

Buckley Road Industrial Estate, Buckley Rd, OL12 9EF

Reference: 609 FRA-v1

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FLOOD RISK ASSESSMENT



FLOOD RISK ASSESSMENTS &
DRAINAGE STRATEGIES

Flood Risk Assessment

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Report Limitations

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The information presented and conclusions drawn are based on statistical data and are for guidance purposes only.

The study provides no guarantee against flooding of the study site or elsewhere, nor of the absolute accuracy of water levels, flow rates and associated probabilities.

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Purpose of this report

- 1.1 RIDA Reports Ltd has been appointed to undertake a Level 1 – Screening Study Flood Risk Assessment for a development located at OL12 9EF.

Objectives

- 1.2 The objectives of this FRA are to demonstrate the following:
- * Whether the proposed development will likely be affected by current or future flooding.
 - * Whether the proposed development will increase flood risk elsewhere.
 - * Whether the flood risks associated with the proposed development can be satisfactorily managed.
 - * Whether the measures proposed to deal with the flood risk are sustainable.

Documents Consulted

- 1.3 To achieve these objectives, the following documents have been consulted and referenced:

The National Planning Policy Framework (NPPF)
CIRIA C753 document The SuDS Manual, 2015
Local Flood Risk Management Strategy (LFRMS)
Level 1 Strategic Flood Risk Assessment (SFRA)
Aerial photographs and topographical survey of the site
British Geological Society Records
Local Council flood Maps
Environment Agency flood maps
The CIRIA publication 'C635 Designing for exceedance in urban drainage— Good practice'

Development Site and Location

- 2.1 The site is located at Buckley Road, Buckley - Rochdale. The nearest postcode is OL12 9EF. Refer to appendix A for site location plan.
- 2.2 The current use of the site is a greenfield. The current use vulnerability classification of the site is Water compatible. The site is located in the River Flood Zone 1. Refer to Appendix B for more details.

Development Proposals

- 2.3 The proposed development includes the construction of a new warehouse building. Refer to Appendix B for the layout of the proposed development.
- 2.4 The vulnerability classification of the proposed development is Less vulnerable with an estimated lifetime between 50 and 100 years.

Site Hydrology and Hydrogeology

- Hydrology 2.5 The Buckley Brook is located approximately 28 m away from the development.
- Aquifer 2.6 The development is located within a secondary aquifer type A. Aquifers type A consist of permeable layers capable of supporting water supplies at a local rather than strategic scale. They are generally aquifers formerly classified as minor aquifers.
- Source Protection Zone 2.7 The site is not located within a Source Protection Zone.
- Groundwater Levels 2.8 The ground water levels for this site are unknown.

Site Geology

- Bedrock 2.9 The British Geological Survey records of the site show that it is located within the Milnrow Sandstone - Sandstone.
- Superficial Deposits 2.10 The British Geological Survey records show that the superficial deposits are Alluvium - Clay, Silt, Sand and Gravel.

National Planning Policy Framework (NPPF)

- 3.1 The NPPF and its technical guidance is a set of planning policies with the key objective of contributing to sustainable development. As part of it, they ensure that flood risk and sustainability are considered during the planning process. This ensures that developments are not located in flood risk areas and directs developments to lower risk areas. The NPPF applies a sequential risk-based approach to determining land suitability for development in flood risk areas. The NPPF also encourages developers to seek opportunities to reduce the overall level of flood risk through the development layout and the application of Sustainable Drainage Systems (SuDS).

The Flood and Water Management Act (2010)

- 3.2 The Flood and Water Management Act aims to reduce the flood risk associated with extreme weather events. It provides robust flood risk management for people, homes and businesses and encourages using SuDS for developments. A robust SuDS strategy should consider the recommendations in this Flood Risk Assessment.

Strategic Flood Risk Assessment (SFRA)

- 3.3 Planning policy with regard to development and flood risk in the area is detailed in the Rochdale Borough's Strategy for Flood Risk Management 2014-2024 (RB SFRM) which was published in 2014. The proposed development site is located within the administrative boundary of the Rochdale Borough Council.
- 3.4 The SFRA commits to direct new development to locations at the lowest flood risk. The SFRA provides information on the levels and flood hazards that could result from flooding. The Environment Agency flood zone maps and the SFRA ignore the presence of existing flood defences when defining the potential extent of flooding.
- 3.5 This report follows the guidance given in the Rochdale Borough's Strategy for Flood Risk Management 2014-2024 by evaluating the flood risk and providing relevant flood mitigation.

- 4.1 The NPPF guidance states that the sequential test "is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. This means avoiding, so far as possible, development in current and future medium and high flood risk areas considering all sources of flooding including areas at risk of surface water flooding."

Applicability of the Sequential Test

- 4.2 The flood risks were determined by identifying all the sources of flooding and assessing their possible impact and likelihood to development. It is confirmed that the development is:

- In Flood Zone 1, based on the Planning Flood Risk Map
- At Very Low risk of surface flooding
- At high risk of groundwater flooding
- Outside of a critical drainage area
- Outside of an area with sewer flooding

- 4.3 Due to the flood risk on the development, a sequential test is not required.

Exception Test

- 4.2 Fluvial flood risk was assessed using the Environment Agency Flood Zone Maps and the sequential risk-based approach recommended in the NPPF guidance. The exception test requirement considers the flood risk vulnerability of land uses about the flood zone categorisation. These parameters are assessed to determine whether the development requires an exception test or is inappropriate.

Step 1 Flood Zone categorisation

- 4.3 The proposed development is less than 1 ha and falls within the Environment Agency (EA) Flood Zone 1. Therefore, this Flood Risk Assessment Level 1- Screening report should be sufficient under the NPPF. Flood Zone 1 is considered to have a low probability of flooding, with an annual probability of flooding of <0.1%. The chance of flooding is 1 in 1000 years or lower.

Step 2 4.4 Within Table 2 (Flood Risk Vulnerability Classification) of the NPPF Planning Practice Guide, the proposed development is classified as 'Less vulnerable '.

Flood risk vulnerability

Step 3 4.5 The Flood Risk vulnerability and Flood Zone incompatibility table of the NPPF Planning Practice Guide states that Less vulnerable developments do not require an exception test in this area.

Flood Zone incompatibility

The Exception Test

4.6 The exception test is not required.

- 5.1 The development has been assessed for the following potential flood risks, river and tidal flood risk, surface water flooding, flooding from groundwater, reservoir flood risk and drainage systems.

Flood Defence and Historic Flooding

- 5.2 The Environment Agency records show that the site does not benefit from flood defences. They also show that the area around the site has not been flooded in the past. See Appendix C for details.

Flooding from river and sea

- 5.3 The proposed development is less than 1 ha and falls within the Environment Agency (EA) Flood Zone 1. Therefore, this Flood Risk Assessment Level 1- Screening report should be sufficient under the NPPF. Flood Zone 1 is considered to have a low probability of flooding, with an annual probability of flooding of <0.1%. The chance of flooding is 1 in 1000 years or lower.
- 5.4 The climate change allowance is not applicable for this site.
- 5.5 The site is located in an area outside of fluvial flooding flood risk.
- 5.6 It is concluded that the site is not affected by fluvial flood risk.

Surface water (overland flows) flood risk

5.7 The Environment Agency maps show that the flood risk from surface water is very low. A residual risk of localised ponding remains unlikely. The Environment Agency surface water flood risk maps are defined by applying a specific procedure based on digital terrain models and assumptions regarding infiltration and urban drainage losses. The surface water flood maps are determined by the Environment Agency as follows.

5.8 *"The nationally produced surface water flood mapping only indicates where surface water flooding could occur due to local rainfall. It does not fully represent flooding that occurs from:*

- Ordinary watercourses
- Drainage systems or public sewers caused by catchment-wide rainfall events
- Rivers
- Groundwater

Due to the modelling techniques, the mapping picks out depressions in the ground surface. It simulates some flow along natural drainage channels, rivers, low areas in floodplains, and flow paths between buildings. Although the maps appear to show flooding from ordinary watercourses, they should not be taken as definitive mapping of flood risk from these as the conveyance effect of ordinary watercourses or drainage channels is not explicitly modelled. Also, structures (such as bridges, culverts and weirs) and flood risk management infrastructure (such as defences) are not represented.

The nationally produced surface water flood mapping does not consider the effect of pumping stations in catchments with pumped drainage. No allowance is made for tide locking, high tidal or fluvial levels where sewers cannot discharge into rivers or the sea."

5.9 The strategic flood risk for the Rochdale Borough Council confirms that the flood risk for the site is Very Low. The surface water flood data has not been produced to determine the flood levels at individual properties. This data does not contain the climate change allowances for depth levels. Therefore, the Design flood level given above is an assumption. The new development may have greater or lower surface water flood depths.

5.10 Based on Environment Agency and the Strategic flood risk assessment's surface water mapping, together with the presence of surface water drainage systems at the site and surrounding area it is concluded that the site is at Very Low risk of flooding from surface water sources.

Flooding from drainage systems in adjacent areas

- 5.11 The council records have been reviewed. The flooding from drainage incidents maps were not found in the Strategic Flood Risk Assessment. Therefore, for the purpose of this report, it has been assumed that the risk of flooding from drainage systems is low.

Reservoirs Risks

- 5.12 The Reservoir Flood Map (RFM) produced by the Environment Agency do not show the risk to individual properties of dam breach flooding. The maps do not indicate or relate to any particular probability of dam breach flooding. The maps were prepared for emergency planning purposes. They can be used to help reservoir owners produce on-site plans, and the Local Resilience Forum produce off-site plans and to prioritise areas for evacuation/early warning in the event of a potential dam failure. The RFM shows that the development could be within the possible dam breach flooding path. See Appendix C.

Groundwater flood risk

- 5.13 The British Geological Survey's flood risk susceptibility maps show that the development has the potential for groundwater flooding above ground level. Groundwater levels vary seasonally and are influenced by ground and meteorological conditions and proximity to water features. The groundwater flooding risk for this site is considered to be high. The groundwater flood depth could potentially be 0.15m. The external level at the site is 138.5m AOD. The potential groundwater flood level is 138.65m AOD. Refer to Appendix C for record drawings.

Critical Drainage Areas

- 5.14 The Strategic Flood Risk Assessment was reviewed as part of this assessment. However, it does not show the critical drainage areas within the council. For this report, it has been assumed that the site is outside of a notified critical drainage area.

- 6.1 The Flood hazard assessment has demonstrated that the site is:
- In Flood Zone 1, based on the Planning Flood Risk Map
 - The development is located in the flood risk zone of the Planning Flood Risk Map
 - At Very Low risk of surface flooding
 - At high risk of groundwater flooding
 - Outside of a critical drainage area
 - Outside of an area with sewer flooding
- 6.2 Under the NPPF it is necessary to demonstrate that, for any new development on the site, it is possible to provide an adequate level of flood protection for personnel working or living at the development.

Design Flood Level

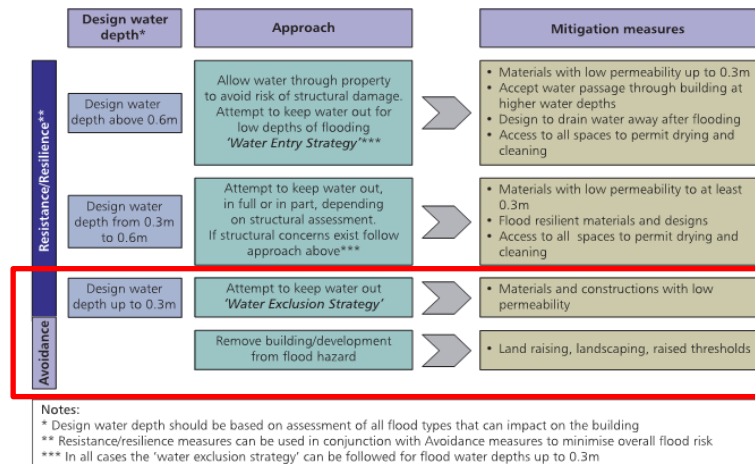
- 6.3 The design flood level is the maximum estimated water level during the design storm event including an allowance for climate change in line with current best practice national planning guidance.
- 6.4 The Design Flood Level for this development has been determined by evaluating the levels from the Pluvial/Sea, Surface Water and Groundwater flood levels.
- 6.5 For this site, the Design Flood Level is 138.65m AOD. This is the highest level and corresponds to the Groundwater Flood Level.

Flood Protection

- 6.6 Where possible, flood avoidance is provided by establishing the development's finished floor level 0.1m above the Design Flood Level. The finished floor should be 138.75m AOD. It would involve a height differential of 0.25m. This is the distance between the average external level (138.5m AOD) and the potential Finished Floor Level.
- 6.7 It is possible to achieve this FFL. As parts of the building are in contact with water, it is proposed that the following flood mitigation is provided.

6.8 The flood mitigation strategies for the development has been based on the CLG 2007 Improving the Flood Performance of New Buildings. See figure below. The strategy is based on the water level within the proximity to the building.

Rationale for flood resilient and/or resistant design strategies.



6.9 The design water depth for this site is 0.15m. The development should utilise building materials that are suitable for a 'water exclusion strategy'. Materials classified as "Good" (highlighted in red) in the Figure below shall be used for new construction upto level of 138.95m AOD.

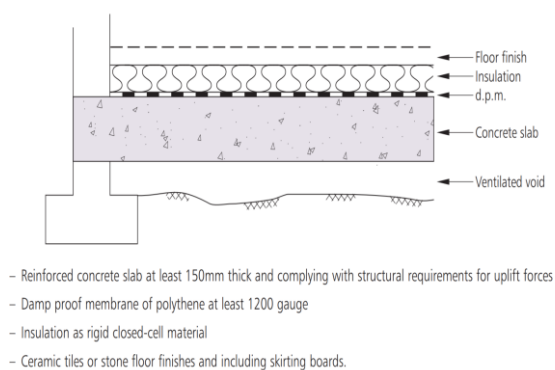
Figure 2: Flood resilience characteristics of building materials (based on laboratory testing)

Material	Resilience characteristics*		
	Water penetration	Drying ability	Retention of pre-flood dimensions, integrity
Bricks			
Engineering bricks (Classes A and B)	Good	Good	Good
Facing bricks (pressed)	Medium	Medium	Good
Facing bricks (handmade)	Poor	Poor	Poor
Blocks			
Concrete (3.5N, 7N)	Poor	Medium	Good
Aircrete	Medium	Poor	Good
Timber board			
OSB2, 11mm thick	Medium	Poor	Poor
OSB3, 18mm thick	Medium	Poor	Poor
Gypsum plasterboard			
Gypsum Plasterboard, 9mm thick	Poor	Not assessed	Poor
Mortars			
Below d.p.c. 1:3(cement:sand)	Good	Good	Good
Above d.p.c. 1:6(cement:sand)	Good	Good	Good

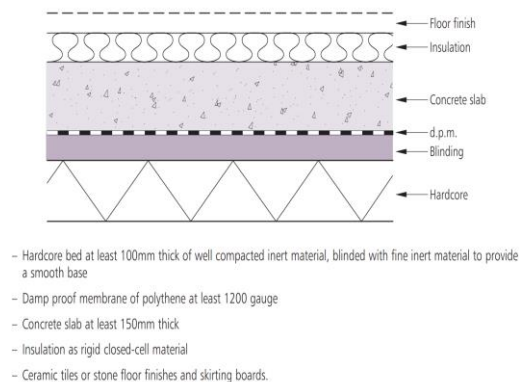
* Resilience characteristics are related to the testing carried out and exclude aspects such as ability to withstand freeze/thaw cycles, cleanability and mould growth

- 6.10 New services and fittings (communications wiring, heating systems, electrical services, water, electricity and gas meters) should be placed at above the level of 138.95m AOD. All service entries should be sealed (e.g. with expanding foam or similar closed cell material).
- 6.11 Closed-cell insulation should be used for pipes. Sealed PVC external framed doors or good fit and sealed wooden frames should be used.
- 6.12 Hollow core timber internal doors should not be used unless sufficient flood warning is given, butt hinges, can be used to allow internal doors to be easily removed and stored.
- 6.13 Suspended concrete floor slabs at least 150mm thick is the preferred option. Suspended slabs can also be used. There should be a minimum space of 150mm ventilated void between the ground level and the bottom of the floor slab. Damp proof membranes should be included in the design. Floor insulation should be of the closed-cell type. Under floor services using ferrous materials should be avoided. Ceramic/concrete-based floor tiles, sitting on a bed of sand, cement render and water resistant grout can be used. See figures below.

