



FLOOD RISK ASSESSMENT FOR CHANGE OF USE OF PARK BUNGALOW, PARK ROAD, HOLBEACH FROM RESIDENTIAL TO OFFICES

August 2024



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ATTACHMENT 1 – Floor Plan, Elevations & Site Plan (Dwg SD24-016/1)



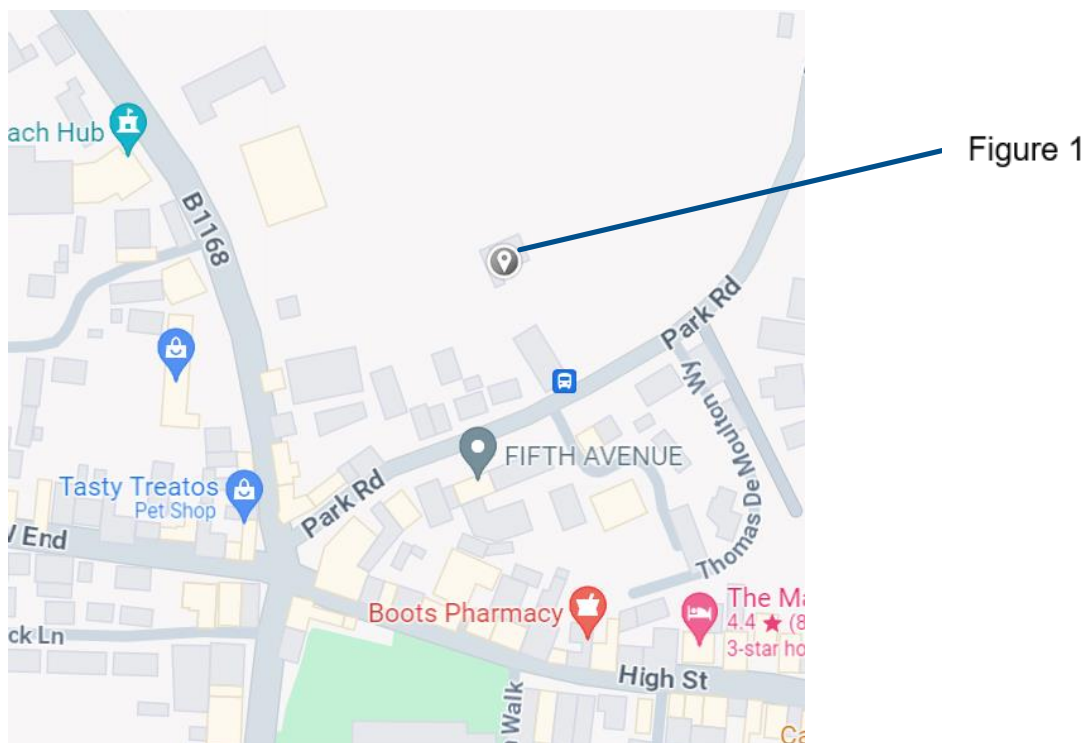
1.0 INTRODUCTION This Flood Risk Assessment has been prepared in accordance with National Planning Policy Framework (NPPF) and supporting planning practice guidance (PPG) on Flood Risk and Coastal Change. In areas at risk of flooding or for sites of 1 hectare or more, developers are required to undertake a site-specific Flood Risk Assessment to accompany an application for planning permission.

This Flood Risk Assessment has been produced on behalf of Holbeach Parish Council in respect of a development that consists of the change of use of a three bedroom bungalow to offices at Park Bungalow, Park Road, Holbeach. A planning application for the development is to be submitted by Holbeach Prish Council.

2.0 SITE LOCATION AND DESCRIPTION

2.1 Site Location

The site is located at Park Bungalow, Park Road, Holbeach. PE12 7EE The National Grid Reference of the site is TF 35932 24973. The location of the site is shown in Figure 1.



2.2 Existing Site

The site is on the northern side of Park Road. The site is comprised of a bungalow and the surrounding land that includes a driveway and garden. There are outbuildings in the west and south side of the site. The area of development is approximately 0.77 hectares. The site is flat with The site is in the South Holland Internal Drainage Board (IDB) District. Surface water at the site would naturally drain through soakaway and hence to the IDB drain system. The old Holbeach River is 405m northeast of the site.

2.3 Development

The development consists of the use of a three bedroom bungalow being used as offices. The Site Plan is provided in Attachment 1.

