FLOOD RISK ASSESSMENTS & DRAINAGE STRATEGIES

Peterborough Road, Crowland, PE6 0DG

Reference: 708 FRA-v1

Aug-24

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FLOOD RISK ASSESSMENT

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Introduction 1

Purpose of this report

1.1 RIDA Reports Ltd has been appointed to undertake a Level 2 – Scoping Study Flood Risk Assessment for a development located at PE6 0DG.

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 Peterborough Road, Crowland. The nearest postcode is PE6 0DG. Refer to appendix A for site location plan.

2.2 The current use of the site is a hand car wash and office. The current use vulnerability classification of the site is Less vulnerable . The site is located in the River Flood Zone 3. Refer to Appendix B for more details.

Development Proposals

2.3 The proposed development includes the change of the existing building usage from car wash office to convenience store. 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 River Welland is located approximately 1650 m away from the development.

Aquifer

2.6 The development is located within an unproductive strata. These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

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 Oxford Clay Formation - Mudstone.

Superficial Deposits

2.10 The British Geological Survey records show that the superficial deposits are Peat - Peat.

National and Local Planning Policy 3

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 Strategic Flood Risk Assessment (SFRA) which was published in 2017. The proposed development site is located within the administrative boundary of the South East Lincolnshire.

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 Strategic Flood Risk Assessment by evaluating the flood risk and providing relevant flood mitigation.



The Sequential and Exception Test 4

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 3, based on the Planning Flood Risk Map
- The final Flood Zone will be confirmed once the Environment Agency's data is received
- At very low risk of surface flooding
- At limited risk of groundwater flooding
- Outside of a critical drainage area
- Outside of an area with sewer flooding

4.3 This type of development is exempt from applying the sequential test as per the National Planning Policy Framework paragraph 174, footnote 60. The development has been made safe and has not increased the risk to other properties. See copy of note below "(60) This includes householder development, small non-residential extensions (with a footprint of less than 250m2) and changes of use; except for changes of use to a caravan, camping or chalet site, or to a mobile home or park home site, where the sequential and exception tests should be applied as appropriate."

Exception Test

4.4 Fluvial flood risk for this change of use was assessed using the Environment Agency Flood Zone Maps and the standing advice approach recommended in the NPPF guidelines. The standing advice considers the development's size and the flood risk vulnerability of land use.

Step 1

Flood Zone

4.5 The proposed development falls within The Environment Agency (EA) Flood

categorisation

Zone 3. The Flood Zone 3 is considered to have a high probability of flooding with a 200 years or greater annual probability or >0.5%AEP.

Step 2 4.6

The Exception Test

The Exception Test is not required for this development.

Flood Hazard Assessment 5

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 potentially been flooded in the past. This data does not indicate if a property has been flooded internally. See Appendix C for details.

Flooding from river and sea

5.3 The site is affected by Tidal Flooding. The proposed development falls within The Environment Agency (EA) Flood Zone 3. The Flood Zone 3 is considered to have a high probability of flooding with a 200 years or greater annual probability or >0.5%AEP.

5.4 Tidal flood level data for the river has been requested from the Environment Agency. This flood risk assessment will be updated once these levels are available.

5.5 Due to the extent of the flood zone, it is not possible to infer the flood levels using the LIDAR data and the outline of the flood zone.

5.6 The assumed flood depth for this site is 0.3m. The assumed flood level for this site is 2.6 mAOD

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 South East Lincolnshire confirms that the flood risk for the site is Very Low.

5.10 Based on the 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. The surface water flood level on this site is therefore taken as 0m AOD.

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 limited susceptibility to ground water flooding. The risk of groundwater flood to the site is considered very low. 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 3, based on the Planning Flood Risk Map
- The final Flood Zone will be confirmed once the Environment Agency's data is received
- At very low risk of surface flooding
- At limited 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 and the national planning policy 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 2.6m AOD. This is the highest level and corresponds to the Pluvial/Sea flood levels.

Flood Protection

6.6 The National Planning Guidance standing advice and Environment Agency recommends that where possible, flood avoidance is provided by establishing the development's finished floor level 600mm above (freeboard) the design flood level. However, this level can be reduced if there is a high level of certainty about the estimated flood level. For this site the estimated free board has been determined to be 0.6m above the Design Flood Level due to the quality of the flood risk information available and the type of risk. The finished floor should be 3.2m AOD. It would involve a height differential of 1.2m. This is the distance between the average external level (2m AOD) and

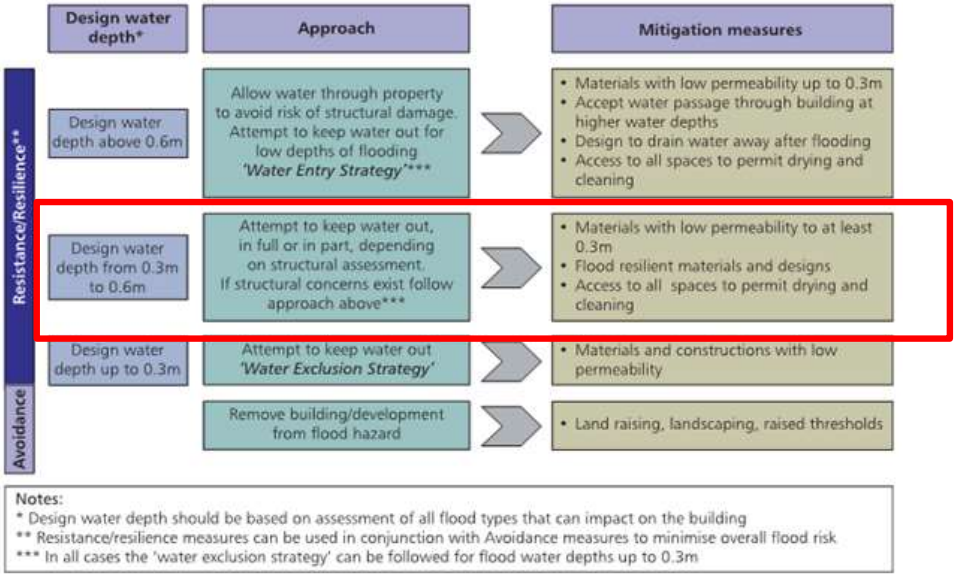


the potential Finished Floor Level.

6.7 As this proposal is for a change of use, it is not possible to achieve this FFL due to access and site constraints. A minimum level of 2.15m AOD is assumed to be achieved. Therefore, the following flood mitigation interventions should be 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 the figure below for the strategy highlighted in red. 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 0.6m. 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 up to 3.2m AOD.

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 There are no changes to the fabric of the building. The new services and fittings (communications wiring, heating systems, electrical services, water, electricity and gas meters) should be placed at above the level of 3.2 m AOD. All service entries should be sealed (e.g. with expanding foam or similar closed cell material).

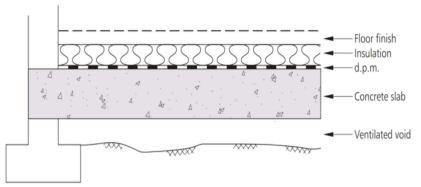
6.11 Closed-cell insulation should be used for pipes. Sealed PVC external framed doors or good fit and sealed wooden frames should be used. Hollow core timber internal doors should not be used unless sufficient flood warning is given, butt hinges, can be used to allow internal doors to be easily removed and stored. Carpets are to be avoided and use of tiles recommended in floor below the predicted design flood level.

6.12 Fittings should be designed to be replaced after a flood, it is advisable to specify durable fittings that are not appreciably affected by water and can be easily cleaned (e.g. use of plastic materials, or stainless steel). The cost of these units may need to be balanced against the predicted frequency of flooding. Avoid wood fiber based carcases and use easily removable solid wood doors and drawers.

6.13 On new foundations or where they are being replaced: Suspended concrete floor slab at least 150mm thick is preferred. Beam and Block slabs with

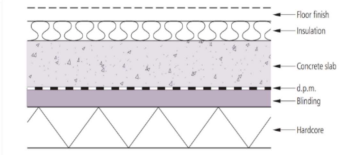
geomembrane and 75mm min screed can also be used. There should be a minimum space of 150mm ventilated void between the ground level and the bottom of the floor slab. Damp-proof membranes should be included in the design. Floor insulation should be of the closed-cell type. Underfloor services using ferrous materials should be avoided. Ceramic/concrete-based floor tiles, sitting on a bed of sand, cement render and water-resistant grout can be used. Ground bearing slabs are also an option. See the figures below.

Suspended Concrete Slab detail



- Reinforced concrete slab at least 150mm thick and complying with structural requirements for uplift forces
- Damp proof membrane of polythene at least 1200 gauge
- Insulation as rigid closed-cell material
- Ceramic tiles or stone floor finishes and including skirting boards.

