

Land South of Bracebridge Heath

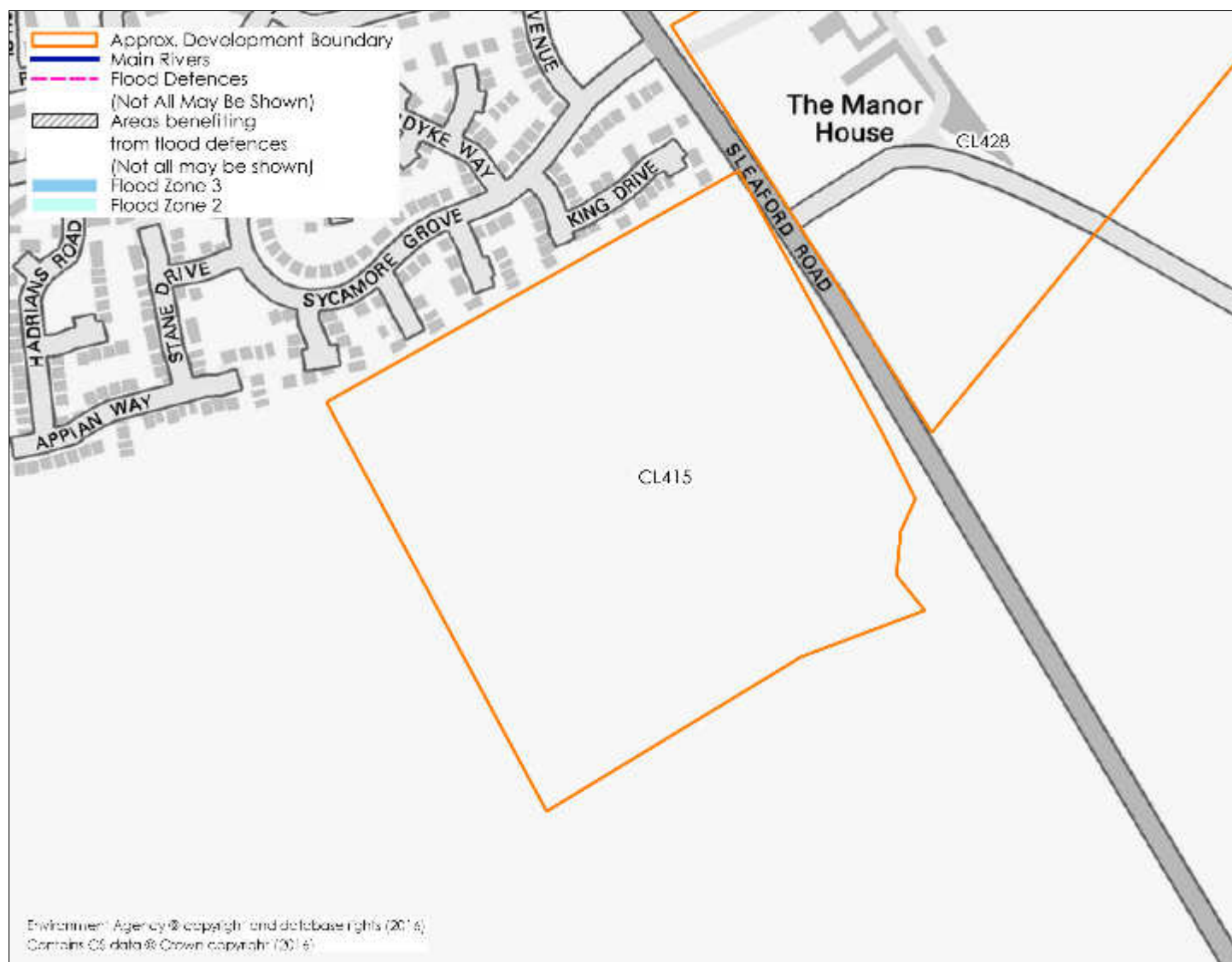
SITE DESCRIPTION

The site is fairly flat used for arable farming with pylons crossing it. Hedgerows mark the west, north and east boundaries and the southern boundary is marked by a proposed southern bypass route. The site is surrounded by arable farm land apart from to the north where there is a housing estate.

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|-------------------------|----------------|
| REFERENCE | CL415 |
| NATIONAL GRID REFERENCE | 498563, 366546 |
| SITE AREA (ha) | 11.82 ha |
| INTERNAL DRAINAGE BOARD | NA |