2.4 Local Development



Documents The South East Lincolnshire Local Plan 2011 – 2036, adopted in March 2019, is the Local Plan for the district. Policy 4: Approach to Flood Risk states the requirements for flood risk reduction. The South East Lincolnshire Level 1 and Level 2 Strategic Flood Risk Assessment (SFRA) was prepared in June 2017. The Joint Lincolnshire Flood Risk and Drainage Management Strategy has been prepared by Lincolnshire County Council as the Lead Local Flood Authority. The purpose of the Strategy is to increase the safety of people across Lincolnshire by reducing the number of people at risk of flooding, increasing the resilience of local communities, and reducing the impact of flooding.

2.5 Flood Zones

An extract from the Environment Agency Flood Maps for Planning is shown in Figure 2. The site is located within Flood Zone 3, an area with a high probability of flooding.

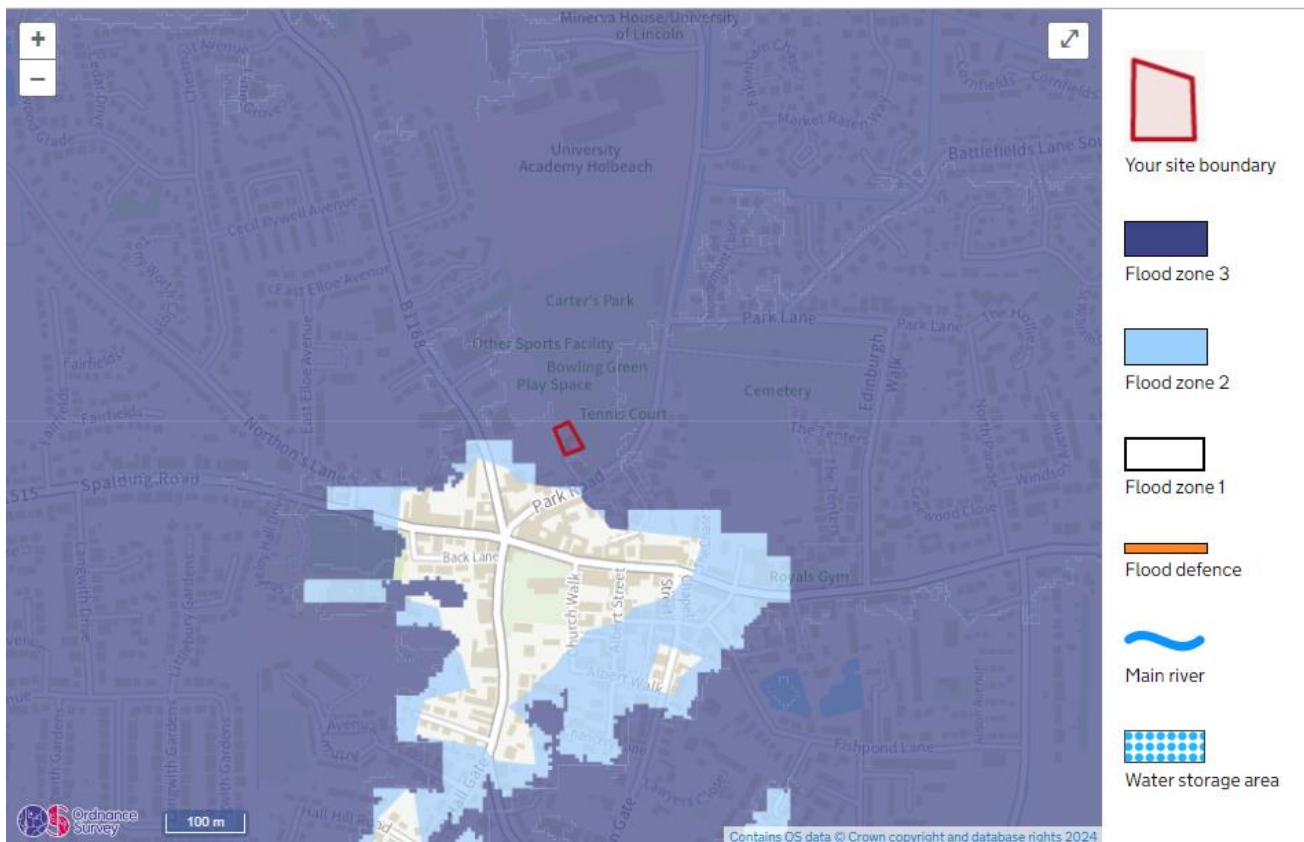


Figure 2 – Environment Agency Flood Map for Planning

The Environment Agency Long Term Flood Risk maps show that:

- in any year land has a 1% or more chance of flooding from rivers, or a 0.5% or more chance of flooding from the sea.
- the site is not within an area at risk of reservoir flooding.