Ground bearing Concrete Slab detail

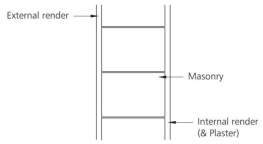


- Hardcore bed at least 100mm thick of well compacted inert material, blinded with fine inert material to provide a smooth base
- Damp proof membrane of polythene at least 1200 gauge
- Concrete slab at least 150mm thick
- Insulation as rigid closed-cell material
- Ceramic tiles or stone floor finishes and skirting boards.

6.14 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 In areas where external walls are being removed. Good quality facing bricks or external renders with water repellent properties can be used for the external face. See below examples of external walls that can be used.

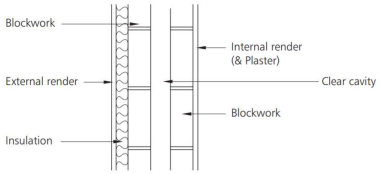
Solid External Wall



- 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: ½ 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

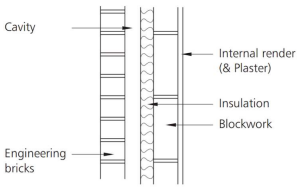


Clear cavity

- External cement based render, preferably with lime content. Composition depends on masonry; the following mixes are effective for flood resilience:
  - 1 cement: 4 sand: ½ 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

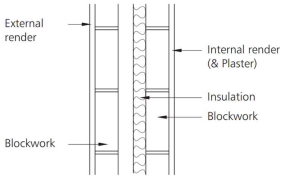


Option A Part-filled cavity

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



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: ½ 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.

6.17 The Strategic Flood Risk Assessment shows that the site is outside of an area of sewer flooding, therefore no mitigation on sewer flood is required.

6.18 The Development Management Procedure Order (2015) requires that the Environment Agency is consulted on developments within Areas with Critical Drainage Problems (ACDPs). The Strategic Flood Risk Assessment does not show the development within a Critical Drainage Area.

Off-Site Impacts 7

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 development is not increasing the surface water run-off as this is a change of use in which no extensions or changes to the external areas are proposed. It is concluded that the proposed development does not increase the off-site impact.

Flood Flow conveyance and storage

7.5 In tidal flooding environments, the volume of available on-shore flood storage is usually not a material consideration as the flood water volume is too large to be attenuated.

7.6 The proposed development will not affect flood flow conveyance through the site or the surrounding area in relation to either defence overtopping or a defence breach. Similarly, although the development would reduce the volume of flood storage available, as the flooding mechanism is tidal, there will be no impact on flood risk in the surrounding area.

Residual Risk 8

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 It will be necessary to ensure that all building users are fully informed of procedures to be implemented during the threat of imminent flooding.

Flood Warning and evacuation

8.4 The site is located within an area covered by the Environment Agency Flood Alert service. It is recommended that the users of the proposed development are registered with this service to receive early warning of imminent flooding.

8.5 The occupants of the site are encouraged to sign up for the alerts. The Table 4 below shows the actions that must be taken for each flood warning.

8.6 Action to be taken in the event of an Alarm being Raised or a Flood Warning Received:

a. Raise the alarm and evacuate the site following the established Fire Drill procedures. The main assembly is as per the main house fire drill assembly point.

b. Contact Emergency Fire Services (999) if necessary and Environment Agency Floodline: (0845 988 1188) if the event is unexpected.

c. If safe to do so, locate and turn off critical services, e.g. water, gas & electricity.

d. Follow the routes below to evacuate the site altogether.

Actions that will be taken for each flood warning

Warning	Message	Timing	Action
 FLOOD ALERT	Flooding is possible. Be prepared.	2 hours to 2 days in advance of flooding.	- Be prepared for flooding. - Prepare a flood kit.
 FLOOD WARNING	Flooding is expected. Immediate action required.	Half an hour to 1 day in advance of flooding.	- Act now to protect your property. - Block doors with flood boards or sandbags and cover airbricks and other ventilation holes. - Move pets and valuables to a safe place. - Keep a flood kit ready. - Move any critical equipment and information to a safe location
 SEVERE FLOOD WARNING	Severe flooding. Danger to life.	When flooding poses a significant threat to life and different actions are required.	- Be ready should you need to evacuate from the property. - Co-operate with the emergency services and call 999 if you are in immediate danger.
Warning Removed	No further flooding is currently expected for your area.	Issued when a flood warning is no longer in force.	- Flood water may still be around and could be contaminated. - If you've been flooded, ring your buildings and contents insurance company as soon as possible.

Useful local phone numbers

Please write your local phone numbers in the space provided below.
Make sure they are easy to find in the event of a flood.


Local authority:



Local police:


Gas and electricity company:



Insurance company and policy details:


Doctor:


Pharmacy:


Electrician:

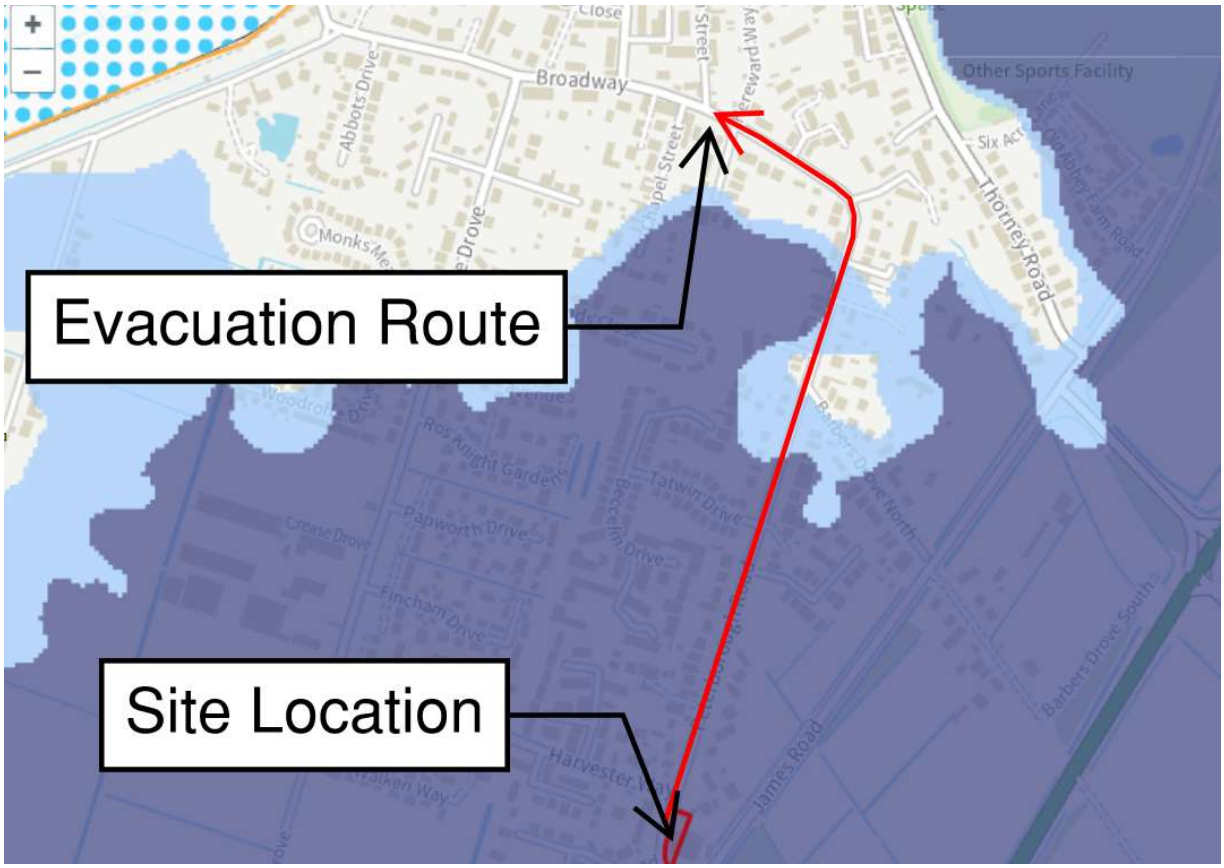

Gas safe engineer:


Plumber:


Builder:

8.7 The proposed evacuation route below shows how the development could be evacuated before the 1 in 1000 or 0.1% annual probability of flooding extreme flood occurs. Safe egress is achievable by following Peterborough Road, up to then following and reaching Broadway which is shown to be beyond the extent of flooding. See figure below for details.

Evacuation Route



Conclusions 9

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.

9.3 It is proposed that a formal Flood Warning and Emergency Response Plan is developed for the proposed development to communicate flood emergency response procedures to all the occupants of the site.

