the site suitable for the proposed use.

7.2 Information gaps and uncertainties

Assumptions have been made regarding the nature and scale of the activities that took place on the site and the types of potential contaminants that may have resulted. These assumptions will need to be reviewed along with the Conceptual Site Model should further information that has not previously been taken into account come to light.

8. APPENDICES

8.1 Appendix 1 – Planning Permission Decision Notice

NOTICE OF PLANNING PERMISSION

Town and Country Planning Act 1990 Town and Country Planning (Development Management Procedure) (England) Order 2015

To:

Mr Rashid Mehmood
I. Planning Services
2A Cook Street
Bury
BL9 0RP

On Behalf Of:

Mr Rizman Suleman
124 Walmersley Road
Bury
BL9 6DX

PART 1 - Particulars of Application

Application Number: 69459

Date of Registration: 17/04/2023

Proposal:

Erection of 2 no. terraced dwellings

Location:

Land adjacent to 35 Hilton Street, Bury, BL9 6LT

PART 2 - Particulars of Decision

Bury Metropolitan Borough Council hereby give notice in pursuance of the provisions of the Town and Country Planning Act 1990 that permission has been **GRANTED** for the carrying out of the development referred to in Part 1 hereof in accordance with the application and plans submitted subject to the following conditions:-

- 1 The development must be begun not later than three years beginning with the date of this permission.
Reason. Required to be imposed by Section 91 Town & Country Planning Act 1990.
- 2 This decision relates to revised drawings numbered 5a/G, 5F, 6F, 7F and 9F and the development shall not be carried out except in accordance with the drawings hereby approved.
Reason. For the avoidance of doubt and to ensure a satisfactory standard of design pursuant to the policies of the Bury Unitary Development Plan listed.
- 3 Details of the materials to be used in the external elevations, and boundaries, together with details of their manufacturer, type/colour and size, shall be submitted to and approved in writing by the Local Planning Authority before the development is commenced. Only the approved materials/bricks shall be used for the construction of the development.
Reason. No material samples have been submitted and are required in the interests of visual amenity and to ensure a satisfactory development pursuant to UDP Policy EN1/1 Visual Amenity.
- 4 Notwithstanding the terms of the Town and Country Planning (General Permitted Development) (England) Order 2015, as subsequently amended, no development

shall be carried out within the terms of Classes A to G of Part 1 and Class A of Part 2 of Schedule 2 of the Order, without the submission and approval of a relevant planning application.

Reason. To ensure that future inappropriate alterations or extensions do not occur pursuant to policies of the Unitary Development Plan listed.

- 5 No development shall commence unless and until:-
- A contaminated land Preliminary Risk Assessment report to assess the actual/potential contamination and/or ground gas/landfill gas risks at the site shall be submitted to, and approved in writing by, the Local Planning Authority;
 - Where actual/potential contamination and/or ground gas/landfill gas risks have been identified, detailed site investigation and suitable risk assessment shall be submitted to, and approved in writing by the Local Planning Authority;
 - Where remediation/protection measures is/are required, a detailed Remediation Strategy shall be submitted to, and approved in writing by, the Local Planning Authority.

Reason. The scheme does not provide full details of the actual contamination and subsequent remediation, which is required to secure the satisfactory development of the site in terms of human health, controlled waters, ground gas and the wider environment and pursuant to National Planning Policy Framework Section 15 - Conserving and enhancing the natural environment.

- 6 Following the provisions of Condition 5 of this planning permission, where remediation is required, the approved Remediation Strategy must be carried out to the satisfaction of the Local Planning Authority within agreed timescales; and A Site Verification Report detailing the actions taken and conclusions at each stage of the remediation works, including substantiating evidence, shall be submitted to and approved in writing by the Local Planning Authority prior to the development being brought into use.

Reason. To secure the satisfactory development of the site in terms of human health, controlled waters and the wider environment and pursuant to National Planning Policy Framework Section 15 - Conserving and enhancing the natural environment.

- 7 No development shall commence unless and until surface water drainage proposals have been submitted to and approved in writing by the Local Planning Authority. The scheme should be in accordance with the submitted Surface Water Sustainable Drainage Assessment and must be based on the hierarchy of drainage options in the National Planning Practice Guidance and be designed in accordance with the Non-Statutory Technical Standards for Sustainable Drainage Systems (March 2015). This must include assessment of potential SuDS options for surface water drainage with appropriate calculations and test results to support the chosen solution. Details of proposed maintenance arrangements should also be provided. The approved scheme only shall be implemented prior to first occupation and thereafter maintained.