3.0 FLOOD RISK VULNERABILITY

3.1 The Sequential and Exception Test

The NPPF requires the application of a Sequential Test to ensure that new development is in areas with the lowest probability of flooding.

The Exception Test is a method to demonstrate and help ensure that flood risk to people and property will be managed, while allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available.

3.2 Vulnerability Classification

Table 2 of the PPG Flood Risk and Coastal Change categorises different types of uses and development according to their vulnerability to flood risk. The development is covered by the description of buildings used for business and is classified as 'Less Vulnerable'.

Table 3 of the PPG Flood Risk and Coastal Change sets out Flood Risk Vulnerability and flood zone 'compatibility'. The site is within Flood Zone 3 and the development is 'Less Vulnerable' therefore it is not necessary to complete the Exception Test.

PPG Flood Risk and Coastal Change defines that the lifetime of the development in terms of flood risk and coastal change is 100 years.

3.3 Application of the Sequential Test

It is for the Local Planning Authority, using the evidence provided and taking advice from the Environment Agency as appropriate, to consider whether an application passes the Sequential Test.

Large parts of the South Holland district between the River Welland and River Nene lie within Flood Zone 2 or Flood Zone 3. The River Nene and River Welland have defences that provide protection during the 1% annual probability (1 in 100 chance each year) event and therefore the 'actual risk' of flooding at the site is low.

The SFRA states that as it is necessary to use the refined flood risk information (hazard and depth maps) to assist with the application of the sequential test. The refined flood risk information contained within the SFRA demonstrates the site is not at risk during the 1% annual probability fluvial and 0.5% annual probability tidal event. The site therefore has a low probability of flooding and is considered to pass the Sequential Test.

4.0 SITE SPECIFIC FLOOD RISK

4.1 Local Flood Assets

The site is 13.2 km west of the tidal River Nene and 9.7 km from the tidal River Welland. The site is protected by the River Nene tidal defences between Wisbech and Sutton Bridge. The River Nene is the responsibility of the Environment Agency. The River Welland is protected by tidal defences and is the responsibility of the Environment Agency.

There is a long-term strategy for the maintenance of the Environment Agency defences which is reviewed and updated periodically.

There is an extensive local drainage network managed by South Holland IDB. There is an IDB Holbeach River approximately 410m to the northeast of the site. The site and the surrounding land are within the Holbeach River catchment and drain to Holbeach Bank Pumping Station to discharge to the Holbeach River Old Sluice. The Holbeach River Old Sluice discharges to the Wards Enclosure Soke Dyke Sluice. The site is approximately 6.7 km south of the Holbeach Bank Pumping Station. During the operation and maintenance of its pumping stations, associated structures, and channel systems, the IDB seeks to maintain a general standard capable of providing flood protection to its district. A routine maintenance programme is in place to ensure that the Boards assets are commensurate with the standard of protection that is sought.

Current maintenance standards of the South Holland Internal Drainage Board and the Environment Agency are generally good.

4.2 Sources of Flooding

A summary of the sources of flooding is provided in Table 1.

Source of Flooding	Level of risk
Drainage network flooding	The risk is assessed in 4.3
Surface Water flooding	Based upon the EA maps the risk is very low.
Fluvial Flooding	The site is at low risk of fluvial flooding
Tidal flooding	The site is at low risk of tidal flooding
Reservoir flooding	Flooding from reservoirs is unlikely in this area.
Groundwater flooding	Flooding from groundwater is unlikely in this area.

Table 1 – Sources of Flooding



4.3 Probability of Flooding

The probability of flooding associated with blockages in the South Holland IDB drainage system is low due to the maintenance standards achieved and managed by the IDB. Failure of Holbeach Bank Pumping Station could lead to an increased level of risk in the IDB catchment.

Through the operation and maintenance of the pumping stations and the channel system the Board seek to maintain a general standard capable to providing flood protection to agricultural land and developed areas of 1 in 20 years and 1 in 100 years, respectively. The risk associated with flood events that exceed the standard of protection provided is lowered due to the South Holland IDB main drains incorporating freeboard. This freeboard provides storage during the exceedance events.

The site benefits from defences on the Rivers Nene and Welland that provide protection during a 0.5% annual probability (1 in 200 chance each year) tidal event and a 1% annual probability (1 in 100 chance each year) fluvial event.