Appendix A

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0m 10m 20m 40m 60m 80m 100m 120m
0m 10mm 20mm 40mm 60mm 80mm 100mm

PLANNING

Revision	Description	Date
D00	Issued for Planning	17/06/2024

SK ARCHITECTURE

Client: **Mr Singh**

Project: **Proposed change of use of Car Wash to Convenience Store**

Drawing: **Site Location Plan**

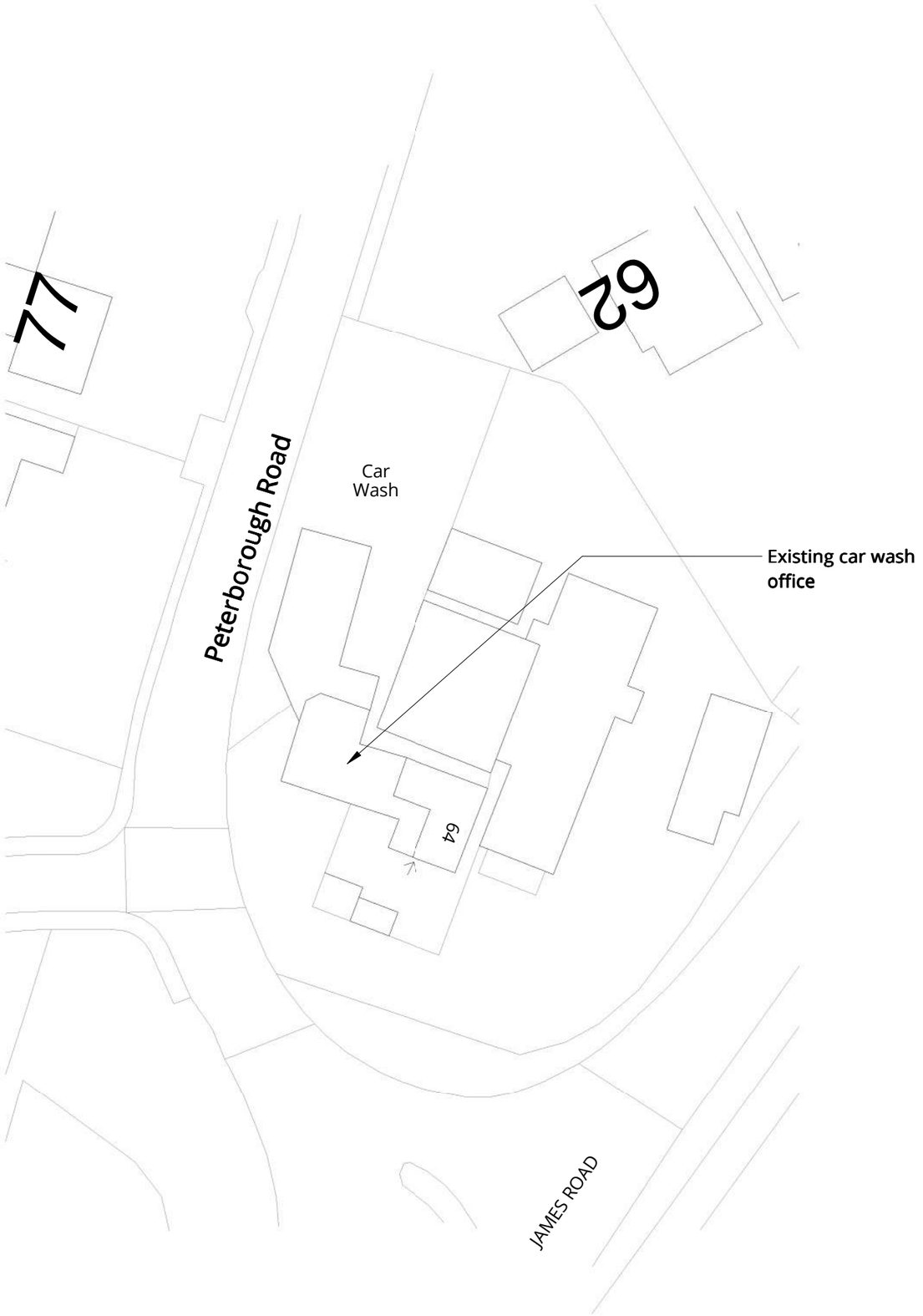
Scale: **1 : 1250 @ A3** Date: **17/06/2024**