Reason. The current application contains insufficient information regarding the proposed drainage scheme to fully assess the impact. To promote sustainable development and reduce flood risk pursuant to Unitary Development Plan Policies EN5/1- New Development and Flood Risk, EN7/3 - Water Pollution and EN7/5 - Waste Water Management and chapter 14 - Meeting the challenge of climate change, flooding and coastal change of the NPPF.

- 8 A landscaping scheme shall be submitted to, and approved by the Local Planning Authority prior to the commencement of the development. The approved scheme shall thereafter be implemented not later than 12 months from the date the dwellings are first occupied or within the first available planting season, and any trees or

shrubs removed, dying or becoming severely damaged or becoming severely diseased within five years of planting shall be replaced by trees or shrubs of a similar size or species to those originally required to be planted.

Reason. To secure the satisfactory development of the site and in the interests of visual amenity pursuant to Policies H2/2 - The Layout of New Residential Development, EN1/2 - Townscape and Built Design.

- 9 Notwithstanding the details indicated on the approved plans, no development shall commence unless and until full details of the following have been submitted to the Local Planning Authority:
1. Foundation details for the dwellings and boundary walls confirming no encroachment under the adjacent adopted highway;
 2. Surface water drainage details confirming no projection into or discharge onto the adjacent adopted highway;
 3. Highway remedial works around the perimeter of the site to 'expose/reintroduce' edgings at the back of the footway to demarcate the limits of the adopted highway and following removal of the affected pedestrian guardrailing, to a scope and specification to be agreed;
 4. Treatment of the area between the proposed edgings and the side/rear gable and garden walls and adjacent to the existing street lighting column.

The details subsequently approved shall be implemented to a programme to be agreed with and to the satisfaction of the Local Planning Authority.

Reason. To secure the satisfactory development of the site in terms of highway safety, ensure good highway design, ensure the intervisibility of the users of the site and the adjacent highways and maintain the integrity of the adopted highway, all in the interests of highway safety.

- 10 No development shall commence unless and until a 'Construction Traffic Management Plan' (CTMP) has been submitted to and agreed in writing with the Local Planning Authority and shall provide the following:
1. Dilapidation survey of the footways and carriageways leading to and abutting the site in the event that subsequent remedial works are required following construction of, and statutory undertakers connection to, the development;
 2. Access route for construction vehicles from the Key Route Network;
 3. Access point(s) to the site, including all temporary works and measures required to protect highway users and facilitate access;
 4. Hours of operation and type and number of vehicle movements that can be accommodated on the adjacent residential streets;
 5. If proposed, site hoarding position clear of the visibility splay indicated on approved plan reference SHT 5a;
 6. A scheme of appropriate warning/speed limit signage in the vicinity of the construction site access(es);
 7. Arrangements for the management of deliveries to the site;
 8. Storage within the curtilage of the site of construction materials, including any requisite phasing of the development to accommodate this;
 9. Measures to ensure that all mud and other loose materials are not spread onto the adjacent adopted highways as a result of the ground work operations or carried on the wheels and chassis of any vehicles leaving the site and measures to minimise dust nuisance caused by the operations.

The approved plan shall be adhered to throughout the construction period and the measures shall be retained and facilities used for the intended purpose for the duration of the construction period. The areas identified shall not be used for any other purposes other than the turning/parking of vehicles and storage of construction materials.

Reason. To mitigate the impact of the construction traffic generated by the proposed development on the adjacent highways, ensure adequate off street materials storage

arrangements for the duration of the construction period and that the adopted highways are kept free of deposited material from the ground works operations.

- 11 The visibility splay indicated on approved plan reference SHT 5a/G shall be implemented to the written satisfaction of the Local Planning Authority before the development is first occupied and subsequently maintained free of obstruction above the height of 0.6m.

Reason. To ensure the intervisibility of the users of the site and the adjacent highways, in the interests of highway safety.