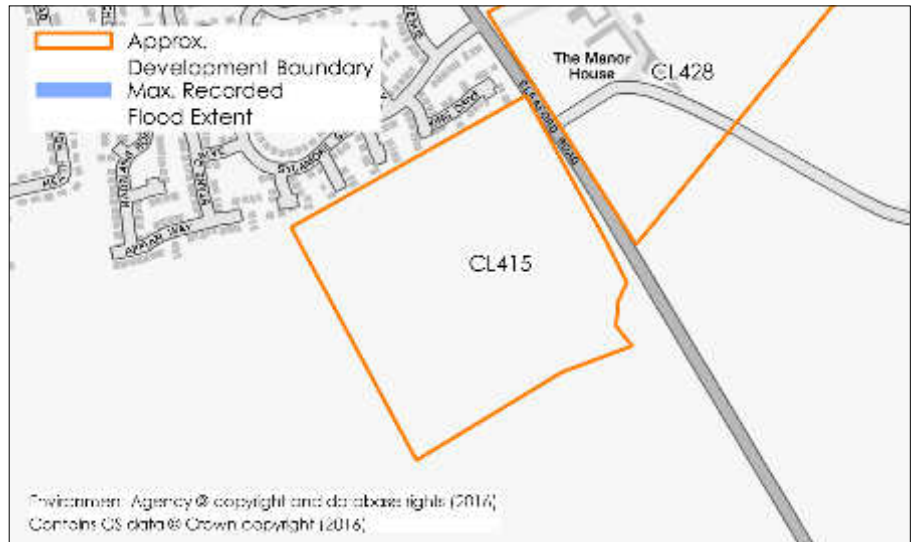
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Bracebridge Heath |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 213 |

FLOOD MAP FOR PLANNING



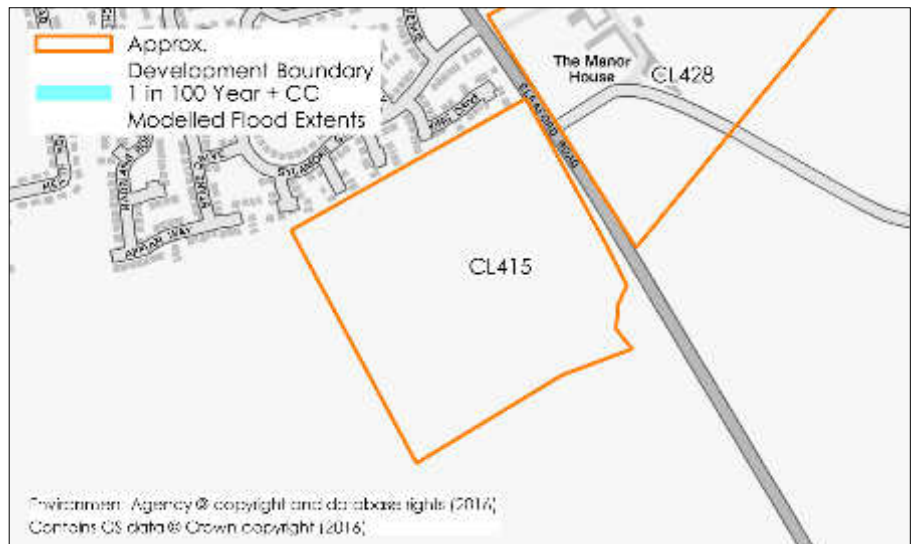
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



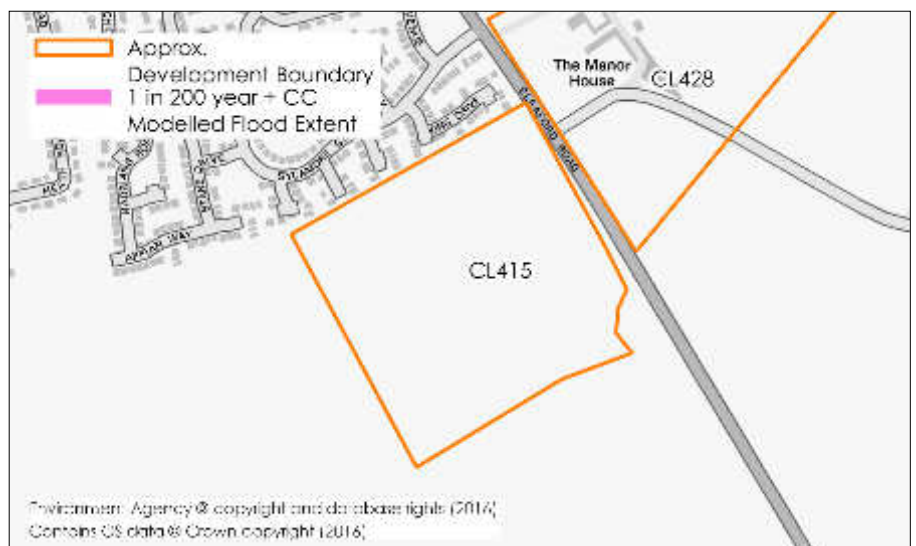
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding in the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