Project	Drawing	Revision
123	SKA-CW 08 00 01	D00

Appendix B

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SCALE 1 : 500
SCALE 1 : 1

0m 5m 10m 20m 30m 40m 50m
0m 10mm 20mm 40mm 60mm 80mm 100mm

Revision	Description	Date
D00	Issued for Planning	17/06/2024

SK ARCHITECTURE

Client: **Mr Singh**

Project: **Proposed change of use of Car Wash to Convenience Store**

Drawing: **Site Block Plan as Proposed**

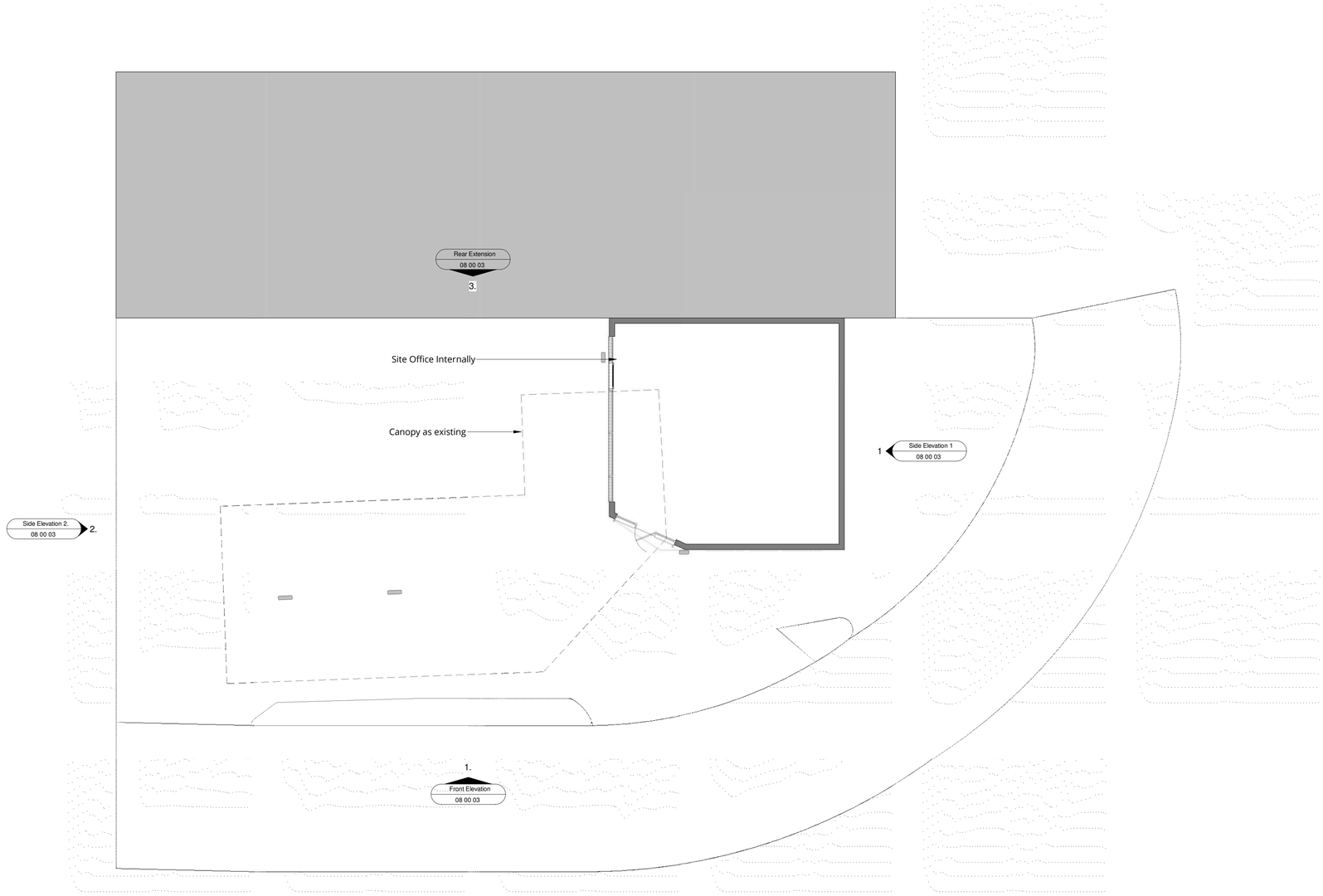
Scale: 1 : 500 @ A3 Date: 17/06/2024

Project	Drawing	Revision
123	SKA-CW 08 00 02	D00

PLANNING

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For information only



SCALE 1 : 100
SCALE 1 : 1

0m 1m 2m 4m 6m 8m 10m
0mm 10mm 20mm 40mm 60mm 80mm 100mm

PLANNING

Revision	Descriptio	Date
	Issued for Planning	17/06/2024

SK ARCHITECTURE

Client
Mr Singh

Project
Proposed change of use of Car Wash to Convenience Store

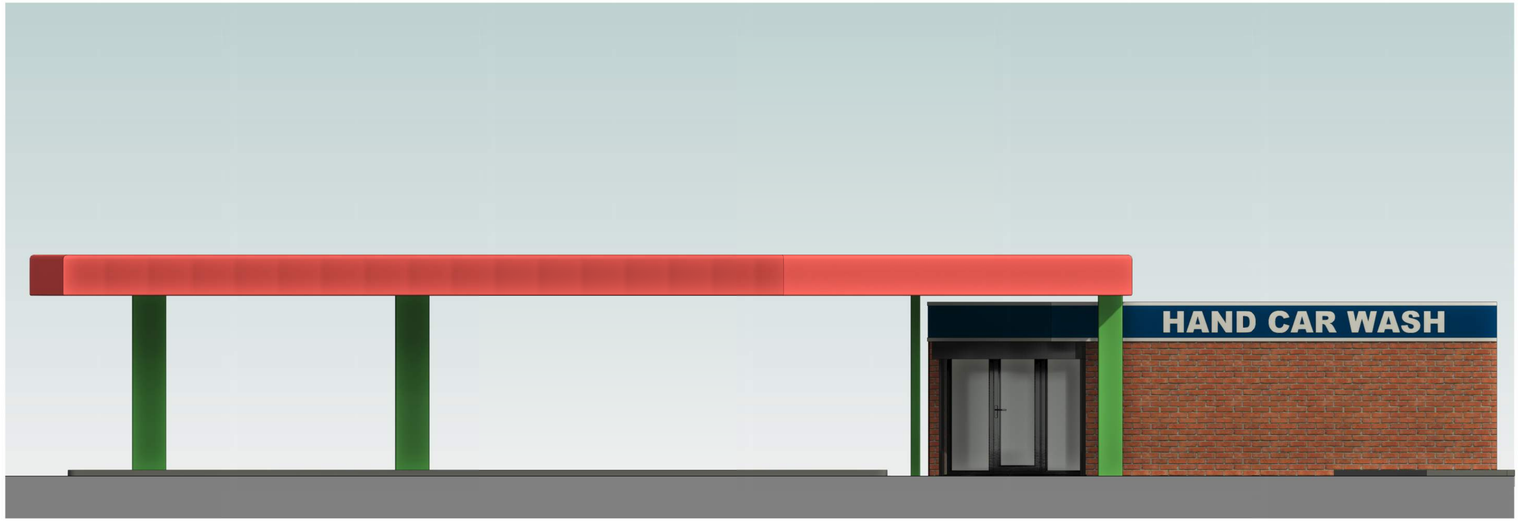
Drawing
Floor Plan as Existing

Scale	Date
1 : 100 @ A1	17/06/2024

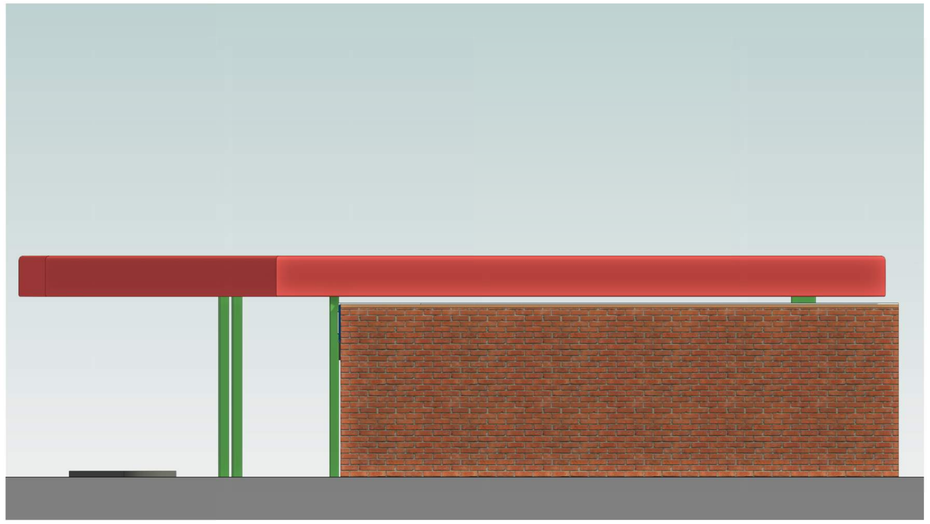
Project No.	Drawing No.	Revision
123	SKA-CW 08 00 03	D00

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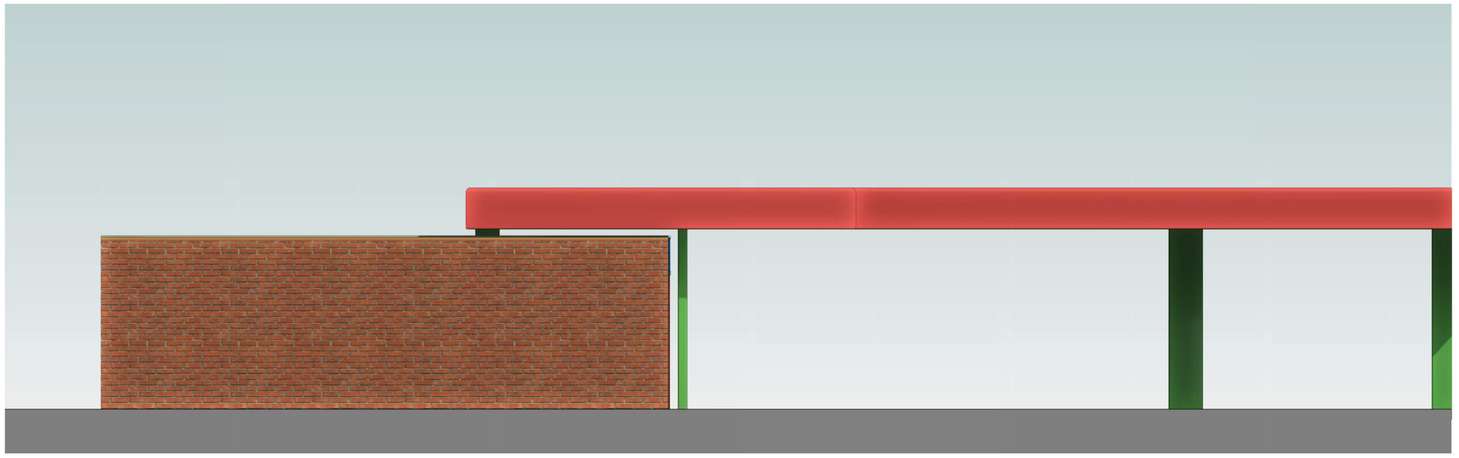
For information only



