

Flood Risk Assessment

Proposed Playground at:

Gedney Hill Playing Field
North Road
Gedney Hill
Spalding
Lincolnshire
PE12 0NL

Report produced by Gedney Hill Parish Council Play Park Committee for the Gedney Hill Parish Council Play Park Project on 06/04/2025

This flood risk assessment has been prepared solely to support the planning application for a playground at Gedney Hill Playing Field, PE12 0NL. The author has made every effort to provide an accurate assessment of the flood risk but accepts no liability should the information be found to be incorrect or incomplete, or if it is used for any other purposes other than for which it was originally commissioned.

1. Introduction

In areas at risk of flooding developers are required to undertake a site-specific Flood Risk Assessment.

This Flood Risk Assessment has been prepared in accordance with the National Planning Policy Framework (NPPF), for use solely in the support of the planning application for a playground from Gedney Hill Parish Council.

All comments and conclusions contained within this report are based upon information available at the time of writing. No liability is accepted if additional information exists or becomes available, or if the information is found to be incorrect or incomplete.

2. Site Location and Description

The proposed site is located on the playing field behind Gedney Hill Primary School. The site address is: Gedney Hill Playing Field, North Road, Gedney Hill, Spalding, Lincolnshire, PE12 0NL.

The National Grid Reference of the site is: TF 34134 11645



This Flood Risk Assessment has been prepared for a planning application for a playground which includes: children's play equipment, adult gym equipment, a zip wire, pergola, mountain bike track and benches.