Suspended Concrete Slab detail



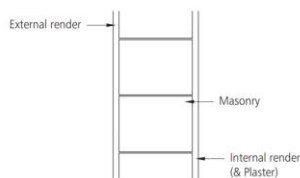
Ground bearing Concrete Slab detail



6.14 Concrete blocks used in foundations should be sealed with an impermeable material or encased in concrete to prevent water movement from the ground to the wall construction. In new walls use extended periscope subfloor ventilators or fit removable airbrick covers; fix plasterboard sheets horizontally rather than vertically, or split sheets mid-height with a dado rail, to reduce the extent of replacement; specify lime- or cement-based renovating plasters or renders rather than gypsum-based, with water-resistant paint finishes. The use of water-proof, water-resistant or micro-porous surface coatings on masonry should be avoided as they can inhibit the drying-out of the building fabric.

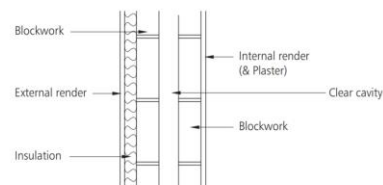
6.15 Good quality facing bricks or external renders with water-repellent properties can be used for the external face. See the examples below of external walls that can be used.

Solid External Wall



- External cement based render, preferably with lime content. Composition depends on masonry. The following mixes have good resilient properties:
 - 1 cement : 6 sand on bricks;
 - 1 cement : 4 sand: 1/2 lime on concrete blockwork or bricks;
 - 1 cement : 6 sand: 1 lime on Aircrete blocks.
 - Masonry with minimum thickness of 300mm (thin mortar joint construction using Aircrete blocks is effective as demonstrated in laboratory tests) or alternatively reinforced concrete wall
 - Internal cement-based render, preferably with lime content. Composition depends on masonry; the following mix is effective for flood resilience:
 - 1 cement : 6 sand: 1 lime on Aircrete.
- Apply external and internal renders, following good practice guidance, ensuring minimum total thickness of 20mm and at least two coats.
- Use external insulation in preference to internal insulation.

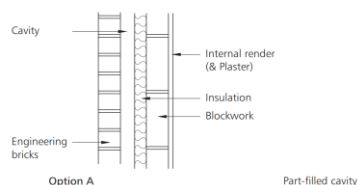
Cavity External Walls – Clear cavity



Clear cavity

- External cement based render, preferably with lime content. Composition depends on masonry; the following mixes are effective for flood resilience:
 - 1 cement : 4 sand: 1/2 lime on concrete blockwork (or bricks);
 - 1 cement : 6 sand: 1 lime on Aircrete.
- Apply render following good practice guidance, ensuring minimum total thickness of 20mm and two coats.
- Internal cement based render, preferably with lime content. Composition depends on masonry. The following mix works well:
 - 1 cement : 6 sand: 1 lime on Aircrete.
 - Stainless steel wall ties should be used to minimise corrosion and consequent staining.

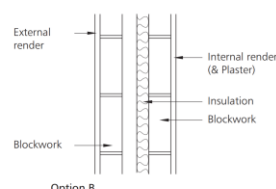
Cavity External Walls- Part fill Option A



Part-filled cavity – Option A

- External face consisting of engineering bricks up to required level for flood protection (up to 0.6m maximum above floor level plus one course). Other external facing materials can be used above this level, but ensure interface is watertight.
- Rigid insulation.
- Internal face consisting of blocks.
- Internal cement based render, preferably with lime content. Composition depends on masonry; the following mix is effective:
 - 1 cement : 6 sand: 1 lime on Aircrete.
- Ensure stainless steel wall ties are used to minimise corrosion and consequent staining.
- Sacrificial plasterboard can be used, but it needs to be removed between ground floor and flood level. The board should be fitted horizontally to make removal easier. In some cases a dado rail can be used to cover the joints.

Cavity External Walls- Part fill Option B



Part-filled cavity – Option B

- External cement based render, preferably with lime content. Composition depends on masonry; the following mixes are effective:
 - 1 cement : 4 sand: 1/2 lime on concrete blockwork
 - 1 cement : 6 sand: 1 lime on Aircrete.
- External face consisting of blocks.
- Rigid insulation.
- Internal face consisting of blocks.
- Internal cement based render, preferably with lime content. Composition depends on masonry; the following mix is effective for flood resilience:
 - 1 cement : 6 sand: 1 lime on Aircrete.
- Ensure stainless steel wall ties are used to minimise corrosion and consequent staining.

6.16 The general precautionary measures to mitigate the risk of groundwater flooding in this development are:

- Ground floor threshold levels are higher than 0.25 m above ground level to allow for uncertainty.
- It is proposed to add a tanking membrane up to 0.3 m above the ground level.
- Flow paths are provided around the proposed development, which groundwater will take in the event of groundwater emergence.

As these measures would mitigate the risks from groundwater flooding, it is considered that the risk from groundwater has been managed.

7.1 The NPPF specifically stipulates that consideration should be given to potential off-site flood impacts of any proposed development. These off-site impacts are in relation to the following:

- Surface water management
- Flood flow conveyance, storage and climate change

Surface Water Management

7.2 The surface water run-off will be disposed of using SuDS techniques. The aim is to provide a sustainable design that accommodates the proposed attenuation volume and replicates the existing drainage regime using the SuDS hierarchy, is shown in the figure below.

7.3 The SuDS techniques highlighted in red below could be used on-site. This assessment is based on the ground conditions and available potential discharge points.

The SuDS Hierarchy (Source:EA Thames region, SuDS a practical guide)

<i>Most Sustainable</i>	SUDS technique	Flood Reduction	Pollution Reduction	Landscape & Wildlife Benefit
↑ ↓	Living roofs	✓	✓	✓
	Basins and ponds - Constructed wetlands - Balancing ponds - Detention basins - Retention ponds	✓	✓	✓
	Filter strips and swales	✓	✓	✓
	Infiltration devices - soakaways - infiltration trenches and basins	✓	✓	✓
	Permeable surfaces and filter drains - gravelled areas - solid paving blocks - porous paviers	✓	✓	
Least Sustainable	Tanked systems - over-sized pipes/tanks - storm cells	✓		

7.4 With no increase in the rate of surface water discharge from the site, compared to the site in its current configuration, the proposed development would have no adverse impact on surface water flood risk at the site or surrounding area. The SuDS should be designed at the detailed project stage.

Flood Flow conveyance and storage

- 7.5 Due to the size of the development and its location in the flood zone, flood compensation for this development is not required.

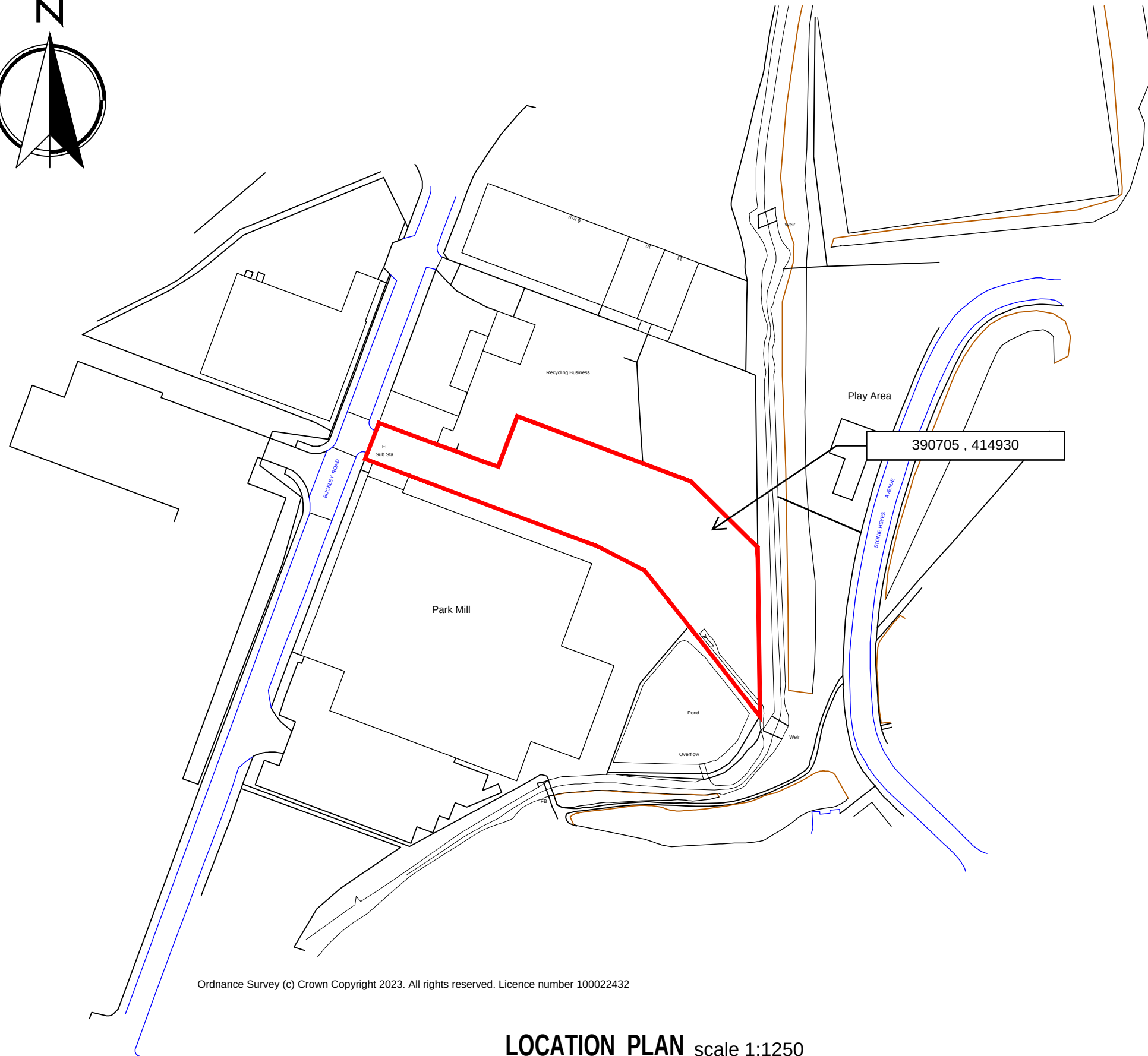
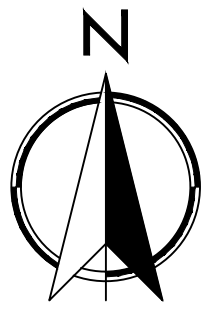
- 8.1 This flood risk assessment has identified the potential flooding mechanisms that could affect the site. As part of this, the following residual risks have been evaluated.

Public safety and Site Access

- 8.2 This assessment has demonstrated that the proposed development will have no adverse impact on flood risk in the area surrounding the site. Available evidence indicates that the development would not change surface water generation. Therefore, there is no basis to indicate that, with respect to flood risk, the proposed development would adversely impact public safety.
- 8.3 The site is located on the borders of the river flood and within an island for surface water flooding. It is recommended that site users are maintained informed of the flooding in the vicinity. As this site will be used as a warehouse, no detailed evacuation plan is required.

- 9.1 It is concluded that subject to the proposed mitigation measures, the site can be developed in accordance with the provisions of the NPPF and the requirements of the Environment Agency and the local planning authority.
- 9.2 This report demonstrates that the proposal will be safe, in terms of flood risk, for its design life and will not increase the flood risk elsewhere.

Appendix A



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LOCATION PLAN scale 1:1250



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Client:	
Address: BUCKLEY ROAD INDUSTRIAL ESTATE, ROCHDALE	
Project: NEW DEVELOPMENT - 1x LARGE COMMERCIAL UNIT	
Dwg Title: PLANNING : LOCATION PLAN	
Date: NOVEMBER 2023	Scale: @A3 1: 1250
Job No: 11.23.658	Dwg No: PL06
Drawn: D.L.	Checked: D.L.

Appendix B



GENERAL NOTES

1. FOUNDATIONS: 225mm min thickness, strip foundations to project 150mm min either side of supported wall. Provide 750mm min cover to foundations. Foundations to be min 900mm to bottom of strip footing and taken down to level below level of any drains passing under or immediately adjacent to the building. Although strip foundations have been shown on the drawing, these may not be appropriate and are for illustrative purposes only. Foundations to suit conditions to the satisfaction of the Local Authority once full test has been done. Alternative Foundations to be designed by Structural Engineer.

Concrete mixes to be in accordance with BS 6800-1.

CONCRETE RELATING TO THE GROUND

There should not be:

- a non-engineered fill (as described in BRE Digest 427) or wide variation in ground conditions within the loaded area, nor
- weaker or more compressible ground at such a depth below the foundation as could impair the stability of the structure.

2. Where new foundations arise in vicinity of old foundations, existing should be fully grubbed up and new foundations laid at least the same depth.