- 12 The bin storage area/arrangements indicated on approved plan reference 7F, incorporating the 450mm high boundary wall shown with foundations that do not encroach under the adjacent adopted highway, access onto Back Walmersley Road East and measures to prevent the discharge of surface water onto the adjacent adopted highway, shall be provided to the satisfaction of the Local Planning Authority before the dwellings hereby approved are first occupied and subsequently maintained available for this use.

Reason. To ensure that adequate bin storage arrangements are provided within the curtilage of each dwelling

Statement in accordance with Article 35(2) Town and Country Planning (Development Management Procedure) (England) (Amendment) Order 2015

The Local Planning Authority worked positively and proactively with the applicant to identify various solutions during the application process to ensure that the proposal comprised sustainable development and would improve the economic, social and environmental conditions of the area and would accord with the development plan. These were incorporated into the scheme and/or have been secured by planning condition. The Local Planning Authority has therefore implemented the requirement in Paragraph 38 of the National Planning Policy Framework.

The following policies of the Bury Unitary Development Plan, National and Regional Government were considered relevant:

NPPF	National Planning Policy Framework
EN1/2	EN1/2 - Townscape and Built Design
H1/2	H1/2 - Further Housing Development
H2/1	H2/1 - The Form of New Residential Development
H2/2	H2/2 - The Layout of New Residential Development
HT2/4	HT2/4 - Car Parking and New Development
EN7	EN7 - Pollution Control
SPD11	Development Control Policy Guidance Note 11 - Parking Standards in Bury
SPD16	Development Control Policy Guidance Note 16 - Design and Layout of New Development in Bury
SPD7	Development Control Policy Guidance Note 7 - Managing the Supply of Housing Land In Bury

This decision relates only to the Town and Country Planning Acts and does not include any consent or approval under any other enactment or under the Building Regulations. Any other consent or approval which is necessary must be obtained from the appropriate authority.

Applicant Plan Numbers:

Revised drawings numbered 5a/G, 5F, 6F, 7F and 9F

NOTES TO APPLICANT

1.

The Control of Noise (Appeals) Regulations 1975, Section 60. Control of Noise on Construction Sites

Works carried out in connection with the planning permission shall comply with the above regulations which require the following:

1. All works and ancillary operations which are audible at the boundary of the nearest house or noise receptor, or at such other place as may be agreed with the Council, shall be carried out only between the hours of 0800 and 1800 on Mondays to Fridays and between the hours of 0900 and 1400 on Saturdays and at no time on Sundays and Bank Holidays.
2. The best practicable means, as defined in section 72 of the Control of Pollution Act 1974, to reduce noise to a minimum shall be employed at all times.
3. All plant and machinery in use shall be properly silenced and maintained in accordance with the manufacturer's instructions.
4. Any emergency deviation from the above (1 – 3) shall be notified to Bury Council without delay.

Any contravention of these requirements will trigger the serving of a Notice under Section 60 of The Control of Noise Regulations 1975.

Signed:

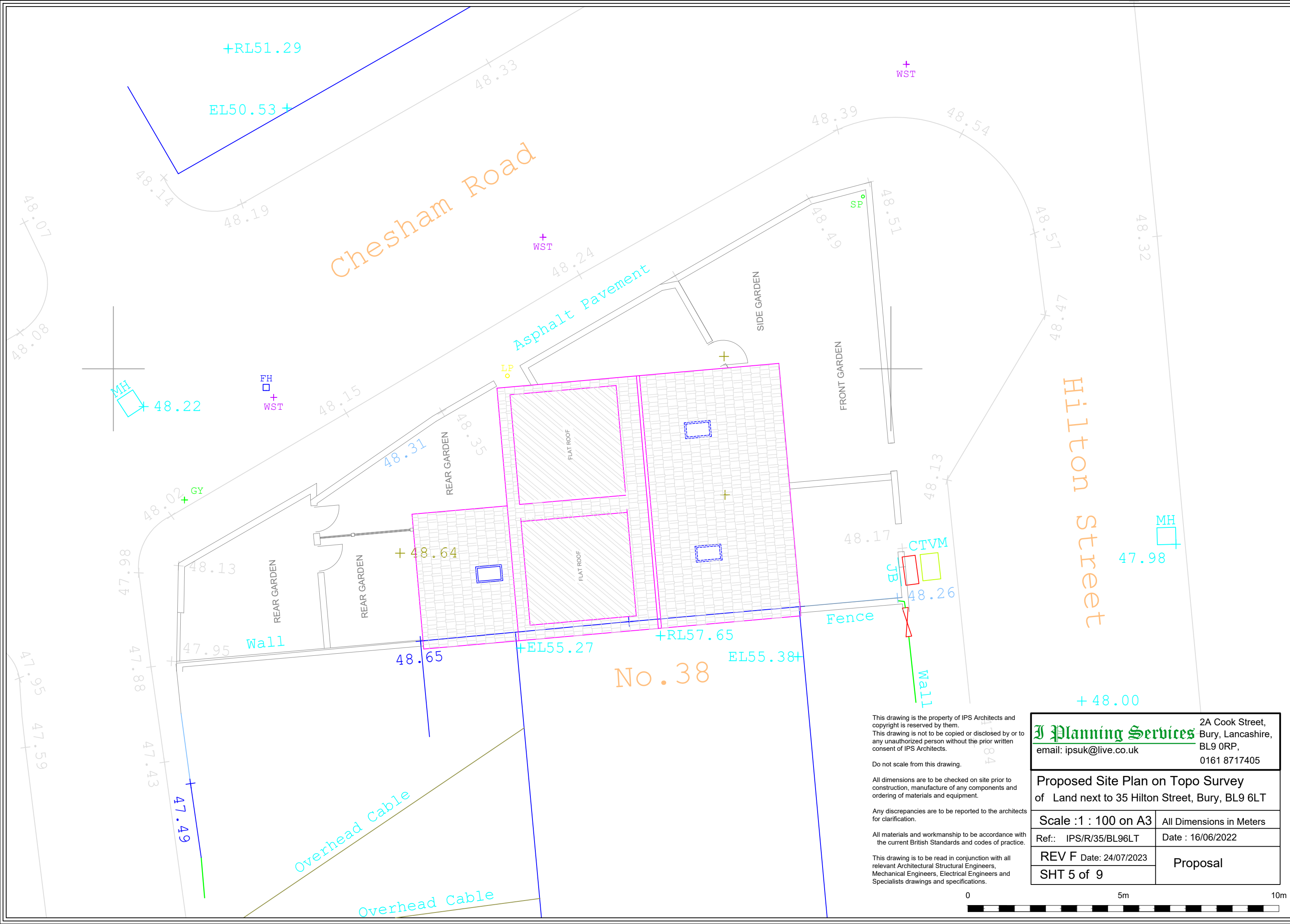


5 of 5

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On behalf of the Council

Date of Decision: 26/07/2023

8.2 Appendix 2 - Proposed Development Plans



This drawing is the property of IPS Architects and copyright is reserved by them.
This drawing is not to be copied or disclosed by or to any unauthorized person without the prior written consent of IPS Architects.

Do not scale from this drawing.

All dimensions are to be checked on site prior to construction, manufacture of any components and ordering of materials and equipment.

Any discrepancies are to be reported to the architects for clarification.

All materials and workmanship to be accordance with the current British Standards and codes of practice.

This drawing is to be read in conjunction with all relevant Architectural Structural Engineers, Mechanical Engineers, Electrical Engineers and Specialists drawings and specifications.

Planning Services

email: ipsuk@live.co.uk

2A Cook Street,
Bury, Lancashire,
BL9 0RP,
0161 8717405

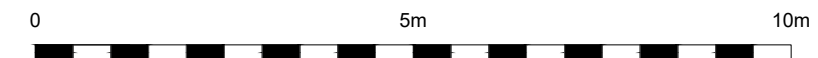
Proposed Site Plan on Topo Survey of Land next to 35 Hilton Street, Bury, BL9 6LT