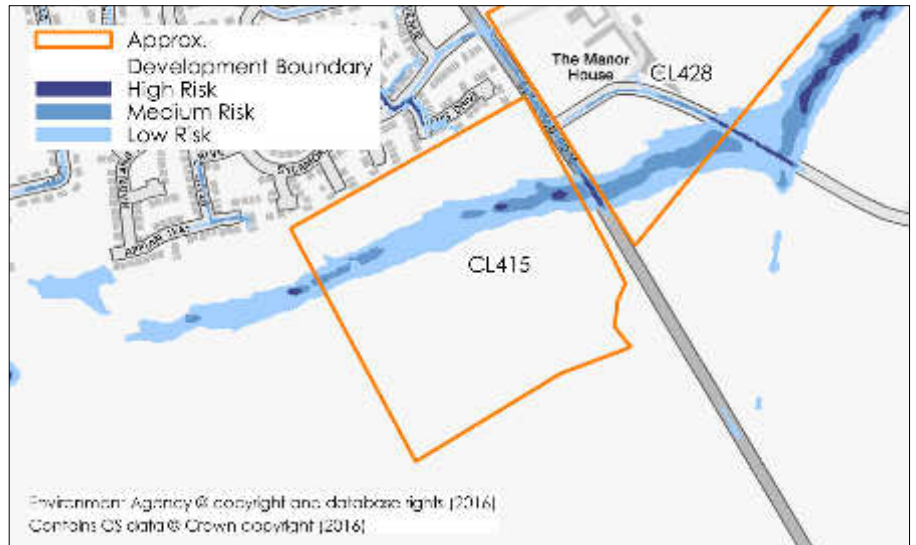
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding in the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the medium surface water flood risk area the depth of flooding is estimated to be up to 0.15m with a velocity of up to 0.5-1.0m/s.

In addition, there is evidence of a low risk flow path through the site from northeast to west.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

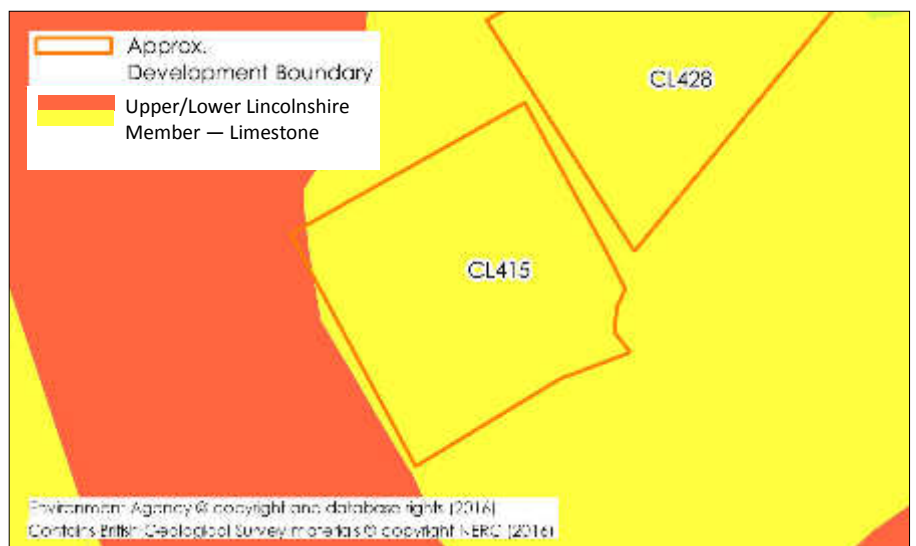
The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to 0.15m deep flooding with a velocity of 0.5-1.0m/s in the medium surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways may be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.
- Raise finished floor levels 300mm above existing ground levels.

LIMITATIONS

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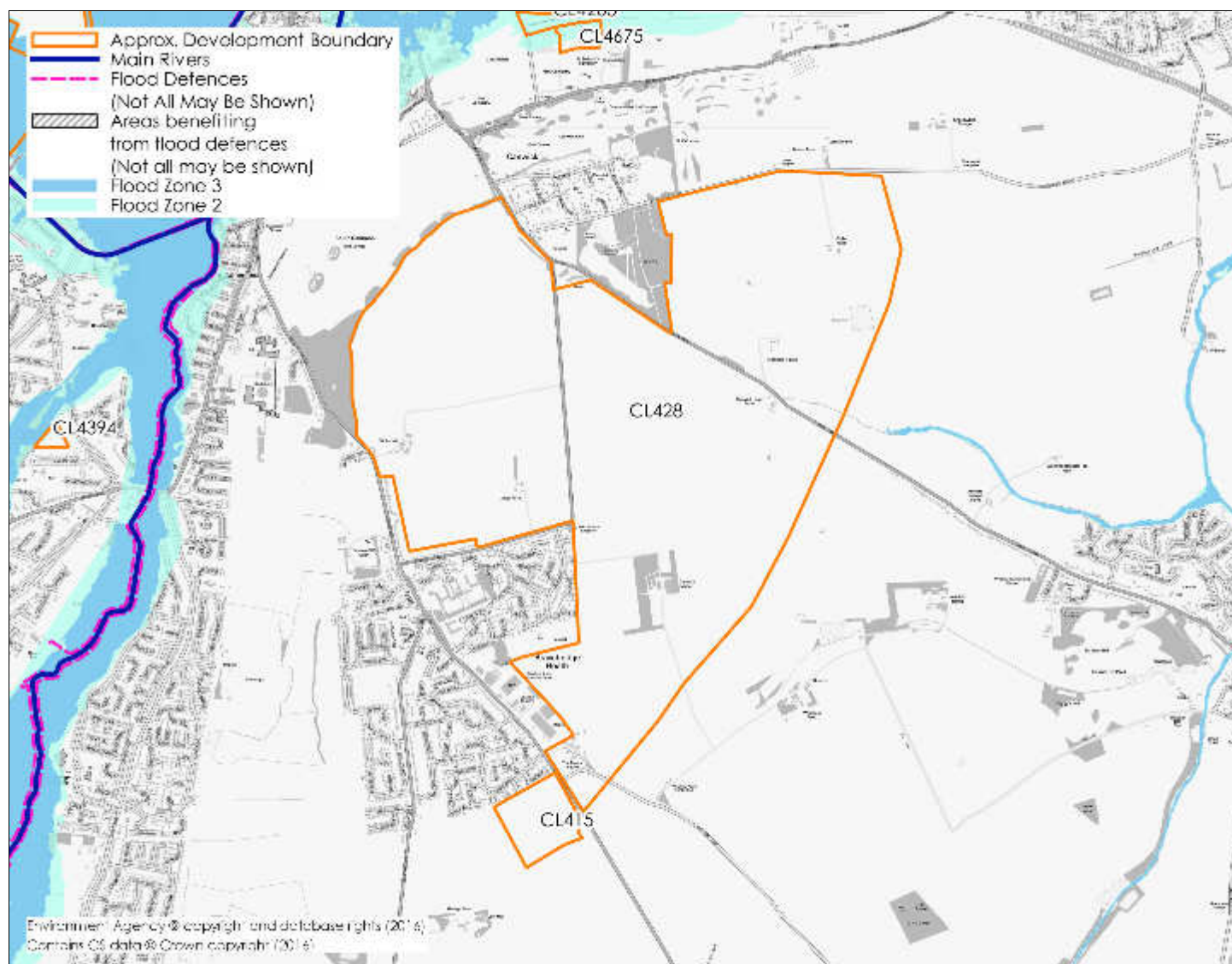
SITE DESCRIPTION