1.
08 70 01
Front Elevation
1 : 50



1
08 70 01
Side Elevation 1
1 : 50



3.
08 70 01
Rear Extension
1 : 50



4
08 70 01
3D View



2.
08 70 01
Side Elevation 2.
1 : 50

SCALE 1 : 50
SCALE 1 : 1

0m 0.5m 1m 2m 3m 4m 5m
0m 10mm 20mm 40mm 60mm 80mm 100mm

PLANNING

Revision	Descriptio	Date
	Issued for Planning	17/06/2024

SK ARCHITECTURE

Client
Mr Singh

Project
Proposed change of use of Car Wash to Convenience Store

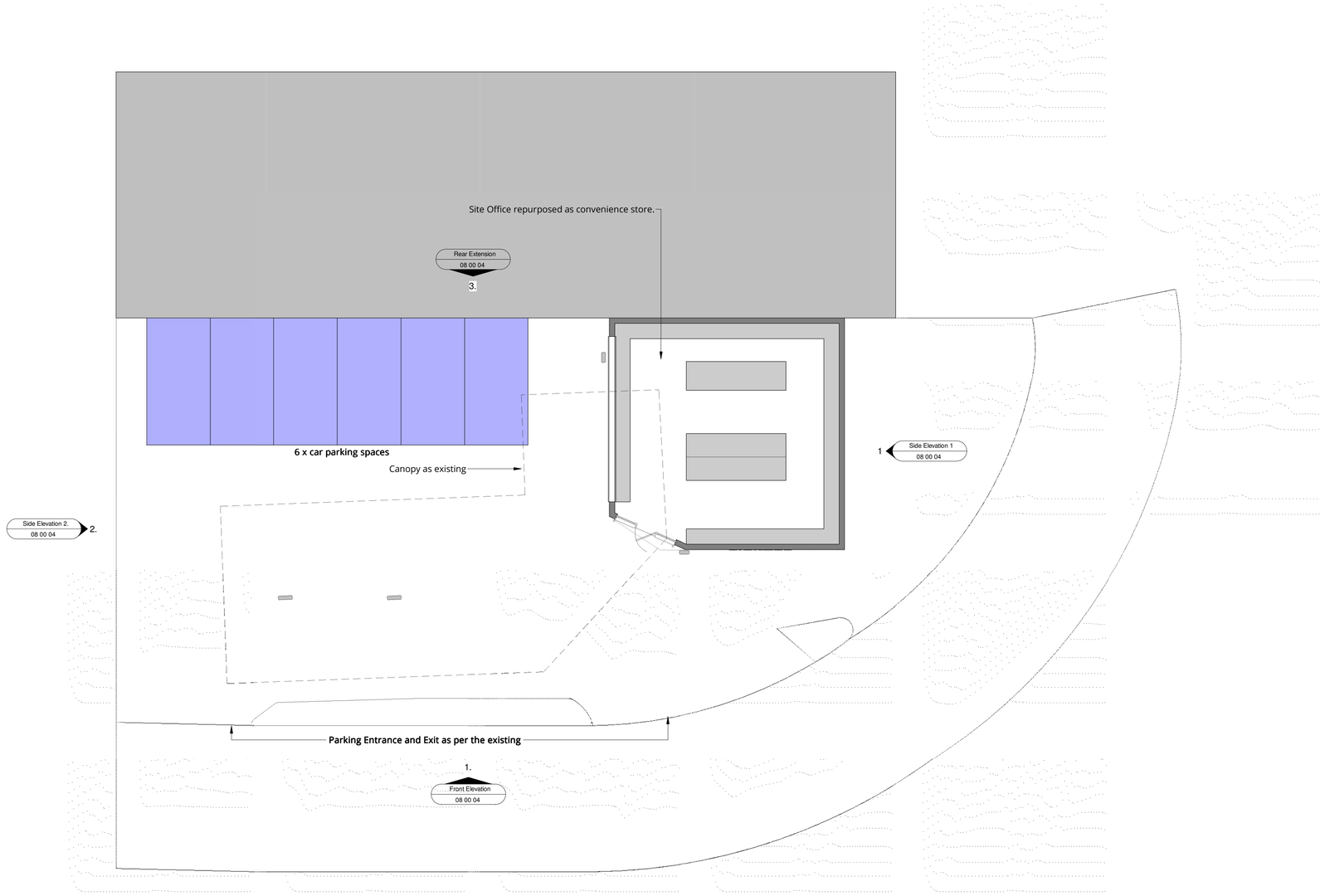
Drawing
Elevations as Existing

Scale	Date
1 : 50 @ A1	17/06/2024

Project No.	Drawing No.	Revision
123	SKA-CW 08 70 01	D00

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For information only



SCALE 1 : 100
SCALE 1 : 1

0m 1m 2m 4m 6m 8m 10m
0mm 10mm 20mm 40mm 60mm 80mm 100mm

PLANNING

Revision	Descriptio	Date
	Issued for Planning	17/06/2024

SK ARCHITECTURE

Client
Mr Singh

Project
Proposed change of use of Car Wash to Convenience Store

Drawing
Floor Plan as Proposed

Scale	Date
1 : 100 @ A1	17/06/2024

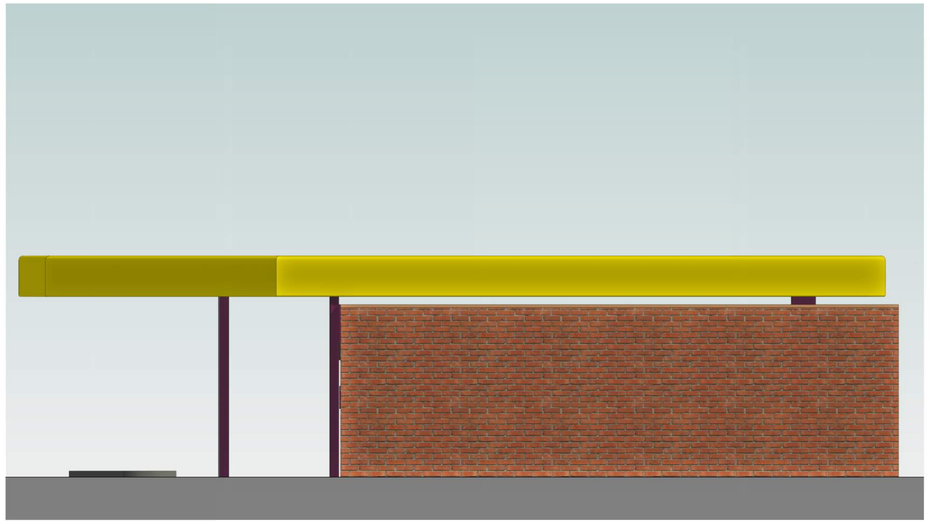
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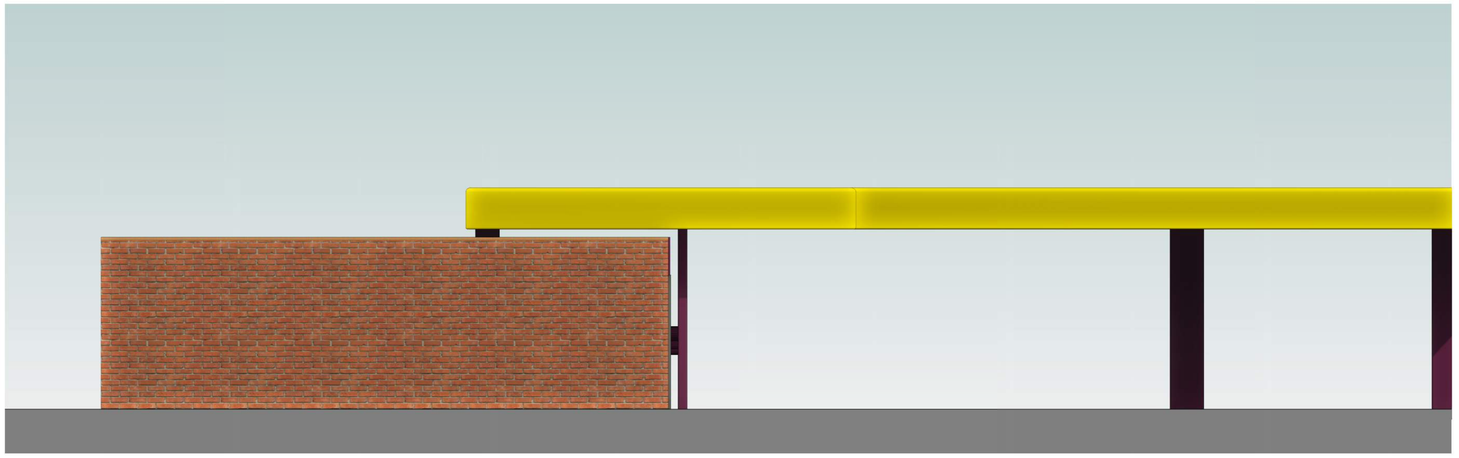
For information only



1.
08 70 02
Front Elevation
1 : 50



1
08 70 02
Side Elevation 1
1 : 50



3.
08 70 02
Rear Extension
1 : 50



2.
08 70 02
Side Elevation 2.
1 : 50



4
08 70 02
3D View

SCALE 1 : 50
SCALE 1 : 1

0m 0.5m 1m 2m 3m 4m 5m
0m 10mm 20mm 40mm 60mm 80mm 100mm

PLANNING

Revision	Descriptio	Date
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SK ARCHITECTURE

Client
Mr Singh

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Proposed change of use of Car Wash to Convenience Store