Scale :1 : 100 on A3	All Dimensions in Meters
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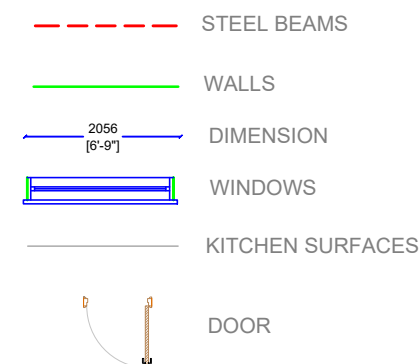
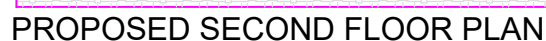
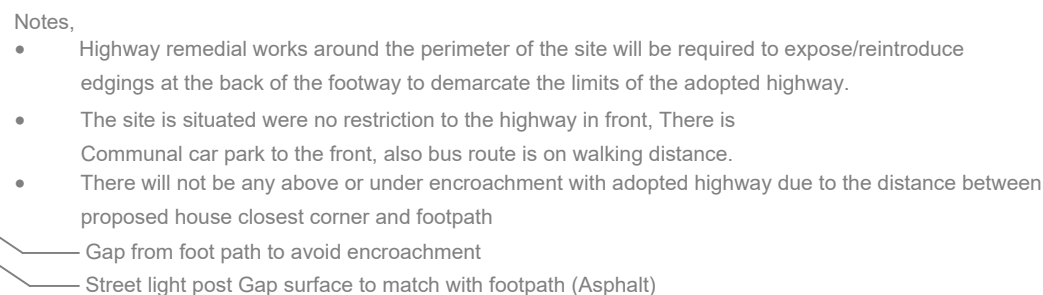
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REV F Date: 24/07/2023	Proposal
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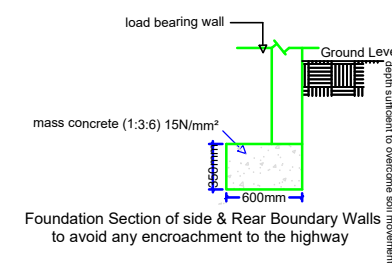
SHT 5 of 9



This drawing is to be read in conjunction with all relevant Architectural Structural Engineers, Mechanical Engineers, Electrical Engineers and Specialists drawings and specifications.



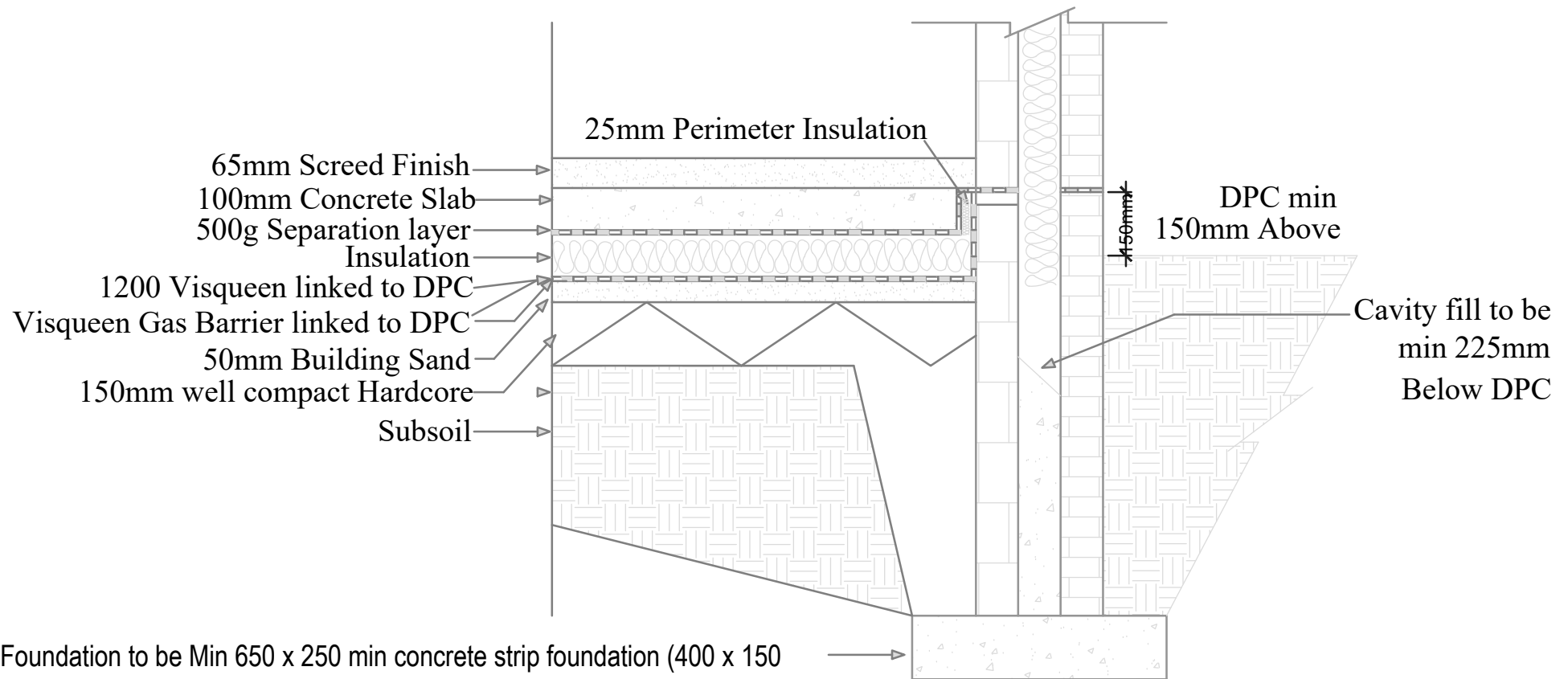
- Walls to be finish with bricks to match adjoining property
- Roof tiles to be Natural slates to match surroundings
- Windows to be double glazed uPVC in black colour
- External doors to be uPVC in black colour to match windows
- Rainwater goods to be 114mm Square Plastic Gutter in black colour to match surroundings
- Rear garden boundary treatment brick wall to match adjoining property
- Rear garden gate to be wooden gate
- Front and side garden boundary to be metal fence finish with black paint on stone effect base to match adjoining property