South East Urban Extension. Very flat farm land. Includes farm buildings, small area of woodland. Pylons run through site. Allotments in North eastern corner. Site wraps around 90's housing development. Canwick avenue (B131) runs through middle of the site.

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| REFERENCE | CL428 |
| NATIONAL GRID REFERENCE | 499009, 368535 |
| SITE AREA (ha) | 485 ha |
| INTERNAL DRAINAGE BOARD | NA |

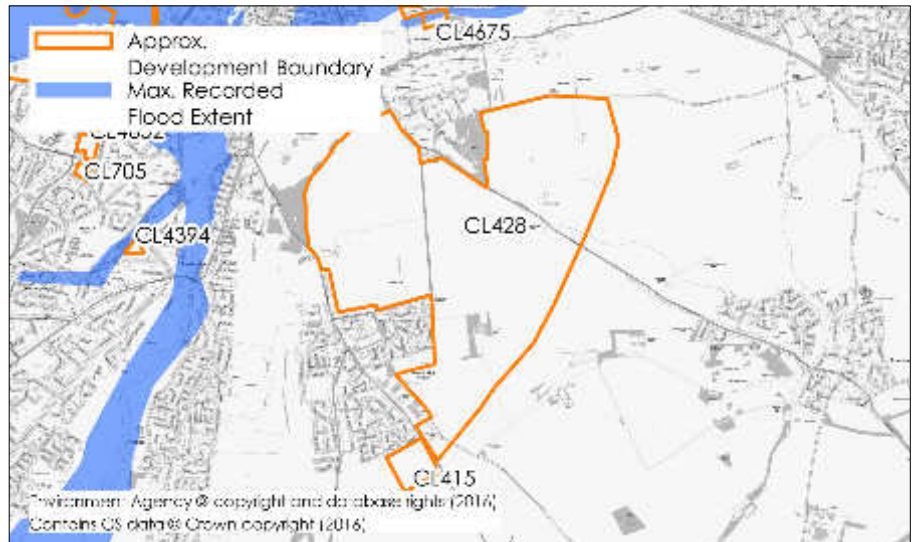
| | |
|---------------------|---------------------------------------|
| LOCAL PLAN STATUS | Preferred Sustainable Urban Extension |
| LOCATION | Canwick |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 3500 |

FLOOD MAP FOR PLANNING



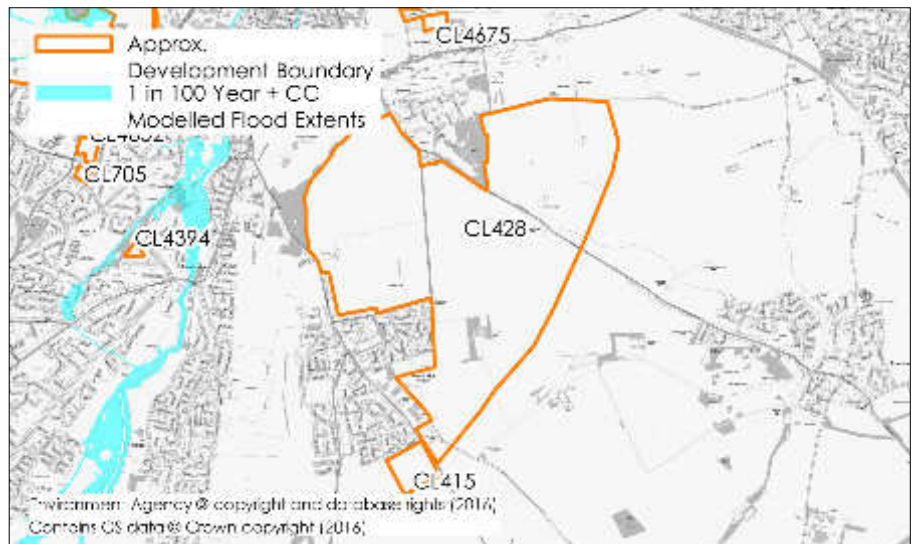
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