Drawing
Elevations as Proposed

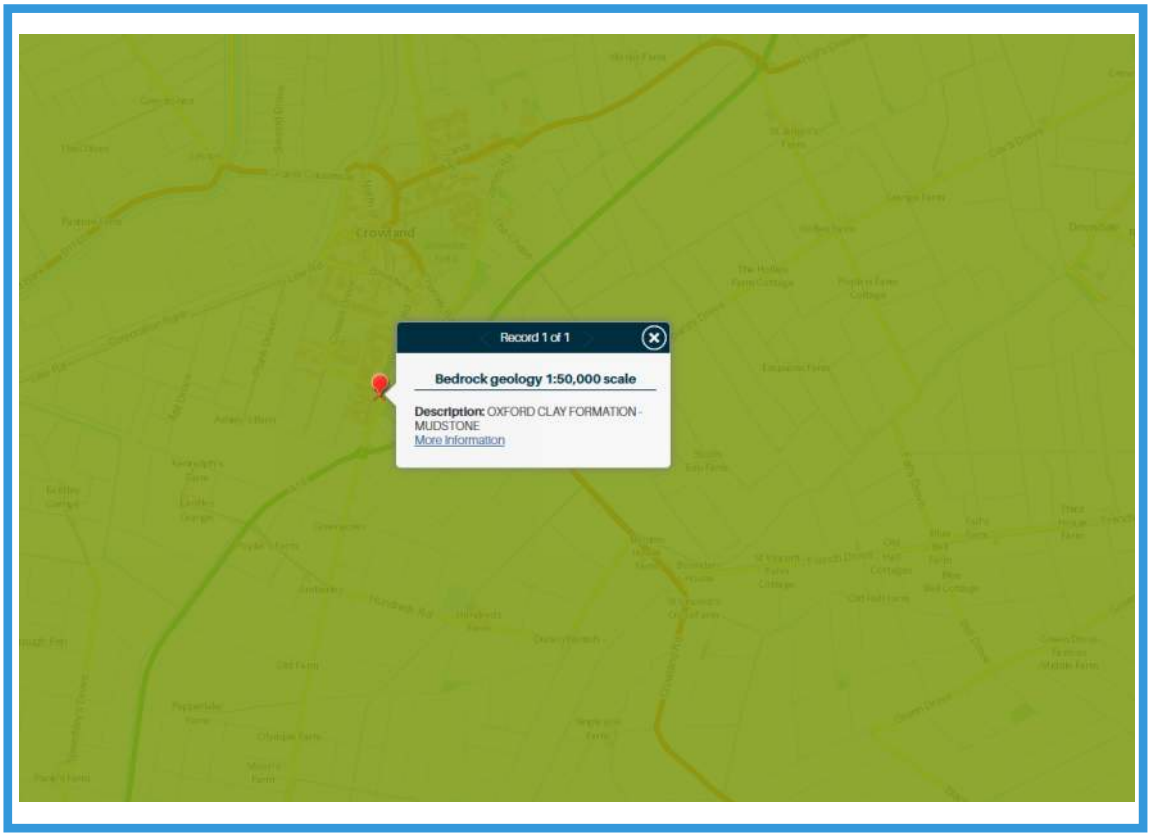
Scale	Date
1 : 50 @ A1	17/06/2024

Project No.	Drawing No.	Revision
123	SKA-CW 08 70 02	D00

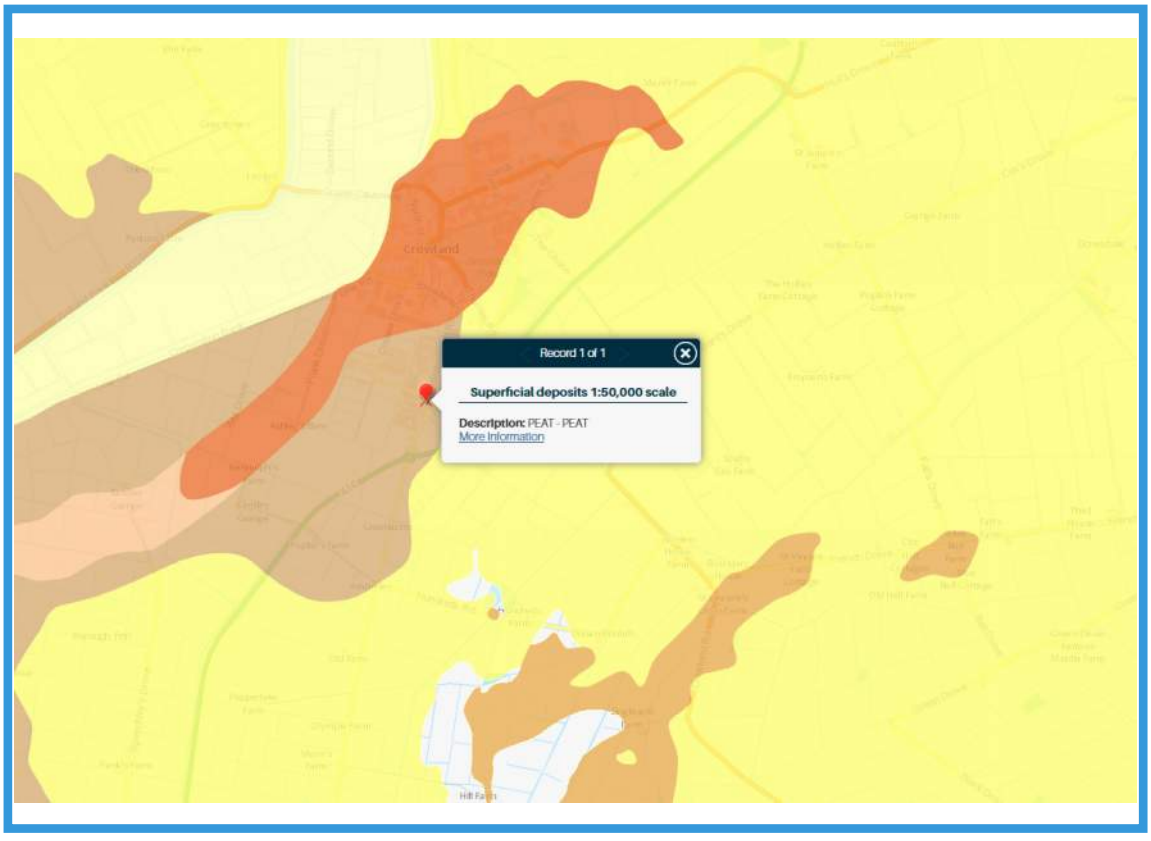
Appendix C

SITE GEOLOGY

GEOINDEX ONSHORE GEOLOGY - BEDROCK - OXFORD CLAY FORMATION - MUDSTONE

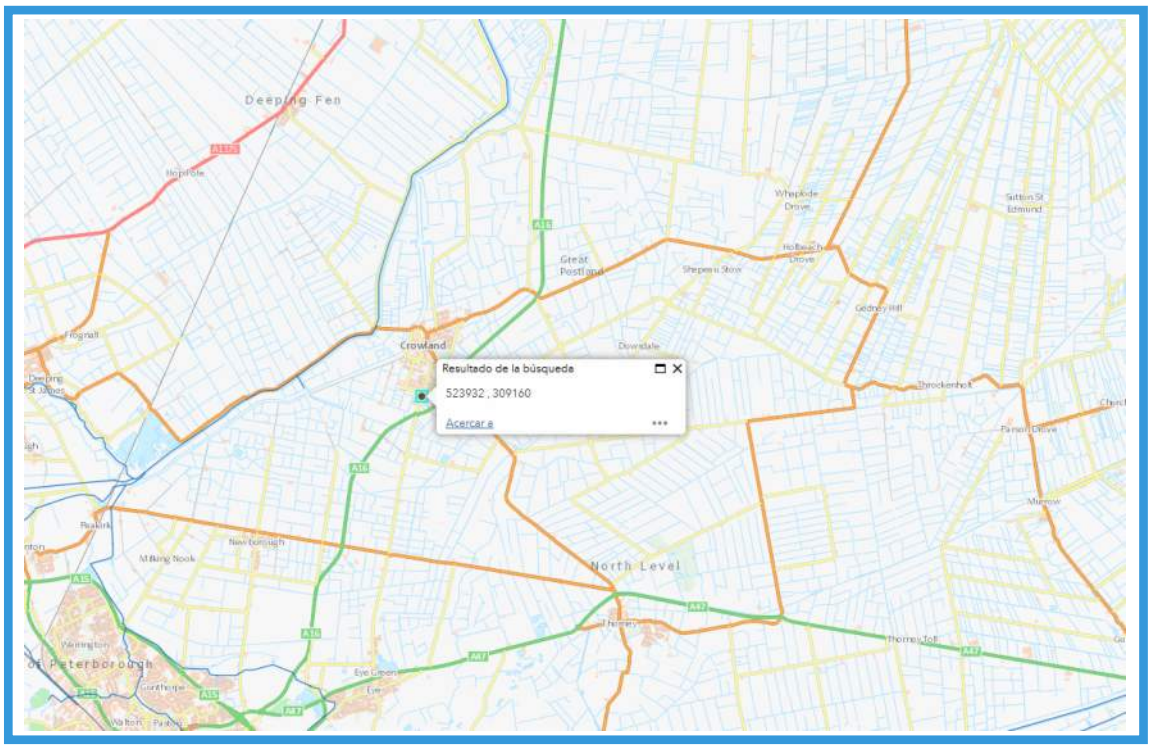


GEOINDEX ONSHORE GEOLOGY - SUPERFICIAL DEPOSITS - PEAT - PEAT

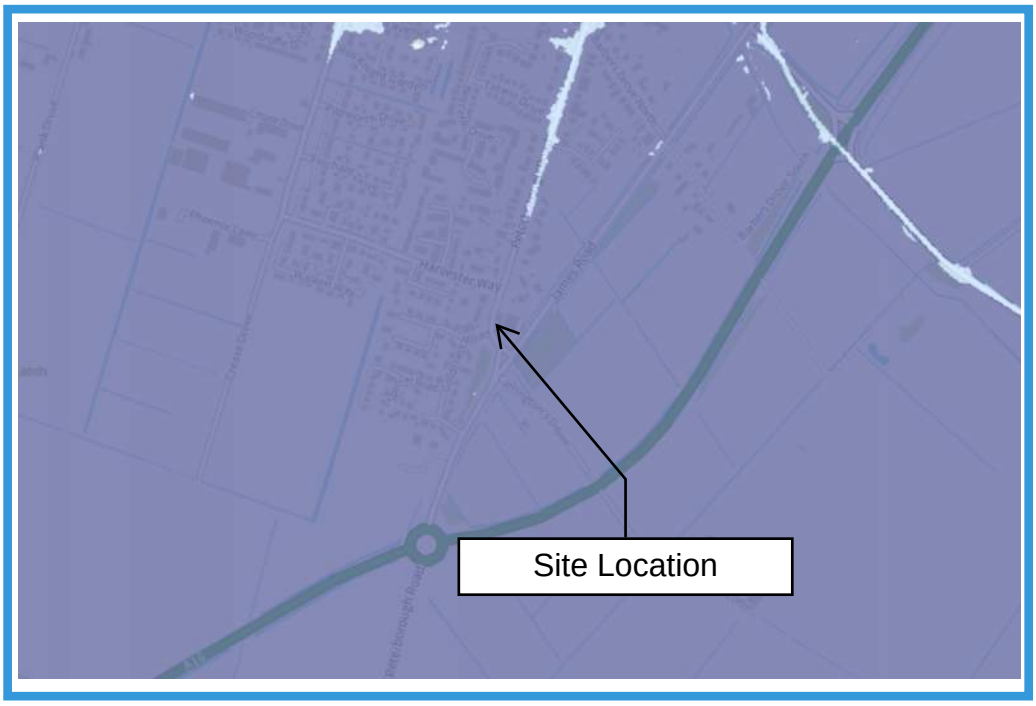


SITE HYDROGEOLOGY

Environment Agency Main River Map







SITE SURFACE WATER FLOOD RISK

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

Flood risk from surface water