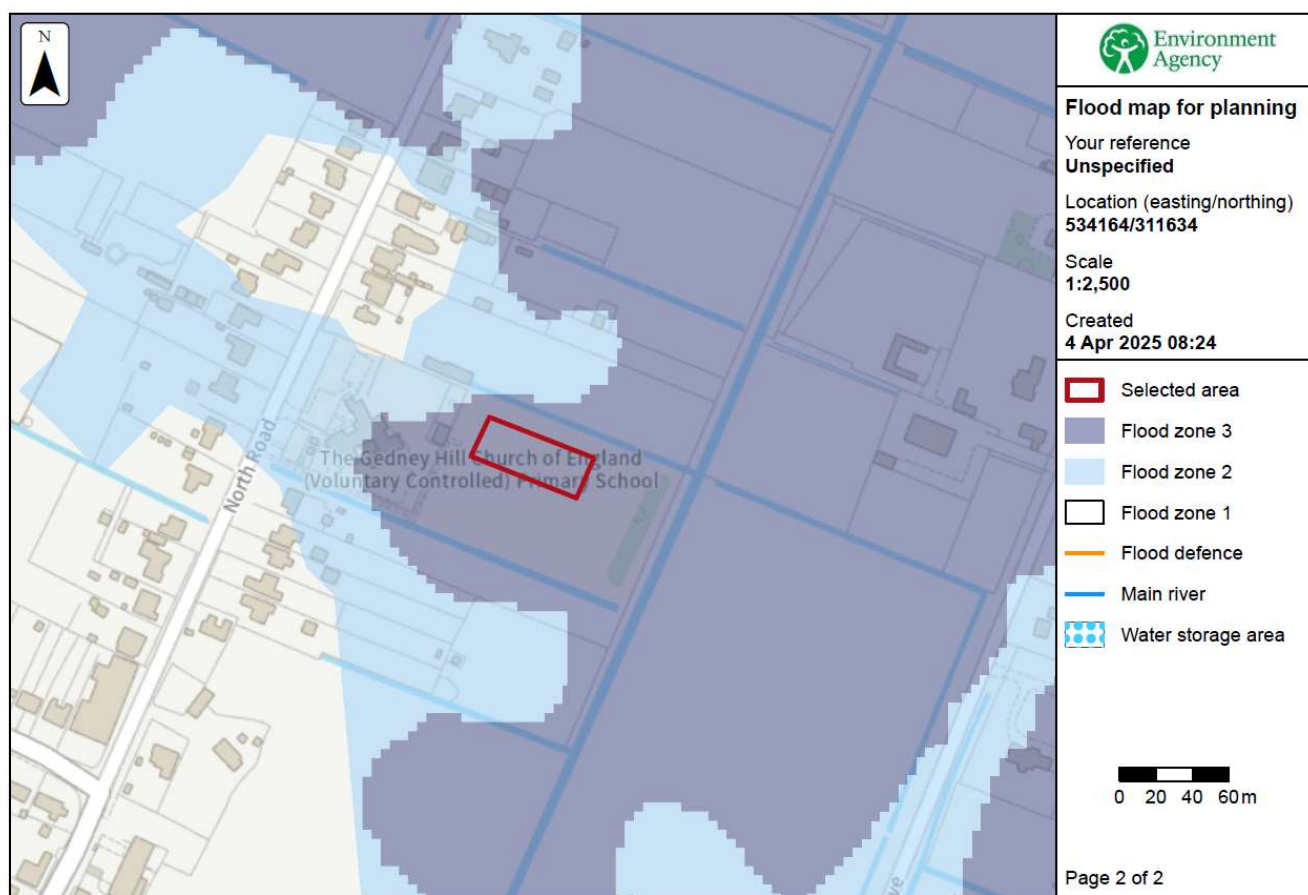
3. Existing Site

The site is on the Eastern side of North Road. The area of the development is approximately 0.18 hectares. The site is currently used as a recreational field with football goals towards the South East side of the field. Previously the playing field contained a small playground with swings, slide, zipwire, tunnel and a hill; these items were gradually removed over time due to deterioration through age.

The National Planning Policy Framework Guidance defines three levels of flood risk. Depending on the probability of annual fluvial flooding occurring:

- Zone 1 - low probability <0.1%
- Zone 2 - medium probability 0.1>1.0%
- Zone 3 – high probability >1%

The proposed development site is shown to be in Flood Zone 3a on the Environmental Agency's Flood Zone Maps without defences. See map below.



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Table 1 of NPPG (below) defines the site as high probability for flood risk, however, stated in the 'appropriate uses' in the table are 'water-compatible' developments.

Zone 3a - high probability

Definition

This zone comprises land assessed as having a 1 in 100 or greater annual probability of river flooding ($>1\%$), or a 1 in 200 or greater annual probability of flooding from the sea ($>0.5\%$) in any year.

Appropriate uses

The water-compatible and less vulnerable uses of land (table 2) are appropriate in this zone. The highly vulnerable uses should not be permitted in this zone.

The more vulnerable uses and essential infrastructure should only be permitted in this zone if the Exception Test is passed. Essential infrastructure permitted in this zone should be designed and constructed to remain operational and safe for users in times of flood.

Flood risk assessment requirements

All development proposals in this zone should be accompanied by a flood risk assessment.

Table 2 of the NPPG ‘Flood Risk Vulnerabilities Classifications’ categorises ‘*outdoor sports and recreation*’ as water-compatible development. (see table below)

Water-compatible development

- Flood control infrastructure.
- Water transmission infrastructure and pumping stations.
- Sewage transmission infrastructure and pumping stations.
- Sand and gravel working.
- Docks, marinas and wharves.
- Navigation facilities.
- Ministry of Defence defence installations.
- Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location.
- Water-based recreation (excluding sleeping accommodation).
- Lifeguard and coastguard stations.
- Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms.
- Essential ancillary sleeping or residential accommodation for staff required by uses in this category, *subject to a specific warning and evacuation plan.*