3. All exposed timbers to be treated with a suitable preservative to BS 1282:1975.

4. All new cavities to be closed with 9mm sulpak, all new cavities to be filled with existing.

5. All new drains to be Hephworth supersewer and to be bedded and surrounded in min. 150mm pea gravel. 100mm diameter drains to fall in 40, 150mm diameter drains to fall in 60. New drains to be encased in min 150mm concrete where they pass under new buildings. All existing drains found not to be in use to be capped and sealed in concrete. 150mm pre-cast concrete linings inserted where new drains pass through external walls. Soil and vent pipes to be 100mm U.P.V.C. 40mm diameter U.P.V.C. waste pipes to showings, sinks and baths with 40mm diameter u-bends. S.V.P. to be taken up to a ridge terminal or roof vent the outlet or otherwise as noted on the plans. Provide rodding eyes or removable traps to give access to all traps of the soil system. All traps are to be 75mm deep sealed air-vent traps. All the plumbing installations are to comply with BS 5572. All boating in for concealed service pipes should be sealed on floor and ceiling levels, and service pipes which penetrate or project may follow construction or voids. (Refer to item D of diagram 4 of the Approved Document L1: Deep flow gutters and (64) 75mm diameter P.V.C. rainwater pipes.

6. Insulated D.C.'s inserted to all head, jambs and cills of new external openings or thermatec closers

7. All disused surfaces to be made good.

8. All new gas water pipes to be trapped at every.

9. 75 x 100mm wallplate to be strapped to wall at 2m centres with 38 x 6mm mild steel straps.

10. Opening lights to be min 1200mm total floor plan area.

11. All glazing to critical zones to be toughened or laminated to BS 6206. All glass to doors within 1500mm of finished floor level and within 300mm of either side of doors and where greater than 250mm wide max 0.5mm in doors, and to screens/ windows within 800mm of finished floor level.

12. Stewards to be noted on plan to comply with BS 440, BS 5950 & be encased in 2 layers of 12.5mm plasterboard with angle beads and 5mm plaster coat to give 1/2 hour fire resistance. Linings to have minimum 150mm end bearings at each end or as specified by Structural Engineer or steel manufacturer.

Canv try to be fitted to linings with external wall with stop ends and weepholes at each end and @ 900mm cts. Loadbearing internal walls to be 100mm concrete blockwork.

13. D.C.'s to outer leaf to be min 150mm above ground level and at slab/door level to inner leaf.

14. Existing brickwork/stonework to extend min 2 courses below ground level.

15. New concrete linings over new openings to BS 5977 Part 2: 1996 (150mm or 225mm) deep where shown.

16. Stainless steel wall ties to be spaced at 750mm centres horizontally staggered and 400mm centres vertically. Wall ties to comply with BS 1224:1979 and to have proprietary (over) running clips to secure the insulation to the inner leaf. Joints to be built solid by returning the blockwork onto 150mm wide vertical D.P.C. Provide additional wall ties at 225mm vertical centres around door/ window openings and to movement joints. Cavities be closed at eaves level to comply with Building Regulations.

17. Notches and holes to timber joists to be within the following limits: notches - no deeper than 0.125 times depth of joist and not cut closer than 107 of the span, nor further away than 125 times the span. Holes - should be no greater diameter than 1/3 the depth of joist; should be drilled at the neutral axis, and should be not less than 3 diameters' centre to centre apart, and be located between 0.25 and 0.4 times span from the support.

No notches or holes to be cut in roof rafters, other than supports where the rafter may be butt-jointed to a depth not exceeding 1/3 the rafter depth.

18. All pipework incorporated in the water/ heating system, that is situated in an unheated space is to be surrounded in 40mm of insulating material (min conductivity 0.045W/mK).

19. All masonry work to comply with BS 5628: Part 3.

20. Mortar: Selection of mortar used below dpc to be in accordance with BS 5628: Part 3.

21. DPM below slab to BS 8515: when the membrane is located below the slab a lining layer of sand should be provided. The continuity of the membrane as follows:

Joists or polyethylene should be 300mm and joints sealed, where necessary membranes beneath slab should link with wall dpc's

22. STAIRCASE: Equal risers (Max rise 220mm) Equal treads (Min going 220mm) Min Going to Tapered treads of 50mm. 200mm headroom in stair measured along pitch line. Max pitch of stair 42 degrees. Handrail between 900mm and 1000mm above pitch line. No gap in balustrading to allow the passage of 100 diameter sphere.

23. Floors (if applicable)

Floor joists to be inserted into inner leaf of external wall in locations shown on plans. Floor joists with max. 45 degree (30 degree preferred), offset at base, bedded in cement mortar grout to comply with B.S. 1181: 1971. All floor and roof timbers will be trimmed 40mm clear from the outer face of chimneys and flues.

24. Chases

Vertical chases should not be deeper than 1/3 of the wall thickness or, in cavity walls, 1/5 of the thickness of the leaf.

Horizontal chases should not be deeper than 1/6 of the thickness of the leaf of the wall.

Chases should not be so positioned as to impair the stability of the wall, particularly where hollow blocks are used.

25. All workmanship and materials to comply with Building Regulations, British Standards, Codes of Practice requirements. All materials to be fixed, applied or mixed in accordance with manufacturers instructions or specifications. All materials shall be suitable for their purpose. The contractor shall take into account everything necessary for the proper execution of the works, to the satisfaction of the "inspector" whether or not indicated on the drawing. Samples of external materials to be submitted to Local Authority for approval.

26. The Builder is entirely responsible for all temporary works and for maintaining stability of the new and existing structures during work.

27. Contractor to visit site prior to commencement of work and check all dimensions and families himself with the site conditions. This drawing must then be checked and verified by the contractor prior to work commencing on site. An Encroachment by the building over the neighbouring boundary line. Client to obtain written permission from relevant bodies for any encroachment whatsoever if unavoidable.

28. Trade Ventilation

Replacement window, background ventilators to be provided as follows:

Habitable rooms - 5000mm² equivalent area

Kitchen, Utility room and bathroom - 2500mm² equivalent area

Addition of a habitable room (not including a conservatory) in an existing building.

Background ventilators to be provided to new windows as follows:

If the Additional room is connected to an existing room that has no window openings to external air, the room can be ventilated through another room or conservatory if background ventilation is provided with ventilators - 8000mm² equivalent area to opening between rooms and to new windows. and Purge ventilation is provided comprising of 1 or more openings with min total floor area as follows:

Windows - hinged or pivot window that opens 30° or more, or the Height x width of the opening part should be at least 1/10 of the room floor area.

For a hinged or pivot window that opening less than 30° opening part should be at least 1/10 of the room floor area.

External doors the Height x width of opening part should be at least 1/10 of the room floor area.

If the room contains a combination of at least 1 external door and at least 1 external window, the opening parts may be added to achieve at least 1/10 of the room floor area.

Note: Background ventilation should be located at least 1700mm above floor level and need not be within the door frame.

Openings between habitable rooms and conservatories must be closable.

29. Unusable material

Vegetable matter such as turf and roots should be removed from the ground to be covered by the building at least to a depth to prevent later growth. The effects of roots close to the building also need to be assessed. Where mature trees are present on sites with shrinkable clays the potential damage arising from ground heave to services and floor slabs and oversite concrete should be assessed. Reference should be made to BRE Digest 298/2. Where soils and vegetation type would require significant quantities of soil to be removed. Reference should be made to BRE Digest 241/23 and 242/24, and to the BRE (Foundation for the Built Environment) report 25.

Construction Design And Management Regulations 1994, (CDM REGULATIONS) And Health and Safety at Work etc. Act 1974

Designers' CDM Statement

The Client is respectfully reminded of his or her duties under the above act and referred to the Health and Safety Executive's Guidance note 39 'The Role of the Client'.

The Designs encompassed on this drawing are classed as simple construction using traditional methods and materials available to general builders. As such they do not present any unusual circumstances in their execution or risks which a competent builder could not be reasonably expected to know.

For alteration work requiring new openings in walls or the removal of existing walls, the builder is to follow the guidance in the Building Research Establishment Good Building Guides Nos 15 & 20 providing temporary support during work on openings in external walls and removing internal load bearing walls in other dwellings.

1. The Contractor shall ensure that he and all visitors to site are fully aware of these regulations and ensure full compliance with same and shall include for all necessary documentation

2. Contractor to provide all necessary scaffolding with edge protection to prevent persons falling or falling debris. Also to provide protection to adjoining properties along site boundary.

3. All necessary safety precautions to be taken when working at high level. i.e. using safety harness.

4. Contractor to investigate possible use of redundant services within the site and any hazardous material that may be present. Refer to Avoiding danger from underground services, HSG 47 Control of Asbestos at Work Regulations 2002, Control of Substances Hazardous to Health Regulations 2002 and Dangerous Substances and Explosive Atmospheres Regulations 2002.

5. All persons entering site to have all necessary protective clothing and head protection compliant with health and safety. Refer to Personal Protective Equipment at Work Regulations 1989 (as amended).

6. Clearing of windows to be accessible from inside if they are unable to be accessed from exterior.

7. All necessary propping and support required for excavation of trenches, retaining walls and underpinning to be installed in accordance with a structural engineers details and specification.

8. Contractor to provide all necessary support to maintain stability of existing or neighbouring structures.

9. Danger of collapse to trenches caused by heavy machinery, working above or near.

10. Danger of persons falling into trenches.

11. Use of power tools and equipment. Refer to Provision and Use of Work Equipment Regulations 1989 and Electricity at Work Regulations 1989.

12. Avoid chasing of walls for services.

13. Risk of working with glass. Risks of working at height and from falling objects.

14. Risks of working with dust/cement - protective wear/earplugs protection to be used. Refer to Control of Substances Hazardous to Health Regulations 2002.

15. Precautions to be taken when lifting heavy materials/objects and beams into position above 20kg - use Adequate Lifting machinery. Refer to Lifting Operations and Lifting Equipment Regulations 1998, Manual Handling Operations Regulations 1992.

16. Covering of roofs. All work to be carried out with due regard to health and safety regulations.

17. Risk of overhead power cables within and around the site.

18. Installation and use of flammable materials. Refer to Fire Precautions (Workplaces) Regulations 1997.

19. Access into and out of site - traffic management into and out of site. Refer to Driving at Work - Managing work-related road safety, INDG 385.

20. Precautions to be taken when working in confined spaces. Refer to Confined Spaces Regulations 1997 and Safe work in confined spaces, Approved Code of Practice, Regulations and Guidance L 101.

21. The CONTRACTOR IS ADVISED OF THE FOLLOWING REGULATIONS APPLICABLE:

22. New Roads and Street Works Act 1991

23. Construction Health Safety and Welfare Regulations 1996

24. Health & Safety First Aid Regulations 1981

25. Health and Safety (Young Persons) Regulations 1989

26. Ionising Radiation Regulations 1989

27. Management of Health and Safety at Work Regulations 1999

28. Noise at Work Regulations 1989

29. Pesticides Safety Regulations 1986

30. Pressure Systems Safety Regulations 2000

31. Reporting of Injuries Diseases and Dangerous Occurrences Regulations 1995

32. Supply of Machinery (Safety) Regulations 1992 (as amended)

33. Workplace (Health, Safety and Welfare) Regulations 1992

34. Guidance

35. Managing Health and Safety in Construction, Approved Code of Practice and Guidance, HSG 224

36. Successful health and safety management, HSG 65

37. Vibration Solutions, HSG 170

What does the Party Wall Act say if I want to build up against or astride the boundary line?

If you plan to build a party wall or party fence wall outside the boundary line, you must inform the Adjoining Owner by serving a notice. You must also inform the Adjoining Owner by serving a notice if you plan to build a wall wholly on your own land but up against the boundary line.

The Act contains no enforcement procedures for failure to serve a notice. However, if you start work without having first given notice in the proper way, Adjoining Owners may seek to stop your work through a court injunction or seek other legal redress.

How long in advance do I have to serve the notice?

At least one month before the planned starting date for building the wall. The notice is only valid for a year, so do not serve it too long before you wish to start.

What happens after I serve notice about building astride the boundary line?

If the Adjoining Owner agrees within 14 days to the building of a new wall outside the boundary line, the work (as agreed) may go ahead. The expense of building the wall may be shared between the owners where the benefits and use of that wall will be shared. The agreement must be in writing and should record details of the location of the wall, the allocation of costs and any other agreed conditions. If the Adjoining Owner does not agree, it is writing within 14 days, to the proposed new wall outside the boundary line, you must build the wall wholly on your own land, and wholly at your own expense. However, you have a right to place necessary bedding for the new wall under your neighbour's land subject to compensating for any damage caused by building the wall or laying the foundations. There is no right to place reinforced concrete under your neighbour's land without their express written consent.

You may start work one month after your notice was served. What does the Act say if I want to excavate near neighbouring buildings?

If you plan to excavate, or excavate and construct foundations for a new building or structure, within 3 metres of a neighbouring owner's building or structure, where that work will go deeper than the neighbour's foundations; or excavate, or excavate for and construct foundations for a new building or structure, within 6 metres of a neighbouring owner's building or structure, where that work will cut a line down downwards at 45° from the bottom of the neighbour's foundations, you must inform the Adjoining Owner or owners by serving a notice. "Adjoining Owners" may include your next-but-one neighbour if they have foundations within 6 metres. The notice must state whether you propose to strengthen or safeguard the foundations of the building or structure belonging to the Adjoining Owner. Plans and sections showing the location and depth of the proposed excavation or foundation and the location of any proposed building must accompany the notice.

The Act contains no enforcement procedures for failure to serve a notice. However, if you start work without having first given notice in the proper way, Adjoining Owners may seek to stop your work through a court injunction or seek other legal redress.

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NOTE: THE CLIENT IS ADVISED TO READ THE PARTY WALL ACT 1996 FULLY FOR EXAMPLES OF NOTICES SERVED AND FOR FURTHER INFORMATION WITH REGARDS TO THE ABOVE.

Approved Document P (Electrical Safety)

All Electrical Work to which the Requirements of Part P (Electrical Safety) apply, will be designed, installed, inspected and tested by a person competent to do so. Prior to completion of works the Local Authority must be satisfied that either: An Electrical Installation certificate issued under a "Competent Persons" scheme has been issued or Appropriate certificates and forms defined in BS 7671 (as amended) have been submitted that confirm that the work has been inspected and tested by a "competent person". A "competent person" will have a sound knowledge and suitable experience relevant to the nature of the work undertaken and to the technical standards set out in BS 7671, be fully versed in the inspection and testing procedures contained in the regulations and employ adequate testing equipment.

NOTE: THE ELECTRICAL LAYOUT SHOWN IS FOR BUILDING REGULATIONS SUBMISSION ONLY.

THE BUILDING INSPECTOR MUST BE INFORMED OF ANY CHANGES TO THE LAYOUT PRIOR TO WORKS COMMENCING AND WORKS TO BE CARRIED OUT BY A COMPETENT PERSON AS DESCRIBED ABOVE.

CONTRACTOR TO AGREE POSITION OF ELECTRICAL ITEMS AND RADATORS WITH CLIENT PRIOR TO WORK COMMENCING

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GENERAL NOTES

1. FOUNDATIONS: 225mm min thickness, strip foundations to project 150mm min either side of supported wall. Provide 750mm min cover to foundations. Foundations to be min 900mm to bottom of strip footing and taken down to level below level of any drains passing under or immediately adjacent to the building. Although strip foundations have been shown on the drawing, these may not be appropriate and are for illustrative purposes only. Foundations to suit conditions to the satisfaction of the Local Authority once full test has been done. Alternative Foundations to be designed by Structural Engineer.