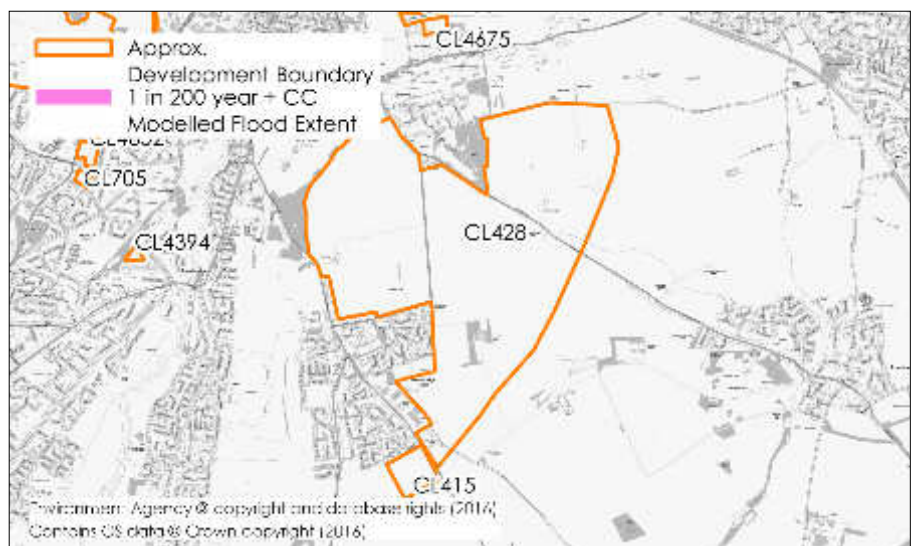
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.

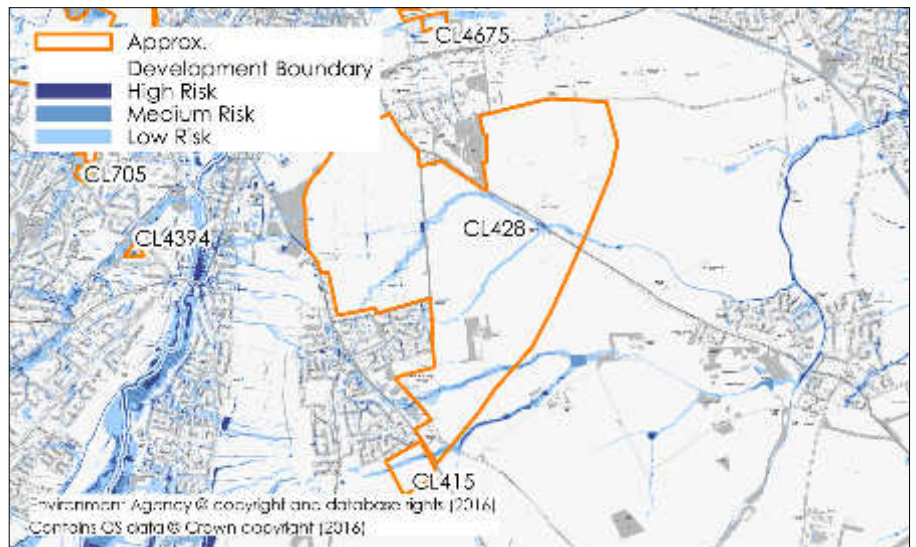


MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that there are small discrete areas of high surface water flooding at depths of flooding is estimated to be 0.3-0.6 with a velocity of 0.25-0.5.

In addition, there is evidence of three low risk flow paths through the site from west to east.

Modelled flood information provided by the Environment Agency indicates that the site is not at high risk of surface water flooding.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

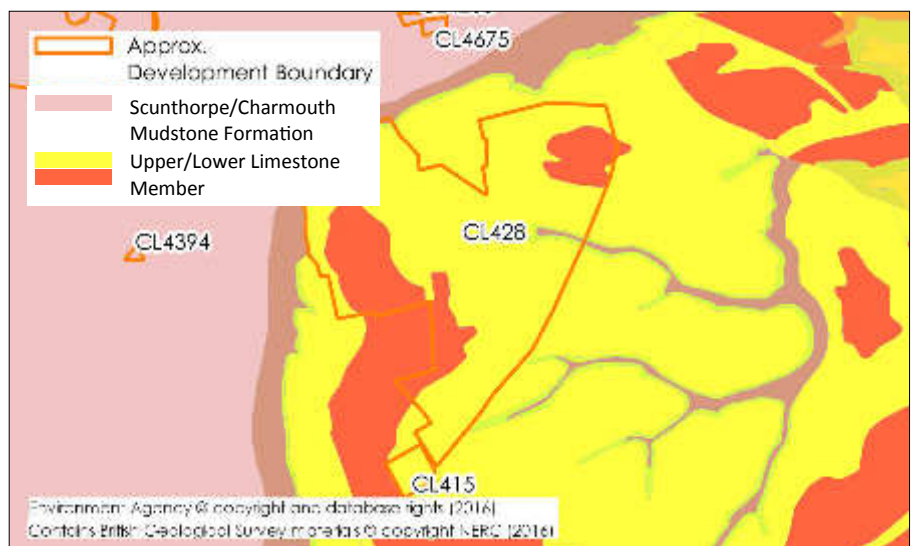
The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to small discrete areas of high surface water flooding at depths of flooding is estimated to be 0.3-0.6 with a velocity of 0.25-0.5. With evidence of three low risk flow paths through the site from west to east.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways may be acceptable for the disposal of surface water.
- There is low risk posed from Groundwater flooding to the site.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.
- Raise finished floor levels 300mm above existing ground level.