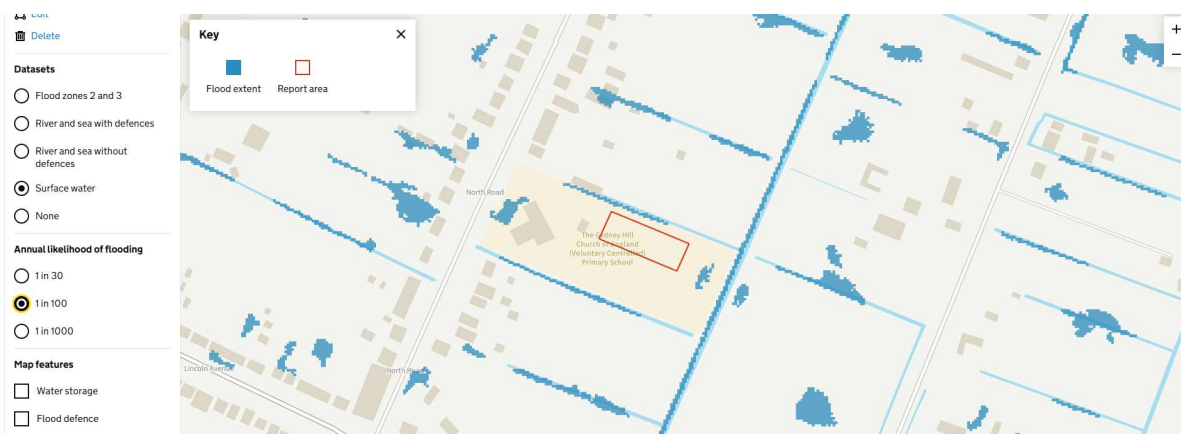
4.0 Sources of Flooding

The potential sources of flooding that have been identified in this Flood Risk Assessment are:

- A blockage in the nearby vicinity to the South Holland IDB drainage system
- An occurrence in the local drainage network, which is greater and exceeds the standard of protection.
- If Fleet Fen Pumping Station were to fail
- River Welland or River Nene breach

4.1 Surface Water Flooding

The picture below extracted from the Environmental Agency’s Flood Risk Map shows an annual likelihood of surface water effects at 1 in 100 (annual probability of 1%)



Surface water
[More about your surface water flood risk](#)

Yearly chance of flooding

Very low

Low

Medium

High

Yearly chance of flooding between 2040 and 2060

Very low

Low

Medium

High

What surface water is

Surface water flooding is sometimes known as flash flooding. It happens when rainwater cannot drain away through normal drainage systems.

4.2 Flood Risk from Rivers

The Flood maps for Risk of Flooding from Rivers and Sea (source EA) show the site to be in the low-risk category (0.1% - 1.0%). Meaning that each year the site has a 0.1 – 1% chance of flooding.

The River Welland, River Nene and The Wash are the closest rivers, these have been discounted as they are not close enough to affect the site; The River Welland lies West approximately 11kms away, The River Nene lies East approximately 11kms away and The Wash is approximately 20kms to the North East.