I Planning Services email: ipsuk@live.co.uk		2A Cook Street, Bury, Lancashire BL9 0RP, 0161 8717405
Proposed Floor plans of Land next to 35 Hilton Street, Bury, BL9 6LT		
Scale :1 : 100 on A3	All Dimensions in Meters	
Ref.: IPS/R/35/BL96LT	Date : 16/01/2023	
REV F Date: 24/07/2023	Proposal	
SHT 7 of 9		



8.3 Appendix 3 – Proposed Gas Protection Measures



Foundation to be Min 650 x 250 min concrete strip foundation (400 x 150 min to internal load bearing walls) - depth as Regulation A1/2 min 1000 below ground level, 300 mm foundation cavity brickwork in commons or similar approved block work with weak mix concrete cavity fill, fill to be min 225 below lowest dpc or mass concrete 600 wide.

Note: Foundations subject to change to suit ground conditions and existing foundation depth.

To be agreed on site with building inspector

Foundation Section Incl. detail of Gas Barrier



Visqueen Gas Barrier

Features and benefits

- BBA certified - third party accreditation
- Complies with BS 8485:2015 + A1:2019 - industry standard for methane and carbon dioxide protection
- Flexible - easy to detail and install on site
- Multi functional - also acts as a radon and damp proof membrane
- Dual jointing methods - lap joints can be taped or heat welded

Product description

Visqueen Gas Barrier is a multi-layer reinforced polyethylene gas barrier with a 20 micron aluminium foil. The barrier is coloured blue on the upper surface and silver on the reverse. The product is supplied in single wound rolls (not folded), 2m x 50m.

Approvals and standards

- Third party accreditation (BBA 13/5069)
- Conforms to the specification requirements of BS 8485:2015 + A1:2019
- Suitable for all Characteristic Gas Situation (CS) ground gas regimes
- Conforms to the specification requirements of NHBC Amber 1 and Amber 2 applications
- Conforms to the specification requirements of BR 211:2015
- CE Mark EN 13967:2017
- Quality Management System ISO 9001:2015
- Occupational Health and Safety System ISO 18001:2007
- Environmental Management System ISO 14001:2015

Usage

Visqueen Gas Barrier is suitable for use in all types of buildings to prevent the ingress of harmful levels of ground gases e.g.methane, carbon dioxide and radon.

The barrier can be positioned above or below a solid concrete ground floor slab or above a precast suspended segmental ground floor system, e.g. beam and block floor.

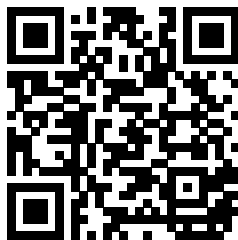
The barrier can also be used as a high performance radon membrane and/or damp proof membrane.

The product is not intended for use where there is a risk of hydrostatic pressure.