4.4 Historic Flooding

During the preparation of this assessment, no evidence was discovered of the site being flooded.

4.5 Climate Change

Climate change is likely to impact the site through increased rainfall intensity and duration affecting the local drainage network and increased flood levels in the Rivers Nene and Welland.

The Rivers Nene and Welland tidal defences have been designed to include an allowance for climate change.

In summary the existing systems and defences are appropriate for the design life of the development (i.e., 100 years).

4.6 Residual Risk

There is a residual risk of flooding at the site should a breach of the tidal defences occur. The South East Lincolnshire SFRA includes maps demonstrating the residual peak depth in 2115. When climate change allowances are applied to the 1% annual probability (1 in 100 chance each year) fluvial event and 0.5% annual probability (1 in 100 chance each year) tidal event the extent of flooding does affect the site. An extract from this map is shown in Figure 3.

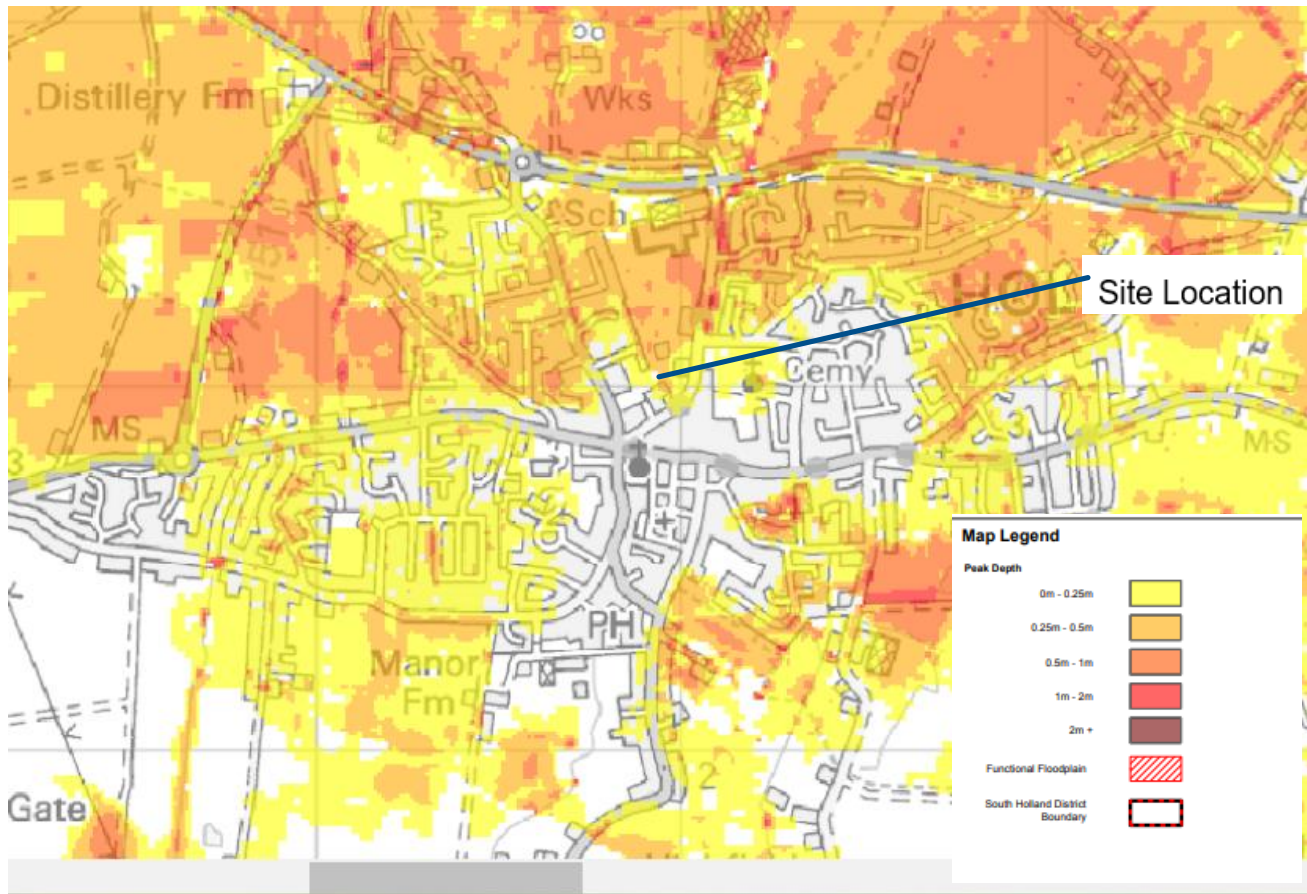


Figure 2 – SFRA 2115 residual peak depth map

5.0 FLOOD RISK MITIGATION

5.1 Summary of Risks

The probability of this development flooding from localised drainage systems is low. Failure of Holbeach St Marks Pumping Station or Wards Enclosure Soke Dyke Sluice could lead to an increased level of risk at the site.