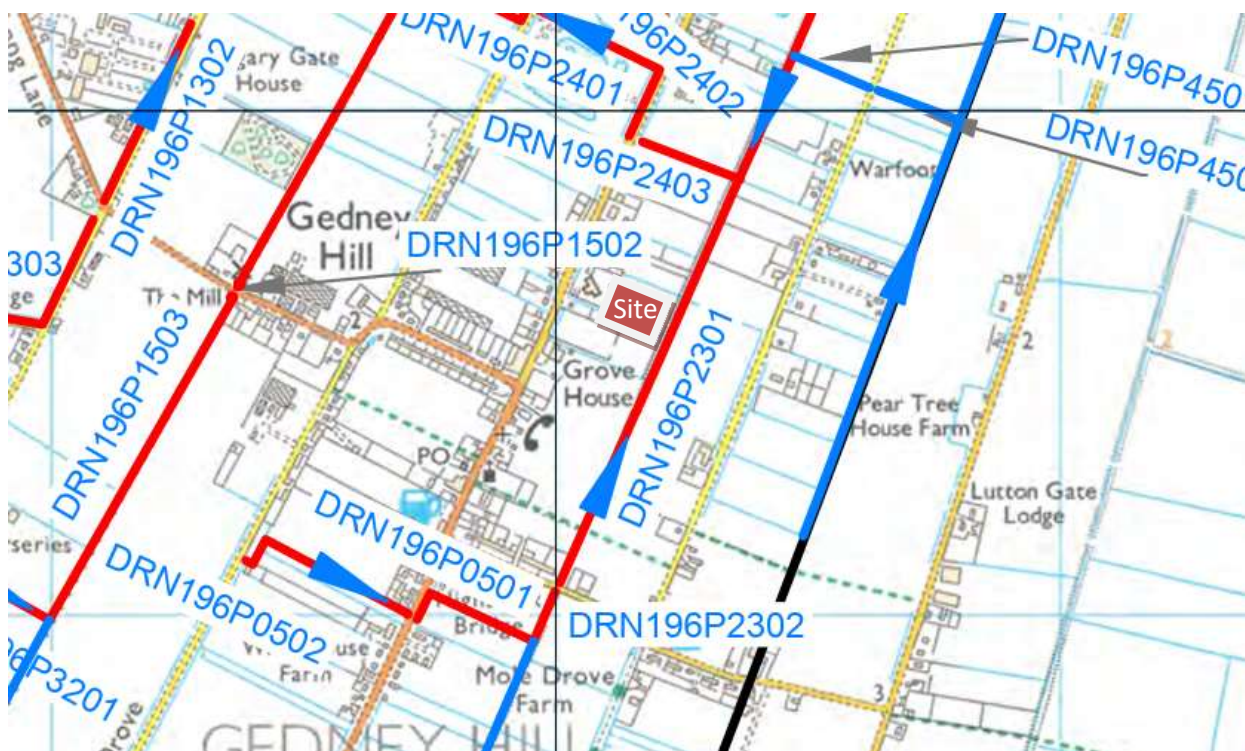
4.3 Historic Flooding

During the analysis of the data available to complete this Flood Risk Assessment, no evidence was discovered of the site being flooded in the past fifty years.

4.4 Internal Drainage Board

The proposed development is located in the catchment area of South Holland Internal Drainage Board. The site is within Fleet Fen's catchment area. The nearest water course to the site is on the East boundary 'Highstock Drain.' The board is responsible to operate and maintain the drain.

The Internal Drainage Board maintains a general standard capable of providing flood protection to its district. A routine maintenance programme is in place which ensures that the IBD's assets are appropriate with the standard of protection that is sought.



Highstock Drain; labelled DRN196P2301 on the IBD map

4.5 Climate Change

Based on the Flood Map for Planning information, without flood defences, there could be a 1 in 100 chance of flooding each year from rivers in the period between 2070 to 2125 and the same chance of tidal flooding by 2125. Flood defences are present and are appropriate for the design life of the development.

Climate change: projected chance of flooding

Without defences (undefended)

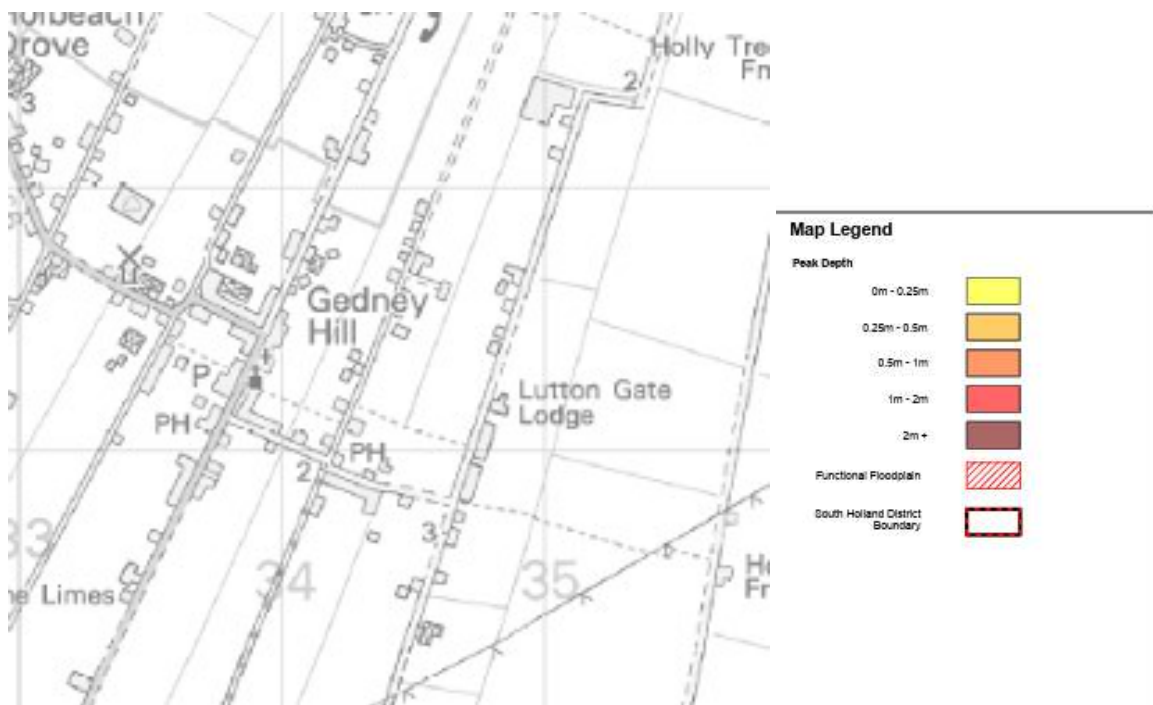
We have not modelled the 3.3% AEP event for an undefended scenario.