System components

- VisqueenPro Double Sided Jointing Tape, 50mm x 10m
- Visqueen Gas Resistant Foil Lap Tape, 75mm x 50m
- Visqueen Ultimate GR Lap Tape, 150mm x 10m
- Visqueen Ultimate Top Hat Units
- Visqueen Preformed Units
- VisqueenPro Detailing Strip, 300mm x 10m, 500mm x 10m
- Visqueen TreadGUARD 300, 2m x 75m
- Visqueen TreadGUARD 1500, 1m x 2m

Find your local stockist





Visqueen Gas Barrier

Storage and handling

Visqueen Gas Barrier should be stored horizontally, under cover in its original packaging.

Care should be taken when handling the product in line with current manual handling regulations.

Preparation

Visqueen Gas Barrier should be installed on a smooth continuous surface e.g. grouted beam and block floor, a compacted blinding layer e.g. 50mm thick sand blinding, or smooth concrete blinding. The substrate should be free from irregularities such as voids or protrusions.

The barrier can be cut with a sharp retractable safety knife or robust scissors.

Installation

Visqueen Gas Barrier should be loose laid on the substrate with the blue side up so as to avoid sunlight glare.

The barrier should be clean and dry at the time of jointing. It should be overlapped by at least 150mm, bonded with Visqueen Pro Double Sided Jointing Tape and sealed with Visqueen Foil Lap Tape. In demanding site conditions seal lap joints with Visqueen Ultimate GR Lap Tape.

Alternatively lap joints can be heat welded to achieve an effective seal. Welded lap joints can be less than 150mm provided the joint integrity is not compromised.

Airtight seals should be formed around all service entry points. Visqueen Preformed Top Hat Units should be used for sealing service entry pipes. The base of the top hat and the upstand should be bonded using Visqueen Pro Double Sided Jointing Tape and sealed with Visqueen Foil Lap Tape. The upstand should be secured with the supplied jubilee clip.

Forming an effective barrier to gases may give rise to complex three-dimensional detailing where, it is recommended Visqueen Preformed Units are used e.g. corners. Alternatively Visqueen Pro Detailing Strip can be used to seal awkward junctions.

If the barrier is punctured or perforated a patch of the same material should be lapped at least 150mm beyond the limits of the puncture and bonded with Visqueen Pro Double Sided Jointing Tape and sealed with Visqueen Foil Lap Tape. Alternatively a patch can be formed using Visqueen Pro Detailing Strip and lapped at least 150mm beyond the extents of the puncture.

The barrier should be covered by a protective layer as soon as possible after installation to prevent damage e.g. from following trades. Care should be taken to ensure that the membrane is not punctured, stretched or displaced when applying a screed or final floor covering. A minimum thickness of 50mm screed is recommended. When reinforced concrete is to be laid over the barrier the wire reinforcements and spacers must be prevented from puncturing the barrier. Where there is a high risk of potential damage, the barrier should be covered with Visqueen TreadGuard protection, screed, or other approved protection material before positioning the reinforcement.

Usable temperature range

It is recommended that Visqueen Gas Barrier and all associated system components should not be installed below 5°C.

Additional information

When used in accordance BS8485:2015 + A1:2019 a subfloor ventilation system or pressure relief maybe required
Where hydrocarbon or VOC contamination is present use Visqueen Ultimate VOC or HC Blok gas protection systems
To assist build sequencing, Visqueen GR DPC is available for gas protection through the wall constructions
For suspended beam and block floor detailing see GB-01
Visqueen Preformed Top Hat Units should be used at service pipe penetrations see GB-51
For internal and external corners Visqueen Ultimate Preformed Units should be used see PFU-553
To seal around steel columns use Visqueen Pro Detailing Strip see GB-52
For additional detailing information, contact Visqueen Technical Services +44 (0) 333 202 6800