Concrete mixes to be in accordance with BS 6800 - 1.

CONVENTIONS RELATING TO THE GROUND

There should not be:

a. non-engineered fill (as described in BRE Digest 427) or wide variation in ground conditions within the loaded area, nor

b. weaker or more compressible ground at such a depth below the foundation as could impair the stability of the structure.

2. Where new foundations arise in vicinity of old foundations, existing should be fully grubbed up and new foundations laid at least the same depth.

3. All exposed timbers to be treated with a suitable preservative to BS 1282:1975.

4. All new cavities to be closed with 9mm sulpax, all new cavities to be filled with existing.

5. All new drains to be Hephworth supervised and to be bedded and surrounded in min. 150mm pea gravel. 100mm diameter drains to fall in 40. 150mm diameter drains to fall in 60. New drains to be encased in min 150mm concrete where they pass under new buildings. All existing drains found not to be in use to be capped and sealed in concrete. 150mm pre-cast concrete linings inserted where new drains pass through external walls. Soil and vent pipes to be 100mm U.P.V.C. 40mm diameter U.P.V.C. waste pipes to showings, sinks and baths with 40mm diameter to basins. S.V.P. to be taken up to a ridge terminal or roof vent the outlet or otherwise as noted on the plans. Provide rodding eyes or removable traps to give access to all traps of the soil system. All traps are to be 75mm deep sealed air-vent traps. All the plumbing installations are to comply with BS 5572. All boating in for concealed service pipes should be sealed on floor and ceiling levels, and service pipes which penetrate or project may follow construction or voids. (Refer to item D of diagram 4 of the Approved Document L1: Deep flow gutters and 64 75mm diameter P.V.C. rainwater pipes.

6. Insulated D.C.'s inserted to all head, jambs and cills of new external openings or thermatec closers

7. All disused surfaces to be made good.

8. All new gas water pipes to trapped gullys.

9. 75 x 100mm wallplate to strapped to wall at 2m centres with 38 x 6mm mild steel straps.

10. Opening lights to be min 1200h total floor plan area.

11. All glazing to critical zones to be toughened or laminated to BS 6206. All glass to doors within 1500mm of finished floor level and within 300mm of either side of doors and where greater than 250mm wide max 0.5m in doors, and to screens/ windows within 800mm of finished floor level.

12. Sashlocks to be noted on plan to comply with BS440, BS5950 & be encased in 2 layers of 12.5mm plasterboard with angle beads and 5mm plaster coat to give 1/2 hour fire resistance. Linings to have minimum 150mm end bearings at each end or as specified by Structural Engineer or steel manufacturer.

Canvly tray to be fitted to linings with external wall with stop ends and weepholes at each end and @ 900mm cts. Loadbearing internal walls to be 100mm concrete blockwork.

13. D.C.'s to outer leaf to be min 150mm above ground level and at slab/door level to inner leaf.

14. Facing brickwork/stonework to extend min 2 courses below ground level.

15. New concrete linings over new openings to BS5977 Part 2: 1986 (150mm or 225mm) deep where shown.

16. Stainless steel wall ties to be spaced at 750mm centres horizontally staggered and 400mm centres vertically. Wall ties to comply with BS 1224:1979 and to have proprietary (over) running clips to secure the insulation to the inner leaf. Jambes to be built solid by returning the blockwork onto 150mm wide vertical D.P.C. Provide additional wall ties at 225mm vertical centres around door/ window openings and to movement joints. Cavities be closed at eaves level to comply with Building Regulations.

17. Nitches and holes to timber plates to be within the following limits: notches - no deeper than 0.125 times depth of joist and not cut closer than 1/10 of the span, nor further away than 1/25 times the span. Holes - should be no greater diameter than 1/12.5 times the depth of joist should be drilled at the neutral axis, and should be not less than 3 diameters' centre to centre apart, and be located between 0.25 and 0.4 times span from the support.

No notches or holes to be cut in roof rafters, other than supports where the rafter may be butt-jointed to a depth not exceeding 1/3 the rafter depth.

18. All pipework incorporated in the water/ heating system, that is situated in an unheated space is to be surrounded in 40mm of insulating material (min conductivity 0.045W/mK).

19. All masonry work to comply with BS 5628: P3.

20. Concrete blocks to BS 6732. Manufactured stone complying with BS 6457.

21. Mortar. Selection of mortar used below dip to be in accordance with BS5628 Part 3.

22. Supabase-resisting cement to be used where recommended by brick manufacturer and where sulphates are present in the ground.

23. DPM below slab to BS 8515, when the membrane is located below the slab a binding layer of sand should be provided. The continuity of the membrane as follows:

tops of polyethylene should be 300mm and joints sealed, where necessary membranes beneath slab should link with wall dips

24. STAPCASE Equal risers (Max riser 220mm) Equal risers (Min going 220mm) Min Going to Tapered treads of 50mm. 2000mm headroom in stair measured along pitch line. Max pitch of stair 42 degrees. Handrail between 900mm and 1000mm above pitch line. No gap in balustrading to allow the passage of 100 diameter sphere.

25. Fuses (if applicable)

Fuses blocks to be inserted into new leaf of external wall in locations shown on plans. Fuse line with max. 45 degree (30 degree preferred), offset at base, bedded in cement mortar grout to comply with B.S. 1181: 1971. All floor and roof timbers will be trimmed 40mm clear from the outer face of chimneys and flues.

26. Chases.

Vertical chases should not be deeper than 1/3 of the wall thickness or, in cavity walls, 1/5 of the thickness of the leaf.

Horizontal chases should not be deeper than 1/6 of the thickness of the leaf of the wall.

Chases should not be so positioned as to impair the stability of the wall, particularly where hollow blocks are used.

27. All workmanship and materials to comply with Building Regulations, British Standards, Codes of Practice requirements. All materials to be fixed, applied or mixed in accordance with manufacturers instructions or specifications. All materials shall be suitable for their purpose. The contractor shall take into account everything necessary for the proper execution of the works, to the satisfaction of the "inspector" whether or not indicated on the drawing. Sample of external materials to be submitted to Local Authority for approval.

28. The Builder is entirely responsible for all temporary works and for maintaining stability of the new and existing structures during work.

29. Contractor to visit site prior to commencement of work and check all dimensions and families himself with the site conditions. This drawing must then be checked and verified by the contractor prior to work commencing on site. An Encroachment by the building over the neighbouring boundary line. Client to obtain written permission from relevant bodies for any encroachment whatsoever if unavoidable.

30. Tackle Ventilation

Replacement window, background ventilators to be provided as follows: Habitable rooms - 5000mm² equivalent area Kitchen, Utility room and bathroom - 2500mm² equivalent area Addition of a habitable Room (not including a conservatory) in an existing building.

Background ventilators to be provided to new windows as follows: If the additional room is connected to an existing room that has no window openings to external air, the room can be ventilated through another room or conservatory if background ventilation is provided with ventilators - 8000mm² equivalent area to opening between rooms and to new windows. and Purge ventilation is provided comprising of 1 or more openings with min total floor area as follows: Windows - hinged or pivot window that opens 30° or more, or the Height x width of the opening part should be at least 1/10 of the room floor area. For a hinged or pivot window that opening less than 30° opening part should be at least 1/10 of the room floor area.

External doors the Height x width of opening part should be at least 1/10 of the room floor area.

If the room contains a combination of at least 1 external door and at least 1 external window, the opening parts may be added to achieve at least 1/10 of the room floor area.

Note: Background ventilation should be located at least 1700mm above floor level and need not be within the door frame.

Openings between habitable rooms and conservatories must be closable.

26. Unusable material

Vegetable matter such as turf and roots should be removed from the ground to be covered by the building at least to a depth to prevent later growth. The effects of roots close to the building also need to be assessed. Where mature trees are present on sites with shrinkable clays the potential damage arising from ground heave to services and floor slabs and oversite concrete should be assessed. Reference should be made to BRE Digest 298/2. Where soils and vegetation type would require significant quantities of soil to be removed. Reference should be made to BRE Digests 241/23 and 242/24, and to the BRE (Foundation for the Built Environment) report25.

Construction Design And Management Regulations 1994, (CDM REGULATIONS) And Health and Safety at Work etc. Act 1974

Designers' CDM Statement

The Client is respectfully reminded of his or her duties under the above act and referred to the Health and Safety Executive's Guidance note 39 'The Role of the Client'.

The Designs encompassed on this drawing are classed as simple construction using traditional methods and materials available to general builders. As such they do not present any unusual circumstances in their execution or risks which a competent builder could not be reasonably expected to know.

For alteration work requiring new openings in walls or the removal of existing walls, the builder is to follow the guidance in the Building Research Establishment Good Building Guides Nos 15 & 20 providing temporary support during work on openings in external walls and removing internal load bearing walls in other dwellings.

1. The Contractor shall ensure that he and all visitors to site are fully aware of these regulations and ensure full compliance with same and shall include for all necessary documentation

2. Contractor to provide all necessary scaffolding with edge protection to prevent persons falling or falling debris. Also to provide protection to adjoining properties along site boundary.

3. All necessary safety precautions to be taken when working at high level. i.e. using safety harness.

4. Contractor to investigate possible fire or redundant services within the site and any hazardous material that may be present. Refer to Avoiding danger from underground services, HSG 47 Control of Asbestos at Work Regulations 2002, Control of Substances Hazardous to Health Regulations 2002 and Dangerous Substances and Explosive Atmospheres Regulations 2002

5. All persons entering site to have all necessary protective clothing and head protection compliant with health and safety. Refer to Personal Protective Equipment at Work Regulations 1992 (as amended)

6. Clearing of windows to be accessible from inside if they are unable to be accessed from exterior

7. All necessary propping and support required for excavation of trenches, retaining walls and underpinning to be installed in accordance with a structural engineers details and specification.

8. Contractor to provide all necessary support to maintain stability of existing or neighbouring structures.

9. Danger of collapse to trenches caused by heavy machinery, working above or near.

10. Danger of persons falling into trenches.

11. Use of power tools and equipment. Refer to Provision and Use of Work Equipment Regulations 1982 and Electricity at Work Regulations 1989

12. Avoid chasing of walls for services.

13. Risk of working with glass. Risks of working at height and from falling objects.

14. Risks of working with dust/cement - protective gear/earthing protection to be used. Refer to Control of Substances Hazardous to Health Regulations 2002

15. Precautions to be taken when lifting heavy materials/objects and beams into position above 20kg - use Adequate Lifting machinery. Refer to Lifting Operations and Lifting Equipment Regulations 1998, Manual Handling Operations Regulations 1992

16. Covering of roofs. All work to be carried out with due regard to health and safety regulations.

17. Risk of overhead power cables within and around the site.

18. Installation and use of flammable materials. Refer to Fire Precautions (Workplaces) Regulations 1997

19. Access into and out of site - traffic management into and out of site. Refer to Driving at Work - Managing work-related road safety, INDG 385

20. Precautions to be taken when working in confined spaces. Refer to Confined Spaces Regulations 1997 And Safe work in confined spaces, Approved Code of Practice, Regulations and Guidance L 101

21. The CONTRACTOR IS ADVISED OF THE FOLLOWING REGULATIONS APPLICABLE:

22. New Roads and Street Works Act 1991

23. Construction Health Safety and Welfare Regulations 1996

24. Health & Safety First Aid Regulations 1981

25. Health and Safety (Young Persons) Regulations 1987

26. Ionising Radiation Regulations 1989

27. Management of Health and Safety at Work Regulations 1999

28. Noise at Work Regulations 1989

29. Pesticides Safety Regulations 1986

30. Pressure Systems Safety Regulations 2000

31. Reporting of Injuries Diseases and Dangerous Occurrences Regulations 1995

32. Supply of Machinery (Safety) Regulations 1992 (as amended)

33. Workplace (Health, Safety and Welfare) Regulations 1992

34. Guidance

35. Managing Health and Safety in Construction, Approved Code of Practice and Guidance, HSG 224

36. Successful health and safety management, HSG 65

37. Vibration Solutions, HSG 170

What does the Party Wall Act say if I want to build up against or astride the boundary line?

If you plan to build a party wall or party fence wall outside the boundary line, you must inform the Adjoining Owner by serving a notice. You must also inform the Adjoining Owner by serving a notice if you plan to build a wall wholly on your own land but up against the boundary line.

The Act contains no enforcement procedures for failure to serve a notice. However, if you start work without having first given notice in the proper way, Adjoining Owners may seek to stop your work through a court injunction or seek other legal redress.

New law in advance do I have to serve the notice?

At least one month before the planned starting date for building the wall. The notice is only valid for a year, so do not serve it too long before you wish to start.

What happens after I serve notice about building astride the boundary line?

If the Adjoining Owner agrees within 14 days to the building of a new wall outside the boundary line, the work (as agreed) may go ahead. The expense of building the wall may be shared between the owners where the benefits and use of that wall will be shared. The agreement must be in writing and should record details of the location of the wall, the allocation of costs and any other agreed conditions. If the Adjoining Owner does not agree, it is writing within 14 days, to the proposed new wall outside the boundary line, you must build the wall wholly on your own land, and wholly at your own expense. However, you have a right to place necessary bedding for the new wall under your neighbour's land subject to compensating for any damage caused by building the wall or laying the foundations. There is no right to place reinforced concrete under your neighbour's land without their express written consent.

You may start work one month after your notice was served. What does the Act say if I want to excavate near neighbouring buildings?

If you plan to excavate, or excavate and construct foundations for a new building or structure, within 3 metres of a neighbouring owner's building or structure, where that work will go deeper than the neighbour's foundations; or excavate, or excavate for and construct foundations for a new building or structure, within 6 metres of a neighbouring owner's building or structure, where that work will cut a line down downwards at 45° from the bottom of the neighbour's foundations, you must inform the Adjoining Owner or owners by serving a notice. "Adjoining Owners" may include your next-but-one neighbour if they have foundations within 6 metres. The notice must state whether you propose to strengthen or relinquish the foundations of the building or structure belonging to the Adjoining Owner. Plans and sections showing the location and depth of the proposed excavation or foundation and the location of any proposed building must accompany the notice.

The Act contains no enforcement procedures for failure to serve a notice. However, if you start work without having first given notice in the proper way, Adjoining Owners may seek to stop your work through a court injunction or seek other legal redress.

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NOTE: THE CLIENT IS ADVISED TO READ THE PARTY WALL ACT 1996 FULLY FOR EXAMPLES OF NOTICES SERVED AND FOR FURTHER INFORMATION WITH REGARDS TO THE ABOVE.

Approved Document P (Electrical Safety)

All Electrical Work to which the Requirements of Part P (Electrical Safety) apply, will be designed, installed, inspected and tested by a person competent to do so. Prior to completion of works the Local Authority must be satisfied that either: An Electrical Installation certificate issued under a "Competent Persons" scheme has been issued or Appropriate certificates and forms defined in BS 7671 (as amended) have been submitted that confirm that the work has been inspected and tested by a "competent person". A "competent person" will have a sound knowledge and suitable experience relevant to the nature of the work undertaken and to the technical standards set out in BS 7671, be fully versed in the inspection and testing procedures contained in the regulations and employ adequate testing equipment.