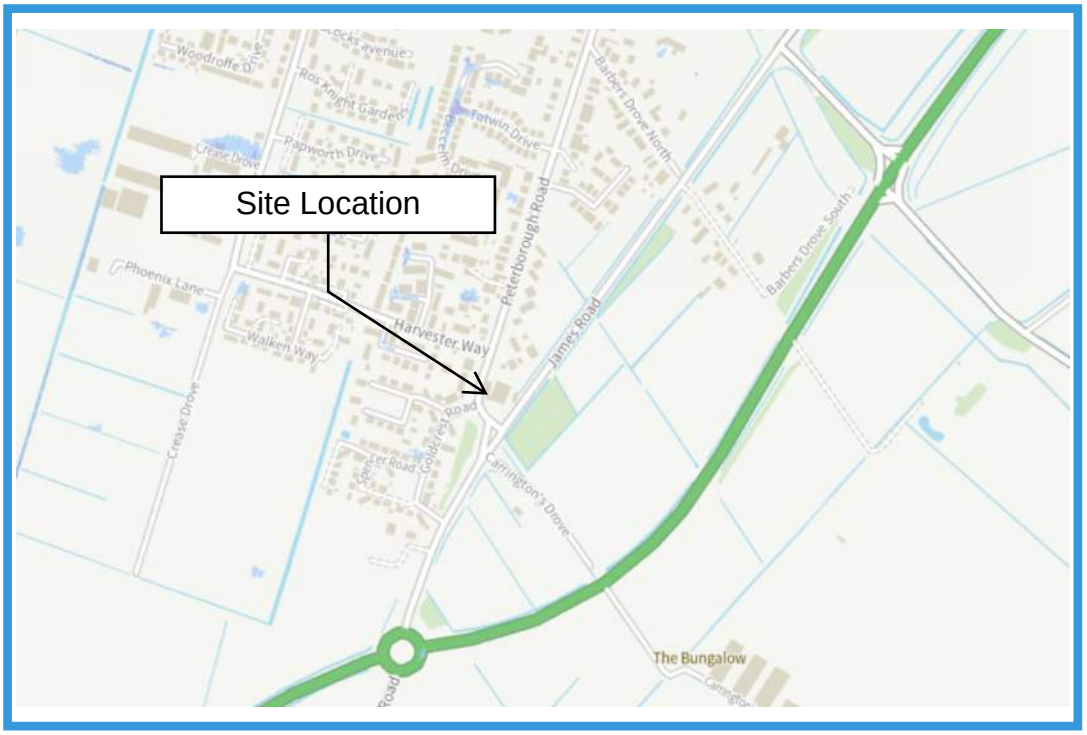
Extent of flooding



High risk
More than 3.3% chance each year

Medium risk
Between 1% and 3.3% chance each year

Low risk
Between 0.1% and 1% chance each year

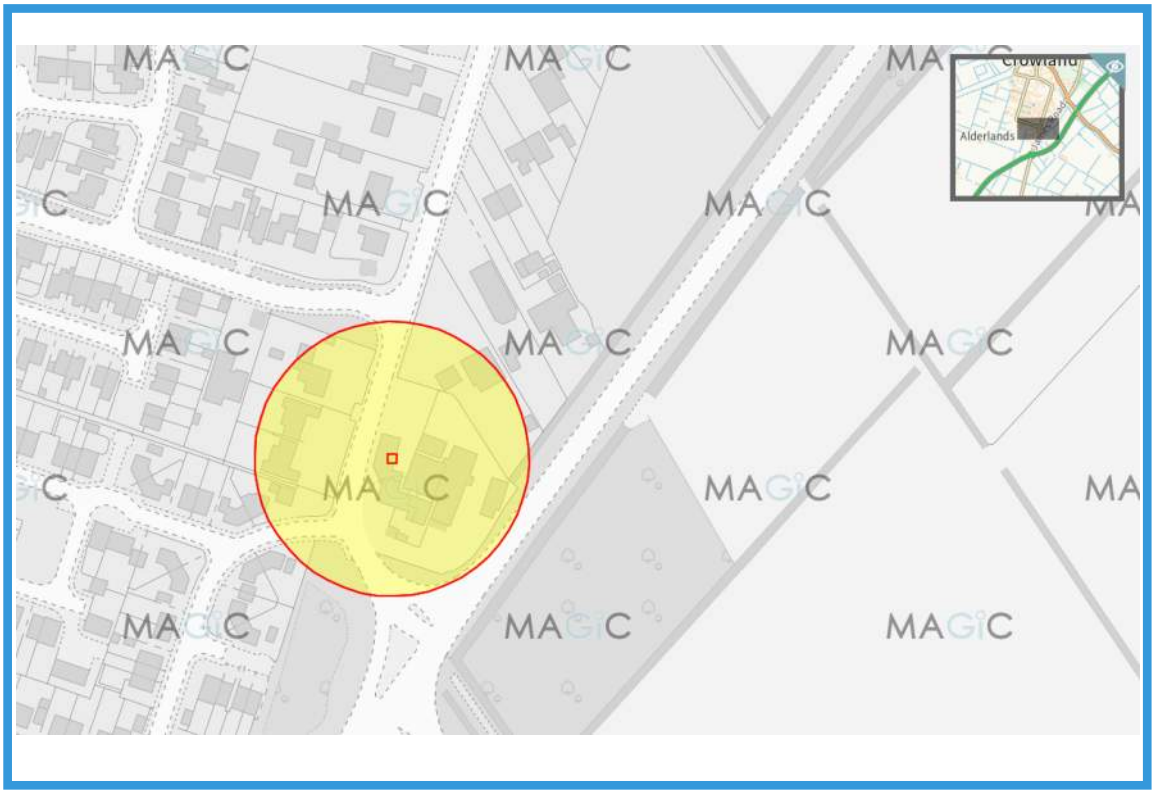


Above 90cm

30cm to 90cm

Below 30cm

MAGIC RESULTS



Site Check Results

Site Check Report Report generated on Wed Aug 14 2024
You selected the location: Centroid Grid Ref: TF23930916
The following features have been found in your search area:

Aquifer Designation Map (Bedrock) (England)

Typology	Unproductive

Aquifer Designation Map (Superficial Drift) (England)