LIMITATIONS

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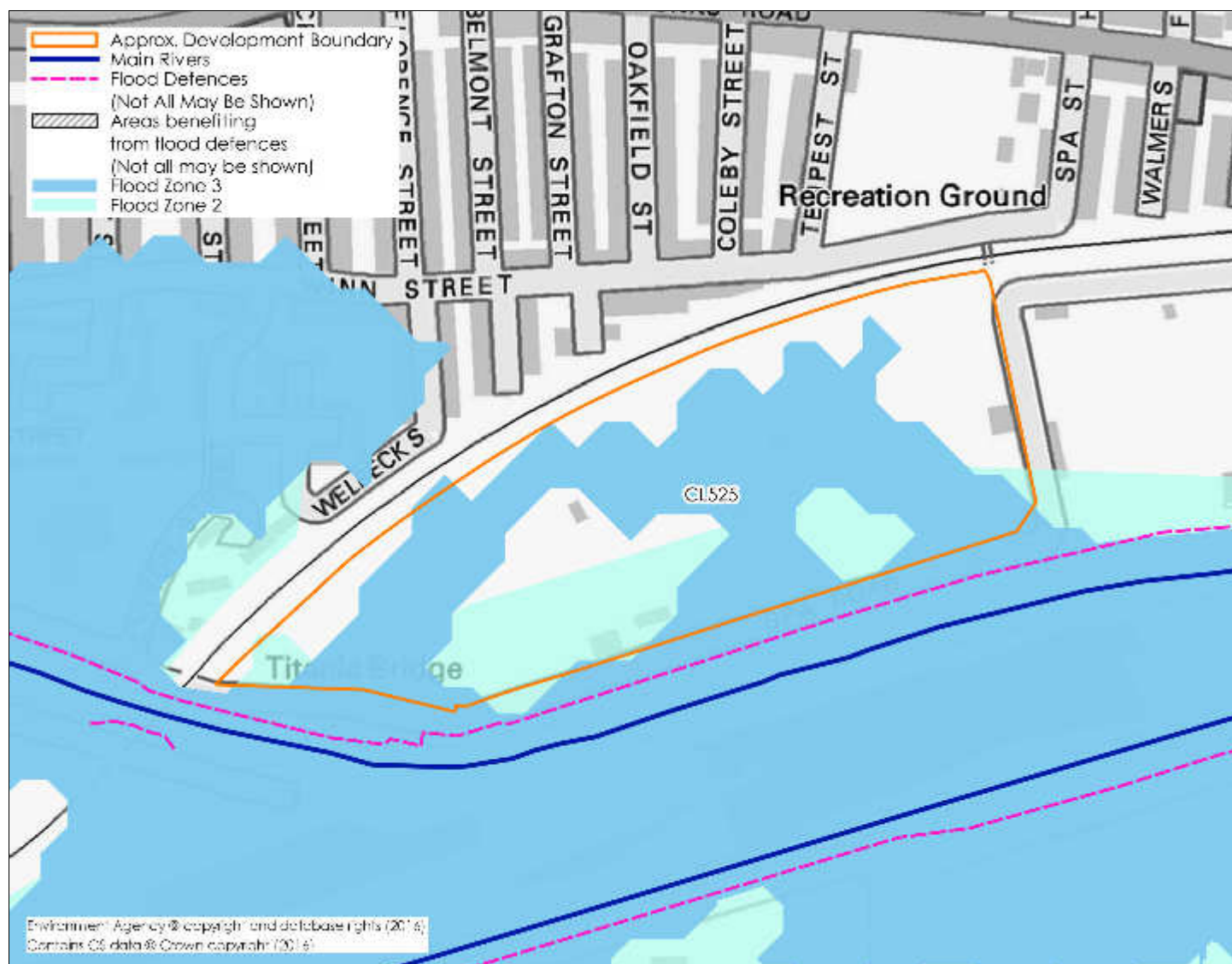
SITE DESCRIPTION

Derelict land between the railway line and the River Witham, surrounded by a high metal fence around the site. Site is overgrown and there are trees and bushes at most boundaries. Pylons run through the site. Some structures remain at the south west corner of the site. To the north, beyond the railway, are Victorian terraced streets, to the south, beyond the river, are offices and warehouses. To the east there is an electricity station. To the west, beyond the railway, is a tower block and residential area.