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THE BUILDING INSPECTOR MUST BE INFORMED OF ANY CHANGES TO THE LAYOUT PRIOR TO WORKS COMMENCING AND WORKS TO BE CARRIED OUT BY A COMPETENT PERSON AS DESCRIBED ABOVE.

CONTRACTOR TO AGREE POSITION OF ELECTRICAL ITEMS AND RADATORS WITH CLIENT PRIOR TO WORK COMMENCING

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Client:	BUCKLEY ROAD INDUSTRIAL ESTATE, ROCHDALE
Address:	BUCKLEY ROAD INDUSTRIAL ESTATE, ROCHDALE
Project:	NEW DEVELOPMENT - 1x LARGE COMMERCIAL UNIT
Dwg Title:	PLANNING- PROPOSED SITE PLAN
Date:	NOVEMBER 2023
Job No:	11.23.658
Drawn:	D.L.
Scale:	1 : 500
Dwg No:	PLO1
Checked:	D.L.

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PROPOSED SITE PLANscale 1:500



GENERAL NOTES

1. FOUNDATIONS 225mm min thickness, strip foundations to project 150mm min either side of supported wall. Provide 750mm min cover to foundations. Foundations to be min 900mm to bottom of strip footing and taken down to level below level of any drains passing under or immediately adjacent to the building. Although strip foundations have been shown on the drawing these may not be appropriate and are for illustrative purposes only. Foundations to suit conditions to the satisfaction of the Local Authority once final has been dug. Alternative Foundations to be designed by Structural Engineer.

Concrete mixes to be in accordance with BS 8500 - 1.

CONDITIONS RELATING TO THE GROUND

There should not be:

- a non-engineered fill (as described in BRE Digest 427) or wide variation in ground conditions within the loaded area, nor
- weaker or more compressible ground at such a depth below the foundation as could impair the stability of the structure.

2. Where new foundations arise in vicinity of old foundations, existing should be fully grubbed up and new foundations laid at least the same depth.

3. All exposed timbers to be treated with a suitable preservative to BS 1282:1975.

4. All new cavities to be closed with 9mm sulpak, all new cavities to be filled with existing.

5. All new drains to be Hepworth supervised and to be bedded and surrounded in min. 150mm pea gravel. 100mm diameter drains to fall in 40, 150mm diameter drains to fall in 60. New drains to be encased in min 150mm concrete where they pass under new buildings. All existing drains found not to be in use to be capped and sealed in concrete. 150mm pre-cast concrete linings inserted where new drains pass through external walls. Soil and vent pipes to be 100mm U.P.V.C. 40mm diameter U.P.V.C. waste pipes to showers, sinks and baths with 40mm diameter to basins. S.V.P. to be taken up to a ridge terminal or roof vent the outlet or otherwise as noted on the plans. Provide rodding eyes or removable traps to give access to all traps of the soil system. All traps are to be 75mm deep sealed air-vent traps. All the plumbing installations are to comply with BS 5572. All boating in for concealed service pipes should be sealed on floor and ceiling levels, and service pipes which penetrate or project into hollow construction or voids, (Refer to item D of diagram 4 of the Approved Document L1. Deep flow gutters and (64.75mm diameter P.V.C. rainwater pipes).

6. Insulated D.P.C.'s inserted to all head, jambs and sills of new external openings or thermate close.

7. All disused surfaces to be made good.

8. All new rain water pipes to trapped gutters.

9. 75 x 100mm wallplate to strapped to wall at 2m centres with 38 x 6mm mild steel straps.

10. Opening lights to be min 1200h total floor plan area.

11. All glazing to critical zones to be toughened or laminated to BS 6206. 6 glass to doors within 1500mm of finished floor level and within 300mm of either side of doors and where greater than 250mm wide max 0.5mm in doors, and to screens/ windows within 800mm of finished floor level.

12. Sashlocks to noted on plan to comply with BS44, BS5950 & be encased in 2 layers of 12.5mm plasterboard with angle beads and 5mm plaster coat to give 1/2 hour fire resistance. Linings to have minimum 150mm end bearings at each end or as specified by Structural Engineer or steel manufacturer.

13. D.P.C.'s to outer leaf to be min 150mm above ground level and at slab/floor level to inner leaf.

14. Facing brickwork to extend min 2 courses below ground level.

15. New concrete lintels over new openings to BS5977 Part 2:1996 (150mm or 225mm) deep where shown.

16. Stainless steel wall ties to be spaced at 750mm centres horizontally staggered and 400mm centres vertically. Wall ties to comply with BS 1224:1979 and to have proprietary (over) running clips to secure the insulation to the inner leaf. Joints to be built solid by returning the brickwork onto 150mm wide vertical P.C. Provide additional wall ties at 225mm vertical centres around door/ window openings and to movement joints. Cavities be closed at eaves level to comply with Building Regulations.

17. Noches and holes to timber plates to be in the following limits: notches - no deeper than 0.125 times depth of joist and not cut closer than 1/10 of the span, nor further away than 1/25 times the span. Holes - should be no greater diameter than 1/25 times the depth of joist should be drilled at the neutral axis, and should be not less than 3 diameters (centre to centre) apart, and be located between 0.25 and 0.4 times span from the support.

No notches or holes to be cut in roof rafters, other than supports where the rafter may be butt-jointed to a depth not exceeding 1/33 the rafter depth.

18. All pipework incorporated in the water / heating system, that is situated in an unheated space is to be surrounded in 40mm of insulating material (min conductivity 0.045W/mK).

19. All masonry work to comply with BS 5628: Part 3.

20. Mortar. Selection of mortar used below dpc to be in accordance with BS5628 Part 3.

21. DPM below slab to BS 8515, when the membrane is located below the slab a binding layer of sand should be provided. The continuity of the membrane as follows:

- laps in polyethylene should be 300mm and joints sealed, where necessary membranes beneath slab should link with wall dpc's

22. STAIRCASE Equal risers (Max rise 220mm) Equal risers (Min going 220mm) Min Going to Tapered treads of 50mm, 200mm headroom in stair measured along pitch line. Max pitch of stair 42 degrees. Handrail between 900mm and 1000mm above pitch line. No gap in balustrading to allow the passage of 100 diameter sphere.

23. **Floors (if applicable)**

Fuses bricks to be inserted into inner leaf of external wall in locations shown on plans. Fuse line with max. 45 degree (30 degree preferred), offset at base, bedded in cement mortar grout to comply with B.S. 1181: 1971. All floor and roof timbers will be trimmed 40mm clear from the outer face of chimneys and flues.

24. Chases.

Vertical chases should not be deeper than 1/10 of the wall thickness or, in cavity walls, 1/15 of the thickness of the leaf.

Horizontal chases should not be deeper than 1/6 of the thickness of the leaf of the wall.

Chases should not be so positioned as to impair the stability of the wall, particularly where hollow blocks are used.

25. All workmanship and materials to comply with Building Regulations, British Standards, Codes of Practice requirements. All materials to be fixed, applied or mixed in accordance with manufacturers instructions or specifications. All materials shall be suitable for their purpose. The contractor shall take into account everything necessary for the proper execution of the works, to the satisfaction of the "inspector" whether or not indicated on the drawing. Sample of external materials to be submitted to Local Authority for approval.

26. The Builder is entirely responsible for all temporary works and for maintaining stability of the new and existing structures during work.

27. Contractor to visit site prior to commencement of work and check all dimensions and familiarise himself with the site conditions. This drawing must then be checked and verified by the contractor prior to work commencing on site. No encroachment by the building over the neighbouring boundary line. Client to obtain written permission from relevant bodies for any encroachment whatsoever if unavoidable.

28. **Ticks Ventilation**

Replacement window, background ventilators to be provided as follows:

- Habitable rooms - 5000mm² equivalent area
- Kitchen, Utility room and bathroom - 2500mm² equivalent area
- Addition of a habitable Room (not including a conservatory) to an existing building.

Background ventilators to be provided to new windows as follows:

- If the Additional room is connected to an existing room that has no window openings to external air, the room can be ventilated through another room or conservatory if background ventilation is provided with ventilators - 8000mm² equivalent area to opening between rooms and to new windows, and Purge ventilation is provided comprising of 1 or more openings with min total floor area as follows:

- Windows - hinged or pivot window that opens 30° or more, or the Height x width of the opening part should be at least 1/10 of the room floor area.
- For a hinged or pivot window that opens less than 30° opening part should be at least 1/10 of the room floor area.
- External doors the Height x width of opening part should be at least 1/10 of the room floor area.
- If the room contains a combination of at least 1 external door and at least 1 external window, the opening parts may be added to achieve at least 1/10 of the room floor area.

Note: Background ventilation should be located at least 1700mm above floor level and need not be within the door frame.

Openings between habitable rooms and conservatories must be closable.

29. **Unsuitable material**

Vegetable matter such as turf and roots should be removed from the ground to be covered by the building at least to a depth to prevent later growth. The effects of roots close to the building also need to be assessed. Where mature trees are present or sites with shrinkable clays the potential damage arising from ground heave to services and floor slabs and oversite concrete should be assessed. Reference should be made to BRE Digest 298/2. Where soils and vegetation type would require significant quantities of soil to be removed, reference should be made to BRE Digests 241/23 and 242/24, and to the BRE (Foundation for the Built Environment) report25.

Construction Design And Management Regulations 1994, (CDM REGULATIONS) And Health and Safety at Work etc. Act 1974

The Client is respectfully reminded of his or her duties under the above act and referred to the Health and Safety Executive's Guidance note 39 'The Role of the Client'.

The Designs encompassed on this drawing are classed as simple construction using traditional methods and materials available to general builders. As such they do not present any unusual circumstances in their execution or risks which a competent builder could not be reasonably expected to know.

For alteration work requiring new openings in walls or the removal of existing walls, the builder is to follow the guidance in the Building Research Establishment Good Building Guides Nos 15 & 20 providing temporary support during work on openings in external walls and removing internal load bearing walls in older dwellings.

1. The Contractor shall ensure that he and all visitors to site are fully aware of these regulations and ensure full compliance with same and shall include for all necessary documentation.

2. Contractor to provide all necessary scaffolding with edge protection to prevent persons falling or falling debris. Also to provide protection to adjoining properties along site boundary.

3. All necessary safety precautions to be taken when working at high level. i.e. using safety harness.

4. Contractor to investigate possible use of redundant services within the site and any hazardous material that may be present. Refer to Assessing danger from underground services, HSG 47, Control of Asbestos at Work Regulations 2002, Control of Substances Hazardous to Health Regulations 2002 and Dangerous Substances and Explosive Atmospheres Regulations 2002.

5. All persons entering site to have all necessary protective clothing and head protection compliant with health and safety. Refer to Personal Protective Equipment at Work Regulations 1992 (as amended).

6. Clearing of windows to be accessible from inside if they are unable to be accessed from exterior.

7. All necessary propping and support required for excavation of trenches, retaining walls and underpinning to be installed in accordance with a structural engineers details and specification.

8. Contractor to provide all necessary support to maintain stability of existing or neighbouring structures.

9. Danger of collapse to trenches caused by heavy machinery, working above or near.

10. Danger of persons falling into trenches.

11. Use of power tools and equipment. Refer to Provision and Use of Work Equipment Regulations 1992 and Electricity at Work Regulations 1989.

12. Electricity Safety, Quality and Continuity Regulations 2002.

13. Avoid chasing of walls for services.

14. Risk of working with glass. Risks of working at height and from falling objects.

15. Risks of working with dust cement - protective gear/breathing protection to be used. Refer to Control of Substances Hazardous to Health Regulations 2002.

16. Precipitation to be taken when lifting heavy materials objects and beams into position above 20kg - use Adequate Lifting machinery. Refer to Lifting Operations and Lifting Equipment Regulations 1998, Manual Handling Operations Regulations 1992.

17. Covering of roofs. All work to be carried out with due regard to health and safety regulations.

18. Risk of overhead power cables within and around the site.

19. Installation and use of flammable materials. Refer to Fire Precautions (Workplaces) Regulations 1997.

20. Access into and out of site - traffic management into and out of site. Refer to Driving at Work - Managing work-related road safety, INDG 380.

21. Precautions to be taken when working in confined spaces. Refer to Confined Spaces Regulations 1997 and Safe work in confined spaces, Approved Code of Practice, Regulations and Guidance L 101.

22. THE CONTRACTOR IS ADVISED OF THE FOLLOWING REGULATIONS APPLICABLE:

- 21. New Roads and Street Works Act 1991
- 22. Construction Health Safety and Welfare Regulations 1996
- 23. Health & Safety First Aid Regulations 1981
- 24. Health and Safety (Young Persons) Regulations 1997
- 25. Ionising Radiation Regulations 1989
- 26. Management of Health and Safety at Work Regulations 1989
- 27. Noise at Work Regulations 1989
- 28. Pigeon's Safety Regulations 1996
- 29. Pressure Systems Safety Regulations 2000
- 30. Reporting of Injuries Diseases and Dangerous Occurrences Regulations 1995
- 31. Supply of Machinery (Safety) Regulations 1992 (as amended)
- 32. Workplace (Health, Safety and Welfare) Regulations 1992
- 33. Managing Health and Safety in Construction: Approved Code of Practice and Guidance: HSG 224
- 34. Successful health and safety management: HSG 65
- 35. Vibration Solutions: HSG 170

What does the Party Wall Act say if I want to build up against or astride the boundary line?

If you plan to build a party wall or party fence wall outside the boundary line, you must inform the Adjoining Owner by serving a notice. You must also inform the Adjoining Owner by serving a notice if you plan to build a wall wholly on your own land but up against the boundary line.

The Act contains no enforcement procedures for failure to serve a notice. However, if you start work without having first given notice in the proper way, Adjoining Owners may seek to stop your work through a court injunction or seek other legal redress.

How long in advance do I have to serve the notice?

At least one month before the planned starting date for building the wall. The notice is only valid for a year, so do not serve it too long before you wish to start.

What happens after I serve notice about building astride the boundary line?

If the Adjoining Owner agrees within 14 days to the building of a new wall outside the boundary line, the work (as agreed) may go ahead. The expense of building the wall may be shared between the owners where the benefits and use of that wall will be shared. The agreement must be in writing and should record details of the location of the wall, the allocation of costs and any other agreed conditions. If the Adjoining Owner does not agree, it is within 14 days, to the proposed new wall outside the boundary line, you must build the wall wholly on your own land, and wholly at your own expense. However, you have a right to place necessary footings for the new wall under your neighbour's land subject to compensating for any damage caused by building the wall or laying the foundations. There is no right to place reinforced concrete under your neighbour's land without their express written consent.

You may start work one month after your notice was served.

What does the Act say if I want to excavate near neighbouring buildings?