Visqueen Gas Barrier

Property	Test method	Units	Compliance criteria	Result
Dimensions	EN 1848-2	m		2 x 50
Overall thickness including scrim mesh	EN 1849-2	mm		0.66
Effective thickness in between scrim mesh	EN 9863-1	mm		0.4
Mass	EN 1849-2	g/m ²	-0%/+5%	400
Tensile strength - MD	EN 12311	N	MLV	350
Tensile strength - CD	EN 12311	N	MLV	350
Tensile elongation - MD	EN 12311	%	MLV	20
Tensile elongation - CD	EN 12311	%	MLV	21
Joint strength	EN 12317-2	N	MLV	332
Watertightness 2kPa	EN 1928	-	Pass/Fail	Pass
Resistance to impact	EN 12691	mm	MLV	200
Dart impact	BS 2782	g	MDV	731
Low temperature flexibility	EN 495-5	°C	MDV	-40
Durability against ageing	EN 1296 and EN 1928	-	Pass/Fail	Pass
Durability chemical resistance	EN 1847	-	Pass/Fail	Pass
Resistance to tearing (nail shank) CD	EN 12310-1	N	MDV	358
Resistance to tearing (nail shank) MD	EN 12310-1	N	MDV	368
Resistance to static loading	EN 12730	kg	MLV	20
Water vapour transmission - resistance	EN 1931	MNs/g	MDV	7000
Water vapour transmission - permeability	EN 1931	g/m ² /d	MDV	0.03
Visible defects	EN 1850 -2	-	Pass/Fail	Pass
Reaction to fire	EN 13501-1	Class	MDV	F
BS 8485:2015 + A1:2019 testing requirements				
Mass	EN 1849-2	g/m ²	Average >370	400
Methane permeability	ISO 15105-1	mls/m ² /d/atm	Pass/Fail	<0.15
Puncture CBR	BS EN ISO 12236	N	MDV	1114
Impact resistance	EN 12691	mm	MDV	1000
Tensiles yield strength MD	ASTM D4885-01	kN/m	MDV	12.5
Tensiles yield strength CD	ASTM D4885-02	kN/m	MDV	7.3
Resistance to static loading	EN 12730	kg	>MLV	20
Yield elongation CD	ASTM D4885-04	%	MDV	19
Tear resistance - trouser method A - MD	BS ISO 34-1	kN/m	MDV	48.2
Tear resistance - trouser method A - CD	BS ISO 34-1	kN/m	MDV	44.8
Tear resistance - angle method B - MD	BS ISO 34-1	N	MDV	53.5
Tear resistance - angle method B - CD	BS ISO 34-1	N	MDV	60.6

Health and safety information

Refer to the Visqueen Gas Barrier material safety datasheet (MSDS).

Visqueen Gas Barrier

About Visqueen

The Visqueen name has long been recognised as one of the leading manufacturers of high quality advanced membrane technologies and design based solutions by specifiers, distributors, builders merchants and contractors throughout the UK and Europe.

For further guidance on the Visqueen services shown below, please refer to the relevant section of the Visqueen website (www.visqueen.com) or contact Visqueen Technical Services on +44 (0) 333 202 6800 or enquiries@visqueen.com

Complete Range, Complete Solution



Structural
Waterproofing



Gas
Protection



Damp Proof
Membrane



Tapes



Damp Proof
Course



Stormwater



Vapour
Control

Visqueen Technical Support

Visqueen combine an extensive product portfolio with industry leading levels of service and support which includes guidance over the phone, bespoke CAD drawings to help with complex detailing, electronic NBS specifications and access to a dedicated team of highly knowledgeable and experienced field based Technical Support Managers.

Visqueen Technical Support is available to all our customers including architects, specifiers, distributors, builders merchants, contractors and end users. All of our technical team have been awarded the industry recognised qualification Certificated Surveyor in Structural Waterproofing (CSSW).

Visqueen CPD Seminars

The Visqueen Continuing Professional Development (CPD) Seminars provide up-to-date information on changes within Building Regulations/Building Standards and nationally recognised industry guidance affecting damp proofing, water vapour control, hazardous ground gas protection and below ground structural waterproofing.

The one hour seminars have been produced for design specialists within the construction sector and are delivered by our team of Technical Support Managers.

Visqueen PI designs and special projects

From initial design to the completed project, Visqueen are with you every step of the way. Whether it be hazardous ground gas protection and/or below ground waterproofing protection employing barrier, structurally integral or drained systems, Visqueen can offer professional indemnity (PI) insurance for bespoke Visqueen design solutions.

Visqueen Technical Support Managers work with all stakeholders to provide cost effective Visqueen solutions offering complete peace of mind throughout the construction phase and beyond.

Visqueen Training Academy

Based at our manufacturing facility in Derbyshire, the Visqueen Training Academy is available to support Visqueen customers throughout the UK by providing a wide range of both theory and practical skills related training.

Courses include one day product awareness training for our distributors and builders merchants to help them in their day-to-day jobs, through to intensive three day courses giving detailed hands-on training in the practical skills required for safe and robust product installation.