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| REFERENCE | CL525 |
| NATIONAL GRID REFERENCE | 498761, 371143 |
| SITE AREA (ha) | 5.71 ha |
| INTERNAL DRAINAGE BOARD | WITHAM THIRD DISTRICT |

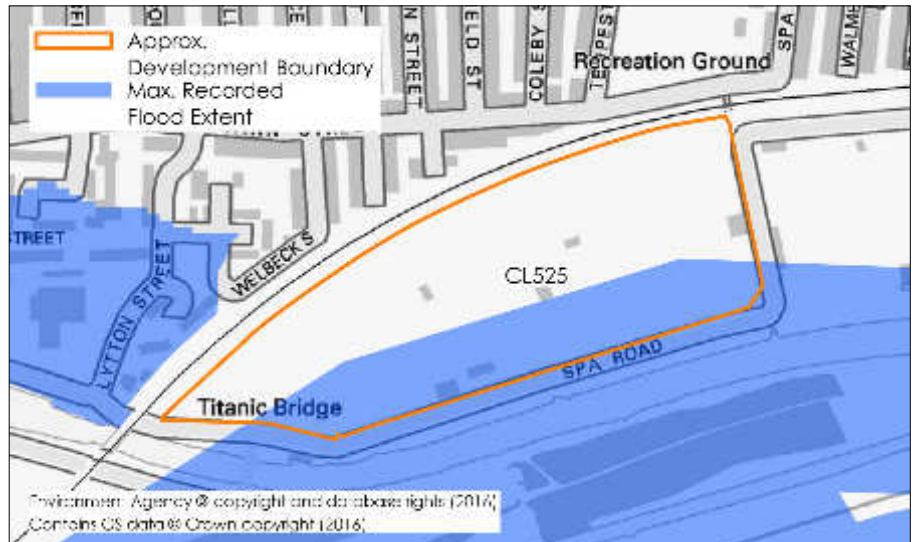
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Lincoln |
| LOCAL AUTHORITY | City of Lincoln |
| INDICATIVE CAPACITY | 300 |

FLOOD MAP FOR PLANNING



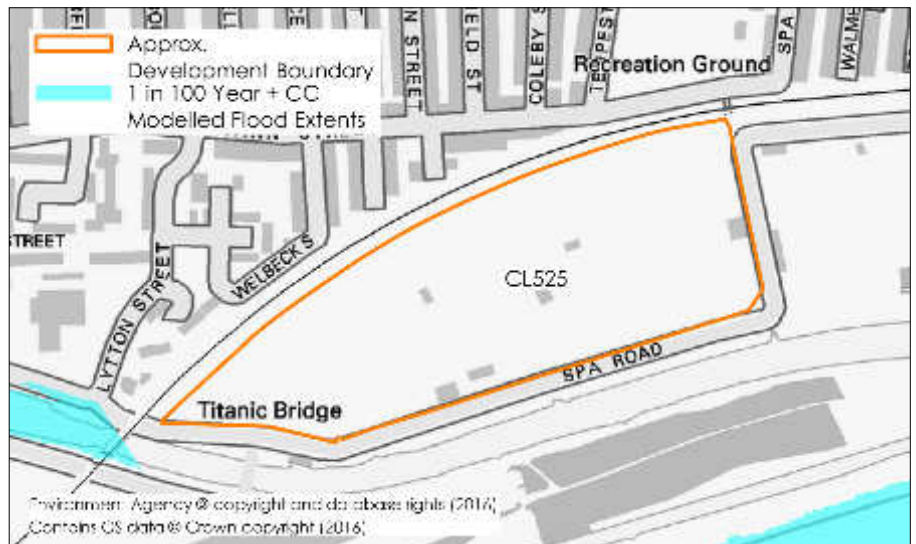
HISTORICAL FLOODING

Historical flooding information provided by the Environment Agency indicates that the site has been subjected to flooding in 1947 from the River Witham.



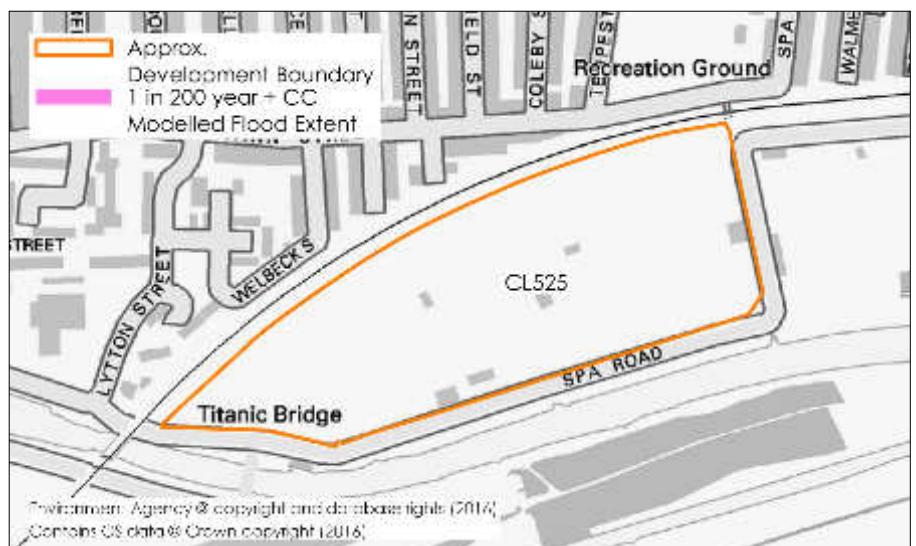
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