If you plan to excavate, or excavate and construct foundations for a new building or structure, within 3 metres of a neighbouring owner's building or structure, where that work will go deeper than the neighbour's foundations, or excavate, or excavate for and construct foundations for a new building or structure, within 6 metres of a neighbouring owner's building or structure, where that work will cut a line down downwards at 45° from the bottom of the neighbour's foundations, you must inform the Adjoining Owner or owners by serving a notice. "Adjoining Owners" may include your next-but-one neighbour if they have foundations within 6 metres. The notice must state whether you propose to strengthen or safeguard the foundations of the building or structure belonging to the Adjoining Owner. Plans and sections showing the location and depth of the proposed excavation or foundation and the location of any proposed building must accompany the notice.

The Act contains no enforcement procedures for failure to serve a notice. However, if you start work without having first given notice in the proper way, Adjoining Owners may seek to stop your work through a court injunction or seek other legal redress.

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NOTE: THE CLIENT IS ADVISED TO READ THE PARTY WALL ACT 1996 FULLY FOR EXAMPLES OF NOTICES SERVED AND FOR FURTHER INFORMATION WITH REGARDS TO THE ABOVE.

Approved Document P (Electrical Safety).

All Electrical Work to which the Requirements of Part P (Electrical Safety) apply, will be designed, installed, inspected and tested by a person competent to do so. Prior to completion of works the Local Authority must be satisfied that either, An Electrical Installation certificate issued under a "Competent Persons" scheme has been issued or Appropriate certificates and forms defined in BS 7671 (as amended) have been submitted that confirm that the work has been inspected and tested by a "competent person". A "competent person" will have a sound knowledge and suitable experience relevant to the nature of the work undertaken and to the technical standards set out in BS 7671, be fully versed in the inspection and testing procedures contained in the regulations and employ adequate testing equipment.

NOTE: THE ELECTRICAL LAYOUT SHOWN IS FOR BUILDING REGULATIONS SUBMISSION ONLY.

THE BUILDING INSPECTOR MUST BE INFORMED OF ANY CHANGES TO THE LAYOUT PRIOR TO WORKS COMMENCING AND WORKS TO BE CARRIED OUT BY A COMPETENT PERSON AS DESCRIBED ABOVE.

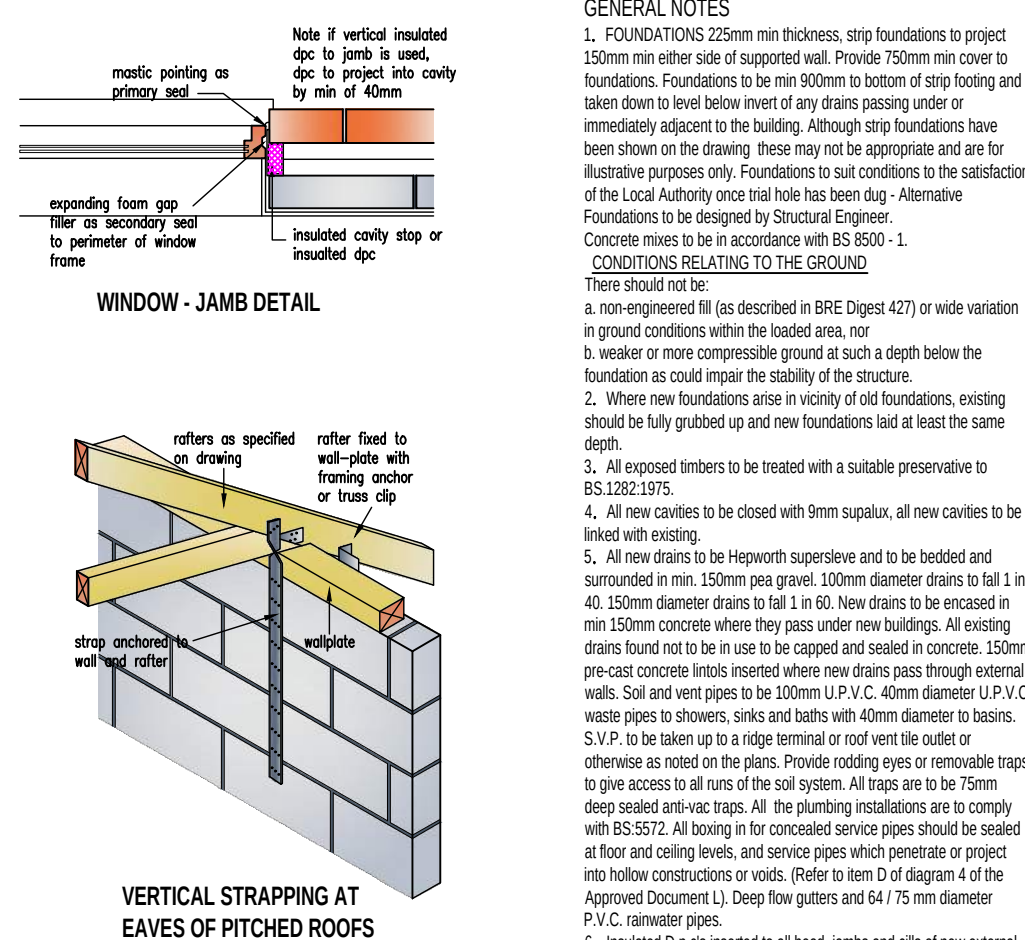
CONTRACTOR TO AGREE POSITION OF ELECTRICAL ITEMS AND RADATORS WITH CLIENT PRIOR TO WORK COMMENCING.

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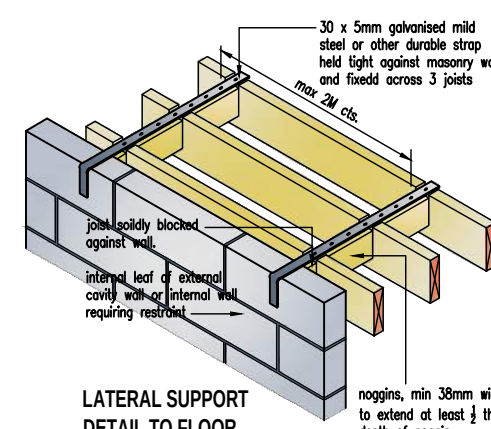
Mob: 07805 560652
e-mail: tdmesign@live.co.uk

Client:	BUCKLEY ROAD INDUSTRIAL ESTATE, ROCHDALE
Address:	BUCKLEY ROAD INDUSTRIAL ESTATE, ROCHDALE
Project:	NEW DEVELOPMENT - 1x LARGE COMMERCIAL UNIT
Dwg Title:	PLANNING- PROPOSED SITE PLAN
Date:	NOVEMBER 2023
Job No:	11.23.658
Drawn:	D.L.
Scale:	1 : 200
Dwg No:	PLO2
Checked:	D.L.

PROPOSED SITE PLANscale 1:200



VERTICAL STRAPPING AT EAVES OF PITCHED ROOFS



LATERAL SUPPORT DETAIL TO FLOOR

noggin, min 30mm x to extend at least $\frac{1}{2}$ depth of noggin

blockwork inner leaf

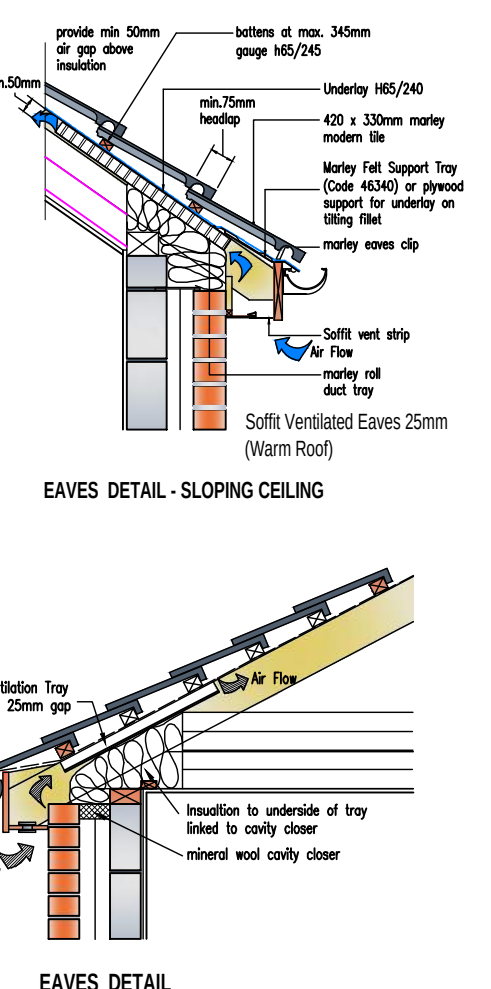
nail

brick outer leaf

EFFECTIVE STRAPPING AT GABLE WALL

strap lapped over uncord block

noggin nailed on drawing

[illegible]

GENERAL NOTES:

1. FOUNDATIONS 150mm min thickness. Provide foundations to project 150mm min either side of supported wall. Provide 750mm min cover to foundations. Foundations to be min 900mm from top of binding and taken down to level below grade of any drains passing under or over.
2. CONCRETE SHALL BE TO BS EN 12620 AND SHALL BE COMPACTED AS SHOWN ON THE DRAWING. THERE MAY NOT BE APPROPRIATE ARE FOR ILLUSTRATIVE PURPOSES. FOUNDATION TO SUT CONDITIONS IN THE SATISFACTION OF THE LOCAL AUTHORITY once it has been given - Alternative concrete may be used if approved by the Local Authority.
3. CONCRETE MUST BE IN ACCORDANCE WITH BS 8500 - 1

28. Unsuitable material

Vegetative material such as stumps and roots should be removed from the ground to be covered by the building at least to a depth to prevent later growth. The effects of roots close to the building also need to be assessed. Where mature trees are present, consultation with the local authority will be required. If there are any trees or shrubs which have to be removed, the contractor shall have to remove services and floor slabs and overhead conductors to be assessed. Reference should be made to BRE Digest 28822. Where soils and vegetation type would require significant quantities of soil to be replaced, and the Foundation should be made to BSE Digest 28242 and 28424, and to the BRE (Foundation for the Built Environment) report2825.

There should not be:

- a. non-engineered fill (as described in BRE Digest 427) or wide variation in ground conditions within the loaded area, nor
- b. weaker or more compressible ground at such a depth below the foundation as could impair the stability of the structure.

2. Where new foundations exist in vicinity of old foundations, existing

Construction Design And Management Regulations 1994, (CDM REGULATIONS) And Health and Safety at Work etc. Act 1974
Designers' CDM Statement

The Client is respectfully reminded of his or her duties under the above act and referred to the Health and Safety Executive's Guidance note 39 "The Role of the Client".

should be fully grubbed up and new foundations laid at least the same depth.

4. All exposed timbers to be treated with a suitable preservative to BS 1282:1975.
5. All new castings to be treated with 9mm sulphur, and all new castles to be linked with castles.
6. All new drains to be Hopwood superdome and to be bedded and surrounded in min. 150mm gap gravel. 100mm diameter drains to fall in 40. 150mm diameter drains to fall in 1:60. New drains to be encased in 150mm concrete.

The Designs encompassed on this drawing are classed as simple construction using traditional methods and materials available to general builders. As such they do not present any unusual circumstances in their execution or risks which a competent builder could not be reasonably expected to know.

For alteration work requiring new openings in walls or the removal of existing walls, the builder is to follow the guidance in the Building Regulations Establishment Good Building Guide Notes 15:5 20 providing temporary support during the works. Changes in internal walls and removing internal load bearing walls is other applications.

1. The Contractor shall ensure that he and all visitors to the site are fully aware of these regulations and ensure full compliance with same and shall include for all necessary documentation.
2. Contractor to provide all necessary scaffolding with edge protection to prevent persons falling or falling debris. Also to provide protection to adjoining properties along site boundary.
3. All necessary safety precautions to be taken when working at high level, i.e. using safety harness.

with BS 5572. All bowing in for concealed service pipes should be sealed at the floor and ceiling levels, and service pipes which penetrate or project into hollow constructions or voids. (Refer to item D of diagram 4 of the Approved Document L1 Deep floor gutters and 64/75 mm diameter P.V.C. rainwater pipes.

6. Insulated D.P.C. is inserted to all heads, jambs and sills of new external openings or verminable closures

7. All disturbed surfaces to be made good.

8. All new rain water pipes to trapped gutleys.

9. 75 x 100mm wallplate to strapped to wall at 2m centres with 38 x 6mm

protection compliant with health and safety. Refer to Personal Protective Equipment at Work Regulations 1992 (as amended)

6. Cleaning of windows to be accessible from inside if they are unable to be accessed from exterior

7. All necessary provision and support required for protection of tape

10. Opening lights to be min 1/20th total floor plan area.

11. All glazing to critical zones to be toughened or laminated to BS 6206.
i.e glass to doors within 1500mm of finished floor level and within 300mm of either side of doors and where greater than 250mm wide max 0.5msq

- in doors, and to several windows within 800mm of finished floor level.
- 12. Steelwork as noted on plan to comply with BS449, BS5586 to be encased in 2 layers of 125mm plasterboard with angle beads and 3mm plaster each side to give 125mm fire resistance. Lettings to have minimum 150mm end bearings at each end or as specified by Structural Engineer or steel manufacturer.
- 13. Carefully may be fixed to lintels within external wall with stop ends and weepholes at each end and at 900mm c/s. Lining internal walls to 100mm.

13. D.p.c.s to outer leaf to be min 150mm above ground level and at slab/floor level to inner leaf.

14. Facing brickwork/stonework to extend min 2 courses below ground level.

15. Risks of working with dust (cement - protective gear/breathing protection to be used. Refer to Control of Substances Hazardous to Health Regulations 2002.