Typology	Unproductive

Source Protection Zones merged (England)
No Features found

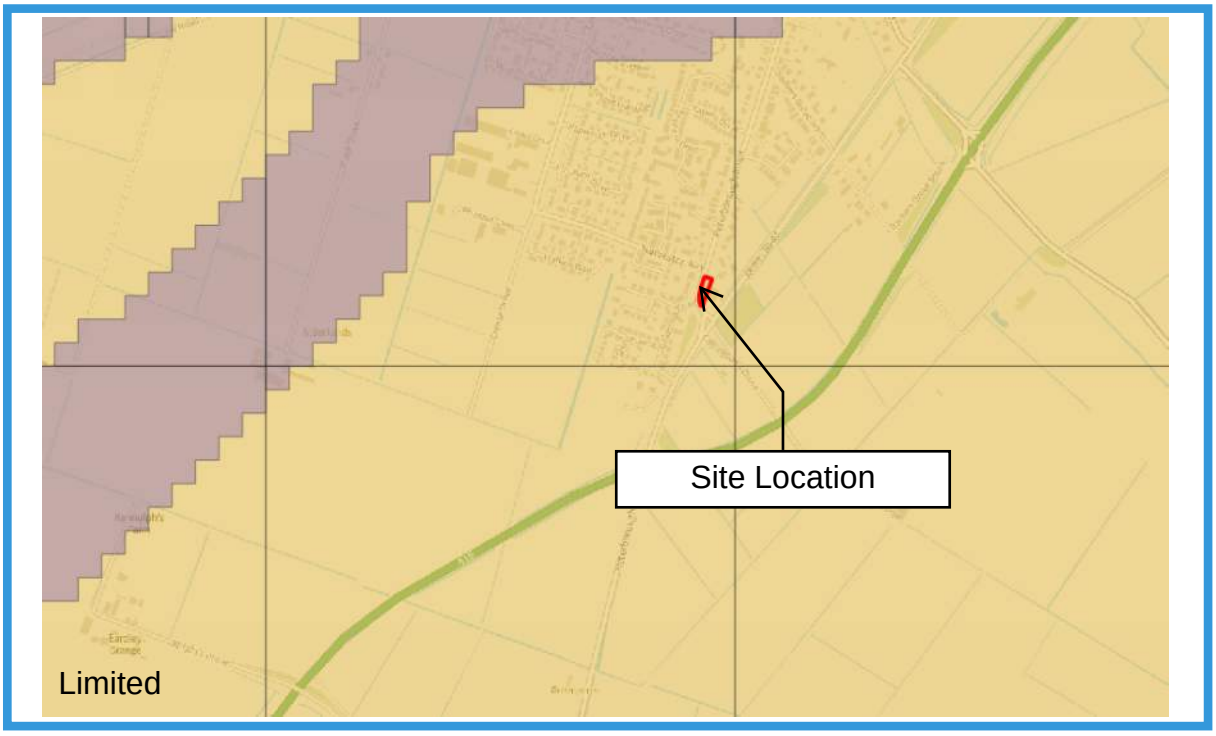
OK | Cancel | Export to CSV | Print

HISTORIC FLOOD MAP

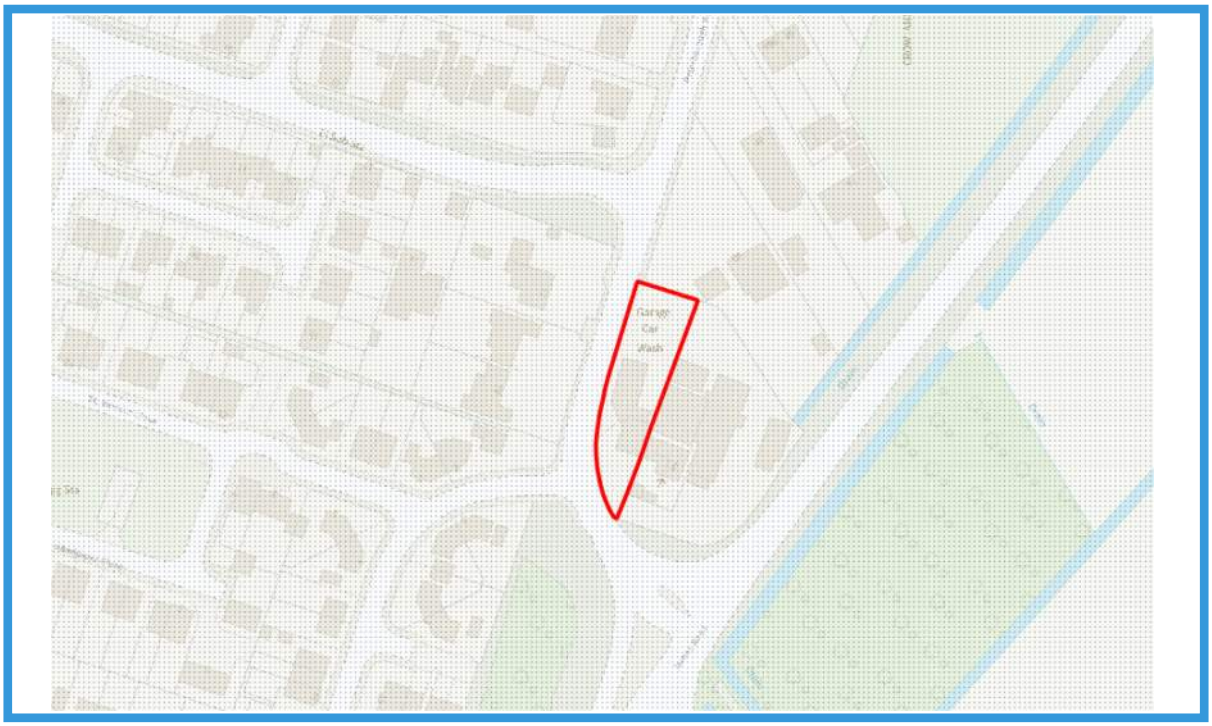


Historic Flood Outline

GROUND WATER FLOOD RISK



FLOOD WARNING AREA



Flood Warning areas

Flood map for planning

Your reference	Location (easting/northing)	Created
<Unspecified>	**523937/309158**	**13 Aug 2024 20:10**

Your selected location is in flood zone 3
– an area with a high probability of flooding.

This means:

- you may need to complete a flood risk assessment for development in this area
- you should ask the Environment Agency about the level of flood protection at your location and request a Flood Defence Breach Hazard Map (You can email the Environment Agency at: enquiries@environment-agency.gov.uk)
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (find out more at www.gov.uk/guidance/flood-risk-assessment-standing-advice)

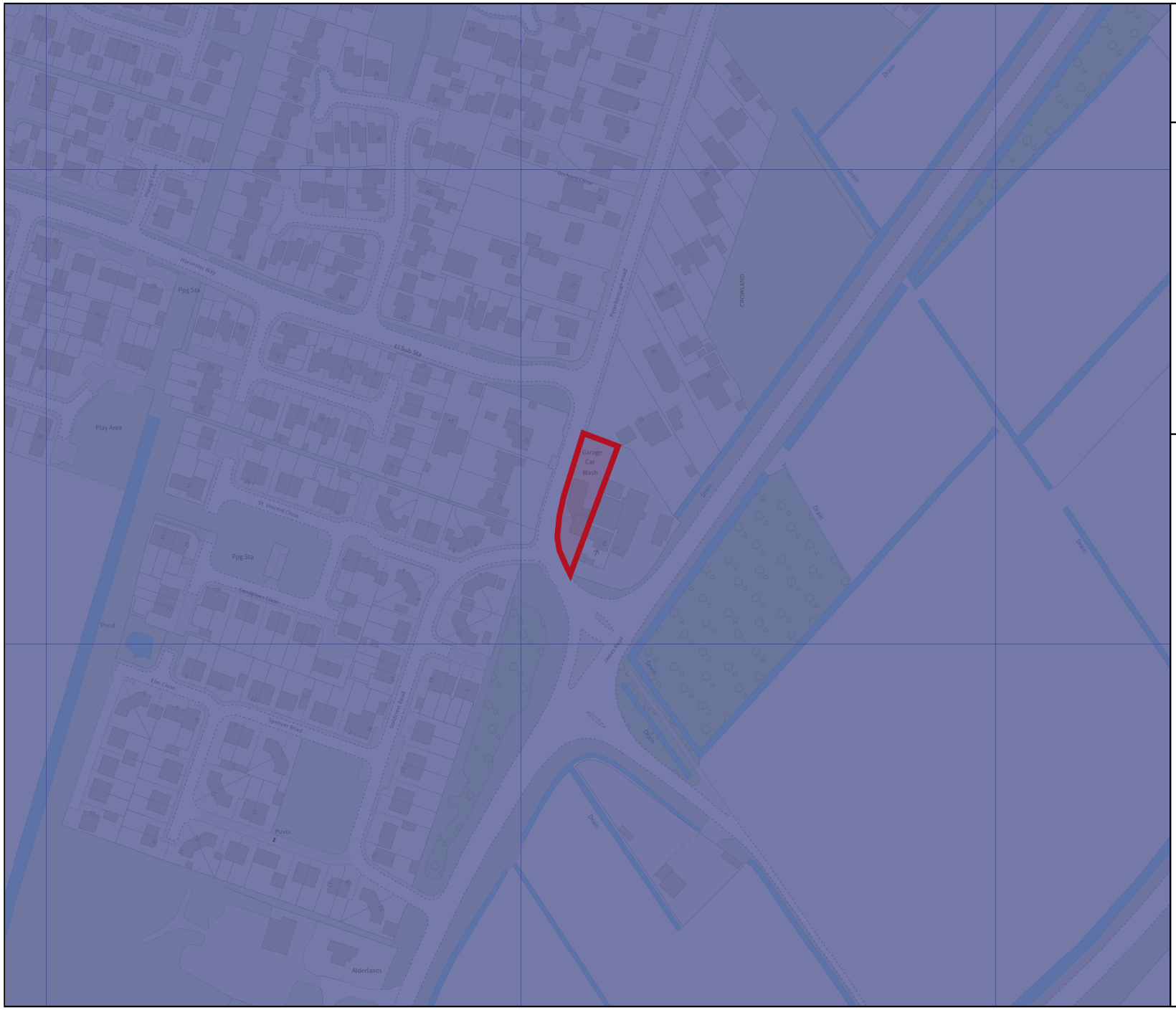
Notes

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/

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Environment Agency

Flood map for planning

Your reference
<Unspecified>

Location (easting/northing)
523937/309158

Scale
1:2500

Created
13 Aug 2024 20:10

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

0 20 40 60m

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