Without flood defences, there could be a 1% AEP (1 in 100) chance of flooding each year:

- from rivers for the period 2070 to 2125
- from the sea (tidal flooding) by the year 2125

5. Strategic Flood Risk Assessment

The fig below shows the South East Lincolnshire Strategic Flood Risk Assessment data, which was updated in 2017 and is used to undertake the Sequential Flood Risk Assessment in South Holland. The Residual Flood Hazard, Depth and Velocity District – present day 1% Fluvial and 0.5% Tidal Event Probability Maps show that the site is located in an area of no hazard (fig below). The Hazard, Velocity and Depth Maps for year 2115 also shows that the proposed development is still within an area of no hazard.



Residual Flood Hazard, Depth and Velocity District – present day 1% Fluvial and 0.5% Tidal Event Probability Map

Sequential Test

The aim of the Sequential Test is to ensure that a sequential approach is followed to steer new development to areas with the lowest probability of flooding with the aim of steering new development to Flood Zone 1 or 2.

Flood zone 3 sites should only be considered where there are no reasonably available sites in Flood Zones 1 or 2.

In the village of Gedney Hill, most of the available land for this type of development is within flood zone 3(a) and therefore it is not possible to locate this on an alternative site in flood zones 1 or 2.

Table 2: Flood risk vulnerability and flood zone ‘incompatibility’

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a †	Exception Test required †	X	Exception Test required	✓	✓
Zone 3b *	Exception Test required *	X	X	X	✓ *

Key:

✓ Exception test is not required

X Development should not be permitted

Table 2 above shows that a water compatible development is deemed acceptable by NPPF and that an exception test is not required.

6. Access, Egress, Warning and Mitigation Advice

The Gedney Hill Play Park is located on a level, open field with one access and exit point this route provides a safe and visible evacuation path to higher ground, including the adjoining road network which lies above the typical flood level for the area.

As the park is unsupervised, signage should be installed to clearly mark evacuation routes and advise visitors to vacate the area in times of flood.

To support flood resilience, the design minimises use of permanent surfacing. The majority of the play surface will be grass mats, which allow natural drainage and are less prone to damage compared to solid materials.

The small area of wet pour safety surfacing is porous and will be installed with a permeable sub-base material to support drainage and reduce water pooling.

All fixtures, including benches and play equipment, will be constructed from materials that are either water-resistant or easy to clean and dry after a flood event.

It is recommended that the site management team subscribes to the Environment Agency's flood warning system to receive real-time alerts. In the event of an amber or red flood warning, temporary signage should be placed at park entrances to advise against entry. Local evacuation procedures will rely on clear communication with residents via community noticeboards, social media, and the Parish Council website. The pavilion can be used as a temporary shelter point, provided it remains safe and accessible during any event.

7. Conclusion

The site has protection of flood defences which are well maintained by the Environment Agency.

The flood risk vulnerability classification from the NPPF Annex 3 describes the site as a:

Water-compatible development

- Amenity open space, nature conservation and biodiversity, ***outdoor sports and recreation*** and essential facilities such as changing rooms.

In conclusion, the development is classified as water-compatible within the National Planning Policy Framework Guidelines. Developments that are water-compatible are designated as appropriate use in Flood Zone 3.

References used:

<https://check-long-term-flood-risk.service.gov.uk/risk#>

<https://flood-map-for-planning.service.gov.uk/map>

The National Planning Practice Guidance

The National Planning Policy Framework

Environmental Agency