16. Precautions to be taken when lifting heavy materials (objects and beams into position above 20kg - use Adequate lifting machinery. Refer to Lifting Operations and Lifting Equipment Regulations 1998. Manual Handling

15. New concrete lintols over new openings to BS9191 Part 2 1986 (150mm or 225mm) depth where shown.	Specialist design and construction to BS 5958:1992 <u>Operations Regulations 1992</u>
16. Stainless steel wall ties to be spaced at 750mm centres horizontally staggered and 450mm centres vertically. Wall ties to comply with BS 1234:1978 and to have proprietary Upvc retaining clips to secure the	16. Covering of roofs. All work to be carried out with due regard to health and safety regulations. 17. Risk of overhead power cables within and around the site.

insulation to the inner leaf. Joints to be built solid by returning the blockwork onto 150mm wide vertical D.P.C. Provide additional wall ties at 225mm vertical centres around door / window openings and to movement joints. Cavities be closed at eaves level to comply with Building Regulations

18. Installation and use of flammable materials. Refer to [Fire Precautions \(Workplace\) Regulations 1997](#)

19. Access into and out of site - traffic management into and out of site. Refer to [Driving at Work - Managing work-related road safety, NDG 382](#)

20. Precautions to be taken when Working in confined spaces. Refer to

17. Notches and holes to timber joists to be within the following limits.
notches - no deeper than 0.125 times depth of joist and not cut closer than 0.07 of the span, nor further away than 0.25 times the span.
Holes - should be no greater diameter than 0.25 times the depth of joist.
Should be drilled at the central axis, and should be no more than 2

23. Construction Health Safety and Welfare Regulations 1996

18. All pipework incorporated in the water / heating system, that is situated in an unheated space is to be surrounded in 40mm of insulating material (min conductivity 0.045W/mK)

19. All masonry work to comply with BS 5628: P3.

26. Management of Health and Safety at Work Regulations 1999

27. Noise at Work Regulations 1989

28. Pipelines Safety Regulations 1996

29. Pressure Systems Safety Regulations 2000

30. Reporting of Injuries Diseases and Dangerous Occurrences Regulations

Clay bricks to BS 3921, Engineering bricks to BS 3921.	<u>1995</u>
Concrete bricks to BS 6073. Manufactured stone complying with BS 6457.	31. <u>Supply of Machinery (Safety) Regulations 1992 (as amended)</u>
20. Mortar: Selection of mortar used below dpc to be in accordance with BS5628: Part 3.	32. <u>Workplace (Health, Safety and Welfare) Regulations 1992</u>
Sulphate-resisting cement to be used where recommended by brick	<u>Guidance</u>
	33. <u>Managing Health and Safety in Construction Approved Code of Practice</u>

21. DPM below slab to BS 6515: when the membrane is located below the slab a binding layer of sand should be provided. The continuity of the membrane as follows:

up in polyethylene should be 300mm and joints sealed, where necessary, membranes beneath slab should link with wall dpc's

22. STAIRCASE Equal risers (Max rise 220mm) Equal risers (Min going 220mm) Min Going to Tapered treads of 50mm. 2000mm headroom to

What does the Party wall Act say if I want to build up against or astride the boundary line?
If you plan to build a party wall or party fence wall astride the boundary line, you

star measured along pitch line. Max pitch of star 42 degrees. Handrail between 900mm and 1000mm above pitch line. No gap in balustrading to allow the passage of 100 diameter sphere.

23. Flues (if applicable)
Flues blocks to be inserted into inner leaf of external wall in locations

shown on plans. Flue liner with max., 45 degree (30 degree preferred), offset at base, bedded in cement mortar grout to comply with B.S. 1181: 1971. All floor and roof timbers will be trimmed 40mm clear from the outer face of chimneys and flues.

24. Chases:

Vertical chases should not be deeper than 1/3 of the wall thickness or, in cavity walls, 1/3 of the thickness of the leaf.

Horizontal chases should not be deeper than 1/6 of the thickness of the leaf of the wall.

Give your wall a chance to acclimate to its climate, the stability of the wall

At least one month before the planned starting date for building the wall. The notice is only valid for a year, so do not serve it too long before you wish to start.

What happens after I serve notice about building astride the boundary line?

25. All workmanship and materials to comply with Building Regulations, British Standards, Codes of Practice requirements. All materials to be brand, specified or mixed in accordance with manufacturers instructions or

specifications. All materials shall be suitable for their purpose. The contractor shall take into account everything necessary for the proper execution of the works, to the satisfaction of the "Inspector" whether or not indicated on the drawing. Sample of external materials to be submitted to Local Authority for approval.

26. The Builder is entirely responsible for all temporary works and for maintaining stability of the new and existing structures during work.

27. Contractor to visit site prior to commencement of work and check all dimensions and familiarises himself with the site conditions. This drawing must then be checked and verified by the contractor prior to work

the wall wholly on your own land, and wholly at your own expense. However, you have a right to place necessary footings for the new wall under your neighbour's land subject to compensating for any damage caused by building the wall or joining the foundations. There is no right to place

[illegible]

Replacement windows, double-glazed ventilators to be provided as follows:

Habitable rooms - 5000mm² equivalent area

Kitchen, Utility room and bathroom - 2500mm² equivalent area

Addition of a habitable Room (not including a conservatory) to an existing building:

neighbouring buildings?

If you plan to excavate, or excavate and construct foundations for a new building or structure, within 3 metres of a neighbouring owner's building or structure, where that work will go deeper than the neighbour's foundations, you

Background ventilators to be provided to new windows as follows:
If the Additional room is connected to an existing room that has no window openings to external air, the room can be ventilated through another room or conservatory if background ventilation is provided with ventilators - 800mm² equivalent area to opening between rooms and to the neighbour's foundations, or excavate, or excavate for and construct foundations for a new building or structure, within 6 metres of a neighbouring owner's building or structure, where that work will cut a line drawn downwards at 45° from the bottom of the neighbour's foundations.

new windows, and Purge ventilation is provided comprising of 1 or more openings with min total floor area as follows:
Windows - hinged or pivot window that opens 30° or more, or the Height x width of the opening part should be at least 1/6th of the room floor area.
Fixed window or glazing panels that cannot be less than 20% window area.

For a ring of pivot window that opening less than 30" opening part should be at least 1/3 of the room floor area.
External doors the Height x width of opening part should be at least 1/3 of the room floor area.
If the room contains a combination of at least 1 external door and at least 1 window that is not a ring of pivot window, the opening part should be at least 1/3 of the room floor area.

1 external window, the opening parts may be added to achieve at least 1/10th of the room floor area.

Note: Background ventilation should be located at least 1700mm above floor level and need not be within the door frame.

Options for reasonably practicable means of background ventilation must be clearly stated in the design.

Notice: However, if you start work without having first given notice in the proper way, Adjoining Owners may seek to stop your work through a court injunction or seek other legal redress.

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Openings between radon rooms and conservatories must be closed.



NOTE THE CLIENT IS ADVISED TO READ THE PARTY WALL ACT 1996 FULLY FOR EXAMPLES OF NOTICES SERVED AND FOR FURTHER INFORMATION WITH REGARDS TO THE ABOVE.

Approved Document P (Electrical Safety)

All Electrical Work to which the Requirements of Part P (Electrical Safety) apply, will be designed, installed, inspected and tested by a person competent to do so. Prior to completion of works the Local Authority must be satisfied that either, an Electrical Installation certificate issued under a 'Competent Persons' scheme has

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M001: 07805 300032 e-mail: tdmdesign@live.co.uk	and testing procedures contained in the regulations and employ adequate testing equipment. NOTE: THE ELECTRICAL LAYOUT SHOWN IS FOR BUILDING REGULATIONS SUBMISSION ONLY.
Client:	

Address:	BUCKLEY ROAD INDUSTRIAL ESTATE, ROCHDALE	(THE BUILDING INSPECTOR MUST BE INFORMED OF ANY CHANGES TO THE LAYOUT PRIOR TO WORKS COMMENCING AND WORKS TO BE CARRIED OUT BY A COMPETENT PERSON AS DESCRIBED ABOVE.)
Project:	NEW DEVELOPMENT - 1x LARGE COMMERCIAL UNIT.	
		CONTRACTOR TO AGREE POSITION OF ELECTRICAL ITEMS AND

COMMERCIAL UNIT		RADIATORS WITH CLIENT PRIOR TO WORK COMMENCING	
Dwg Title: PLANNING: PROPOSED PLANS		This drawing is Produced for submission to the Local Authority for	
Date: NOVEMBER 2023	Scale: @A1 1:100	Approvals under the Building Regulations and Town and Country Planning Acts only and this drawing is the copyright of T D M ARCHITECTURAL LTD	

Job No: 11.23.658	Dwg No: PL04
Drawn: D.L	Checked: D.L

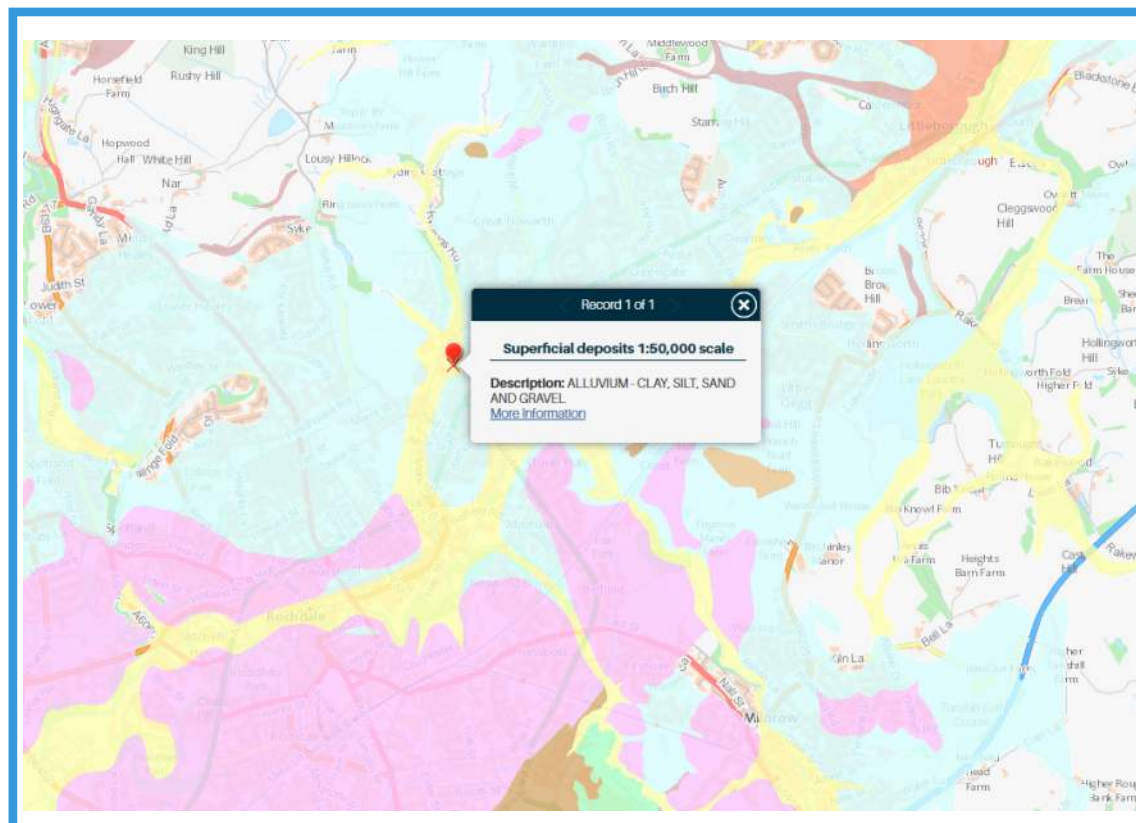
Appendix C

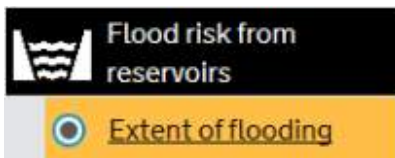
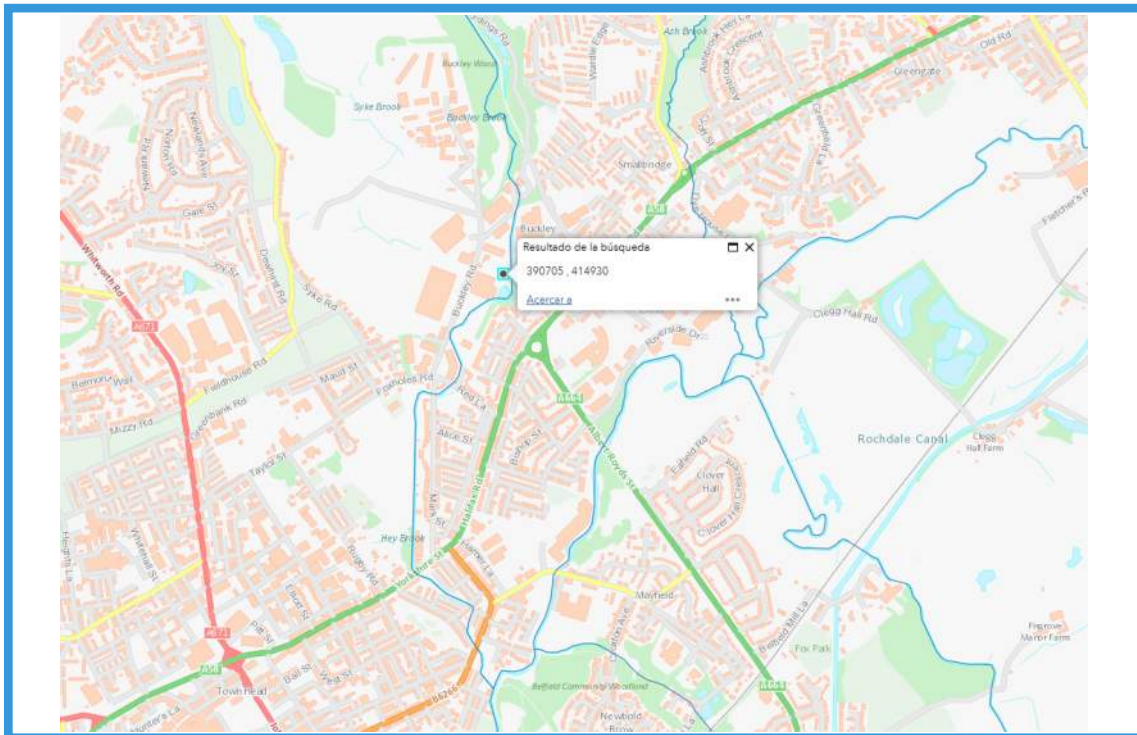