The probability of the site flooding from any Environment Agency system is less than 1% annual probability (1 in 100 chance each year) because of the standards of the existing flood defences. Over time there will be a gradual increase in risk to the site due to climate change. During the design life of the development, it is not anticipated that the site would flood.

The SFRA considers the residual risk associated with overtopping and a breach in the defences in 2115. The maps show that the site is at low risk.

There will be no increase in impermeable area associated with the development so there is no potential that flood risk will be increased elsewhere.

5.2 Mitigation Measures

The site has a low 'actual risk' of flooding. Considering the nature of the development, it being an existing building and change of use, there are no specific mitigation measures proposed associated with the design.

Holbeach Parish Council will ensure that they are sufficiently aware of the risk of flooding, and the standard of the existing defences. The Environment Agency operates a flood warning system for properties at risk of flooding to enable householders to protect life or take actions to manage the effect of flooding on property. Floodline Warnings Service is a national system run by the Environment Agency for broadcasting flooding warnings. Holbeach Parish Council will register to receive flood warnings.

Should there be a failure of Holbeach Bank Pumping Station or Wards Enclosure Soke Dyke Sluice and conditions were such to put properties and land at risk of flooding, the Internal Drainage Board would take emergency action to maintain the drainage level of service by utilising temporary pumping equipment.

As an existing building the surface water runoff is managed so that stormwater will not affect the adjoining land or increase the flood risk elsewhere.



6.0 CONCLUSIONS

As a result of the assessment, the following conclusions have been reached.

- The development consists of the change of use of a three bedroom bungalow to offices at Park Bungalow, Park Road, Holbeach
- The site is located within an Internal Drainage Board catchment and through the operation and maintenance of the pumping stations and the channel system the Board seek to maintain a general standard capable to providing flood protection to agricultural land and developed areas of 1 in 20 and 1 in 100 years, respectively.
- The development is in Flood Zone 3. The development is protected during the 1% annual probability (1 in 100 chance each year) event including an allowance for climate change by defences on the tidal River Nene and River Welland.
- There are no specific recommendations associated with the building to reduce the risk of flooding to the development.
- The development passes the Sequential Test and is therefore suitable for the location.



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ATTACHMENT 1

FLOOR PLAN, ELEVATIONS & SITE PLAN



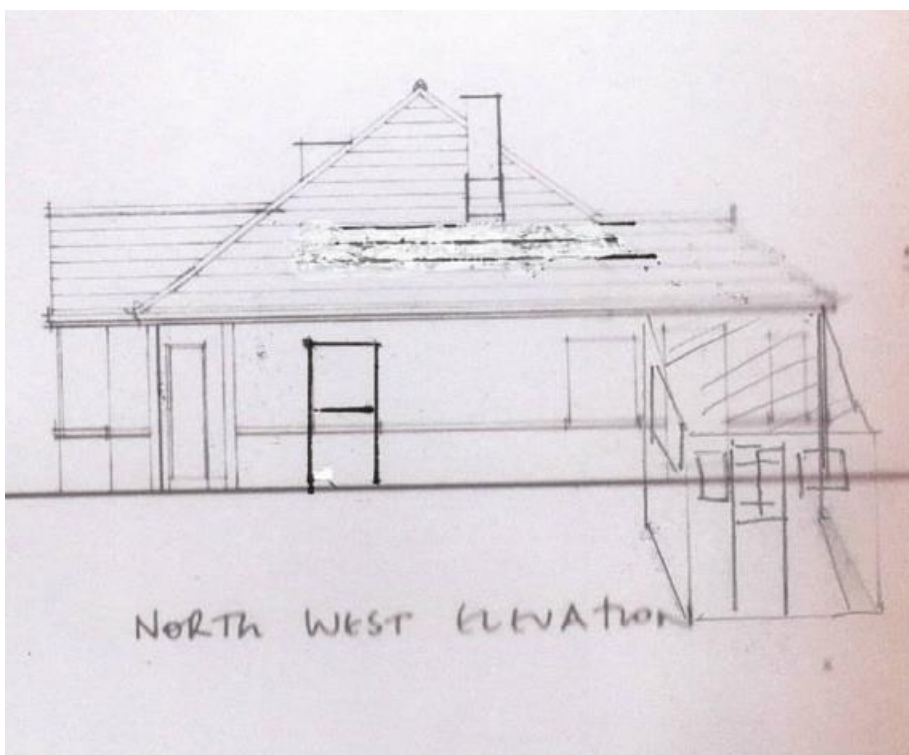
Existing elevation plans





Proposed elevation plans





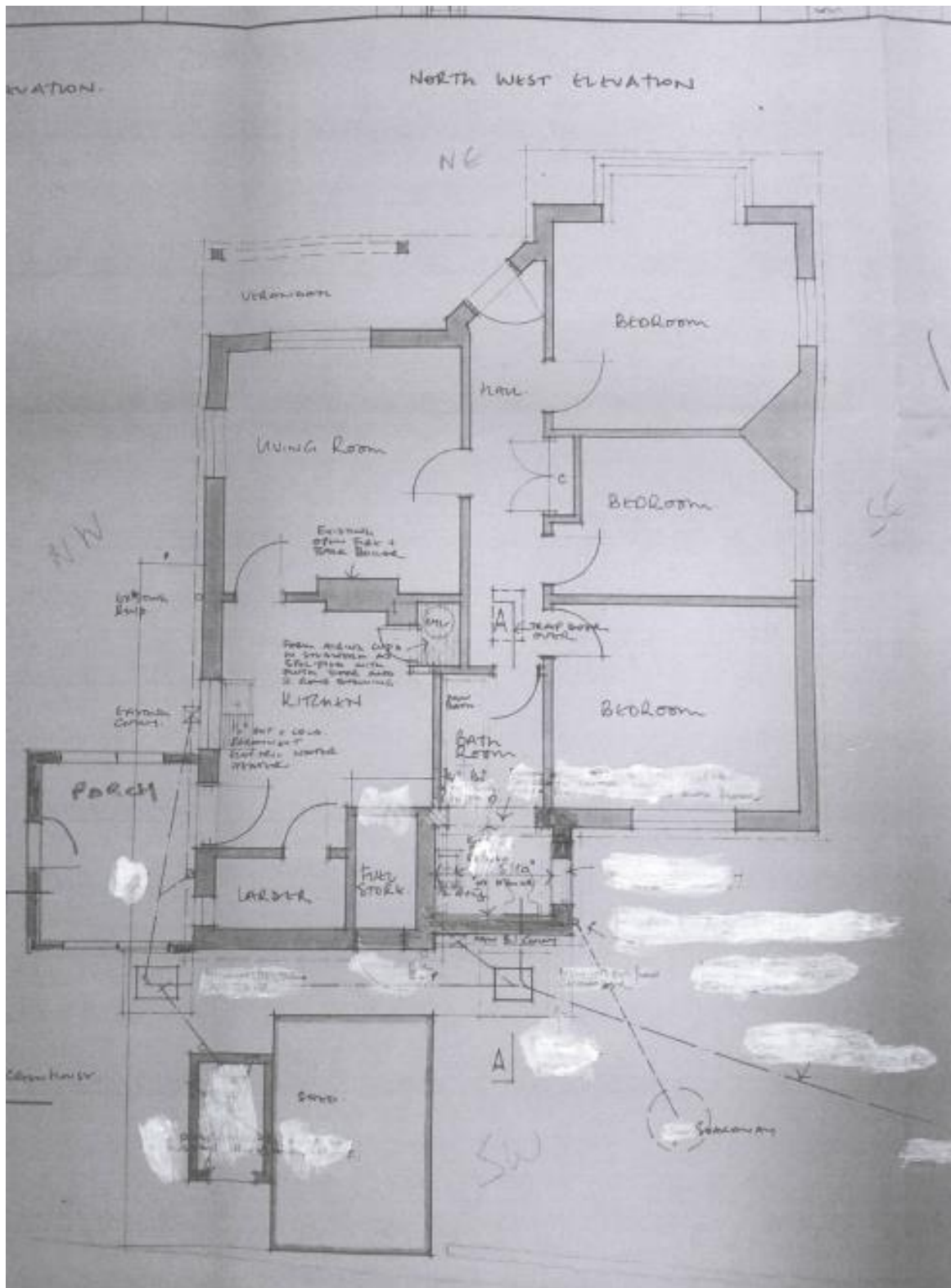


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Existing floor plan





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Proposed floor plan