GEOLOGY - BEDROCK - MILNROW SANDSTONE - SANDSTONE



GEOLOGY - SUPERFICIAL DEPOSITS - ALLUVIUM - CLAY, SILT, SAND AND GRAVEL





SITE SURFACE WATER FLOOD RISK

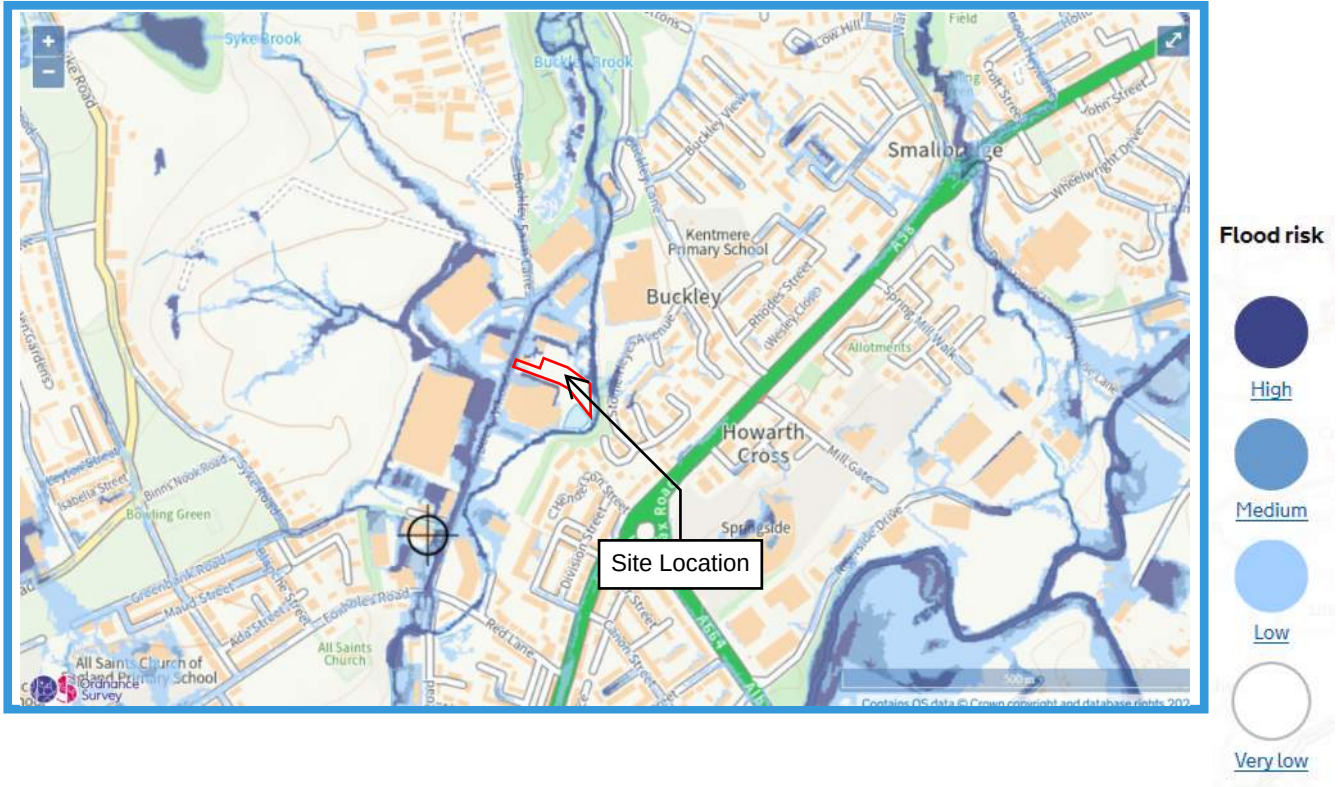


Flood risk from surface water



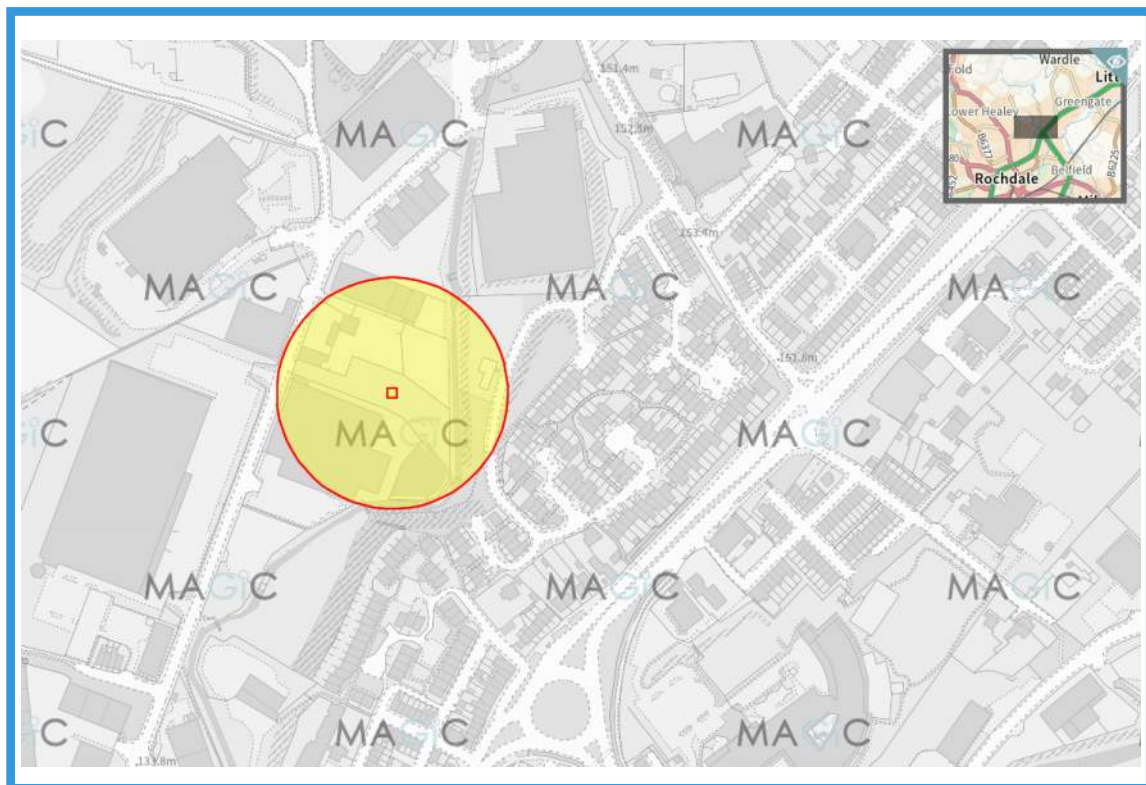
Extent of flooding

High risk means a chance of flooding greater than 3.3% (1:30)
 Medium risk means a chance of flooding of btw 1% (1:100) and 3.3%
 Low risk means a chance of flooding of btw 0.1% (1:1000) and 1%
 Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding



Over 900mm 300 to 900mm Below 300mm

MAGIC RESULTS



Site Check Results

Site Check Report Report generated on Thu Jan 11 2024

You selected the location: Centroid Grid Ref: SD90681493

The following features have been found in your search area:

Aquifer Designation Map (Bedrock) (England)

Typology

Secondary A

Aquifer Designation Map (Superficial Drift) (England)

Typology

Secondary (undifferentiated)

Typology

Secondary A

Source Protection Zones merged (England)

No Features found

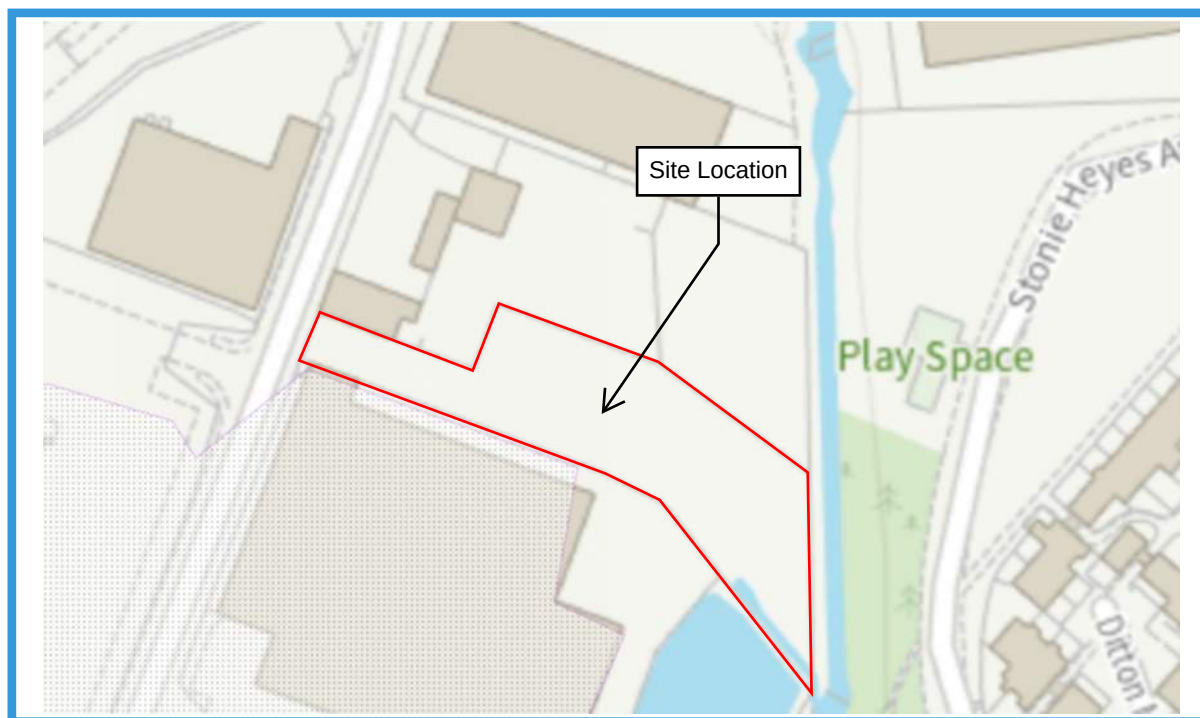
OK

Cancel

Export to CSV

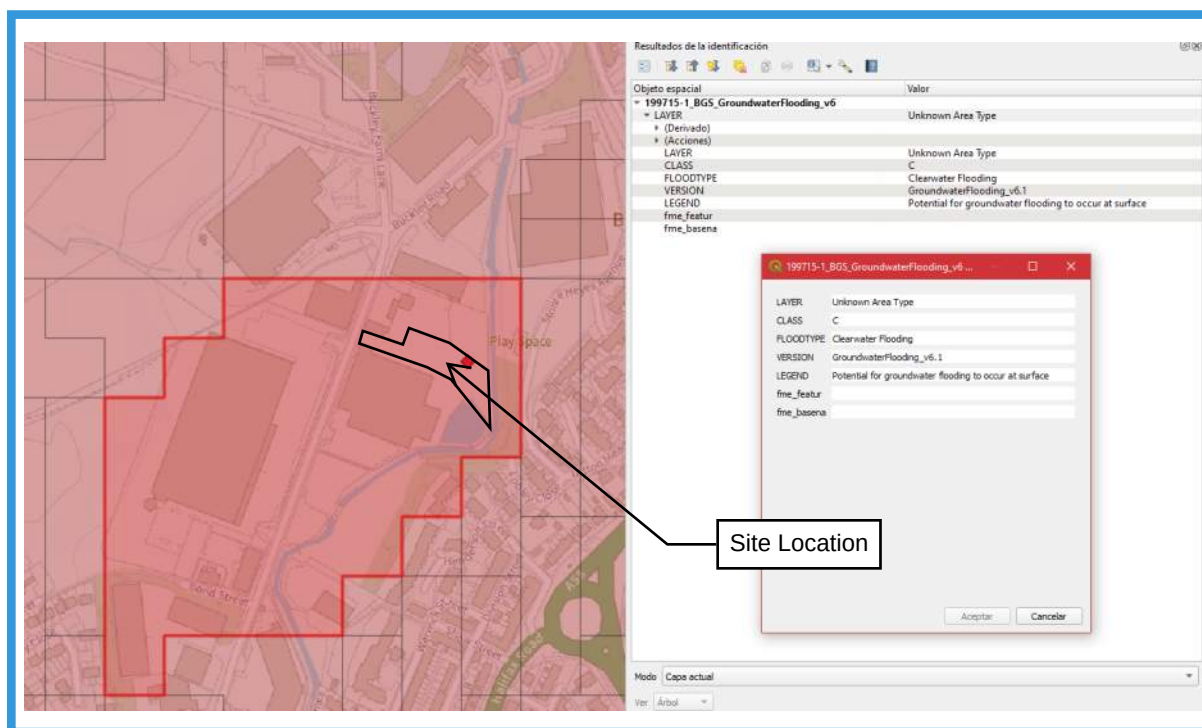
Print

FLOOD WARNING AREA

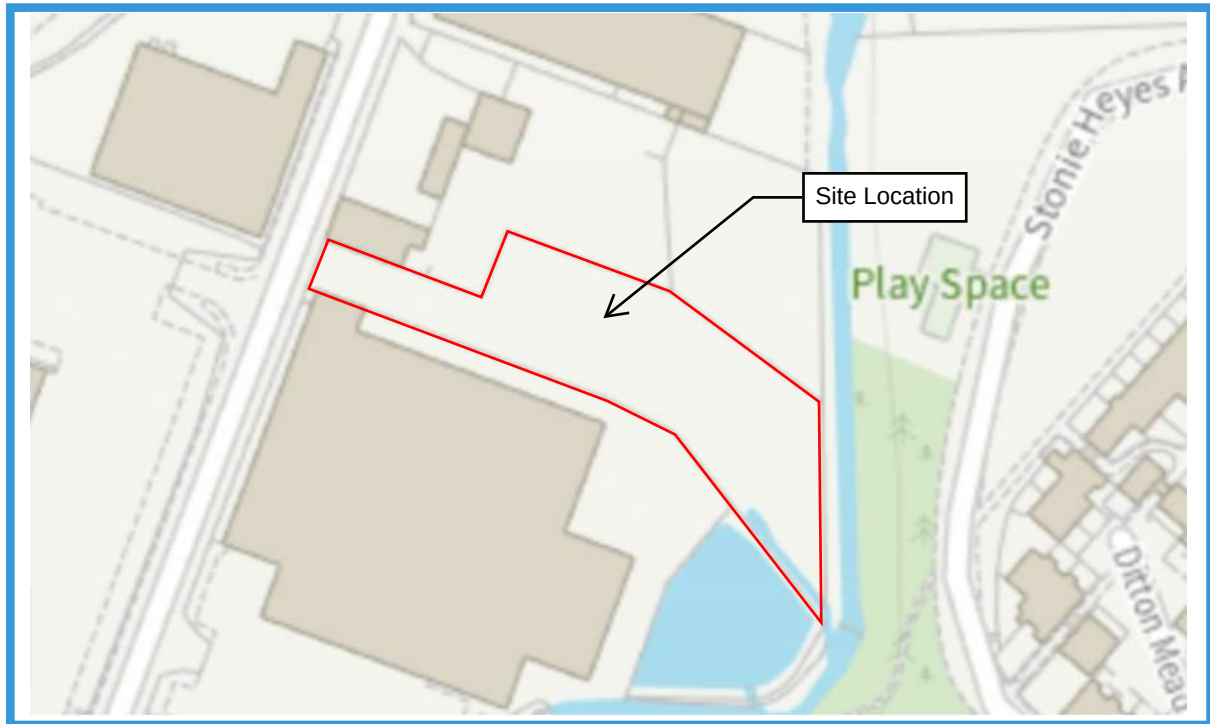


 Flood Warning areas

GROUND WATER FLOOD RISK



HISTORIC FLOOD MAP



 Historic Flood Outline

Flood map for planning

Your reference
<Unspecified>

Location (easting/northing)
390668/414916

Created
11 Jan 2024 17:01

Your selected location is in flood zone 2, an area with a medium probability of flooding.

This means:

- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see www.gov.uk/guidance/flood-risk-assessment-standing-advice)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence which sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2022 OS 100024198. <https://flood-map-for-planning.service.gov.uk/os-terms>



Flood map for planning

Your reference
<Unspecified>

Location (easting/northing)
390668/414916

Scale
1:2500

Created
11 Jan 2024 17:01

-  Selected area
-  Flood zone 3
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Water storage area