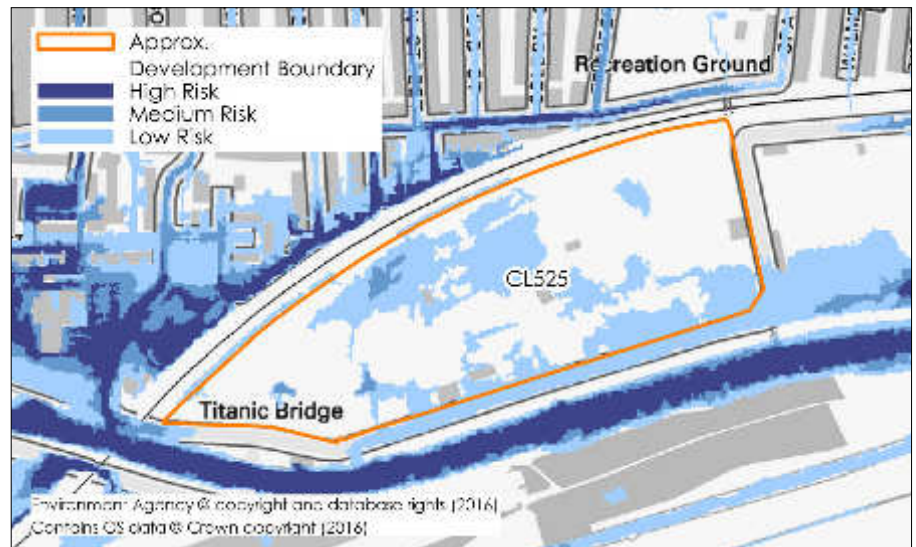
MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the low surface water flood risk area the depth of flooding is estimated to be predominantly up to 0.6 metres with some deeper patches to the south east of the site of 1.2 metres with a velocity of less than 0.25 m/s.



OTHER SOURCES OF FLOOD RISK

Breaching of Flood Defences

The River Witham and the South Delph have a number of defences associated with them, which are actively maintained by the Environment Agency. There is generally a low probability that these could fail, however the consequences of such failure could be significant.

The information made available by the Environment Agency for this investigation does not provide sufficient data to report on this risk. However, the Environment Agency's hydraulic flood model would allow for this analysis to be undertaken, and the advice of a flood risk specialist should be sought when preparing a planning application for the site.

Reservoir Flooding

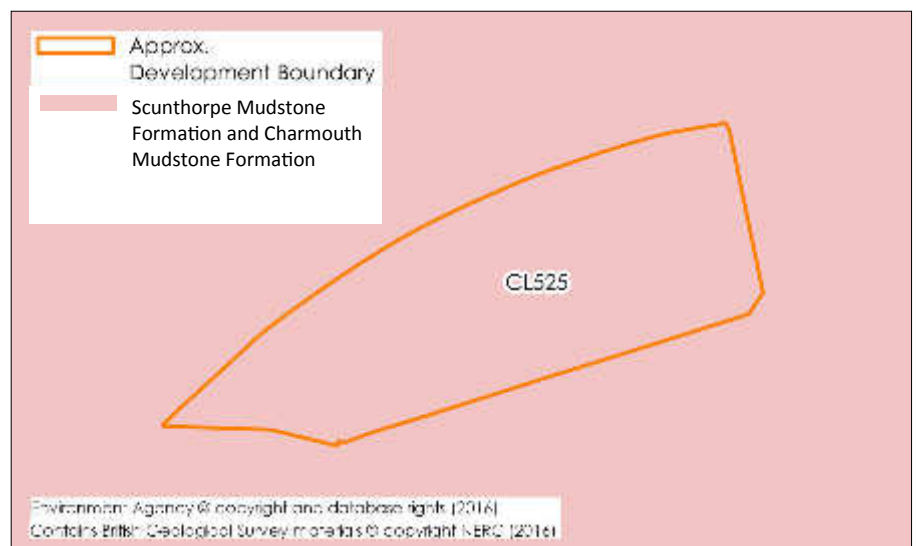
The site is shown to be predominately outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- Approximately 70% of the site is shown to be within Flood Zones 2 and 3.
- The site has previously been subjected to flooding in 1947.
- The site is not subject to fluvial flooding in the Environment Agency 1 in 100 year + CC model.
- The site is not subject to tidal flooding.
- The site is not subjected to high risk of surface water flooding.
- The site is subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Raise land levels to provide development platform above flood level on site with corresponding loss of floodplain mitigation.
- Raise finished floor levels 300mm above flood level on site and provide flood resilient construction 300mm above residual flood level.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

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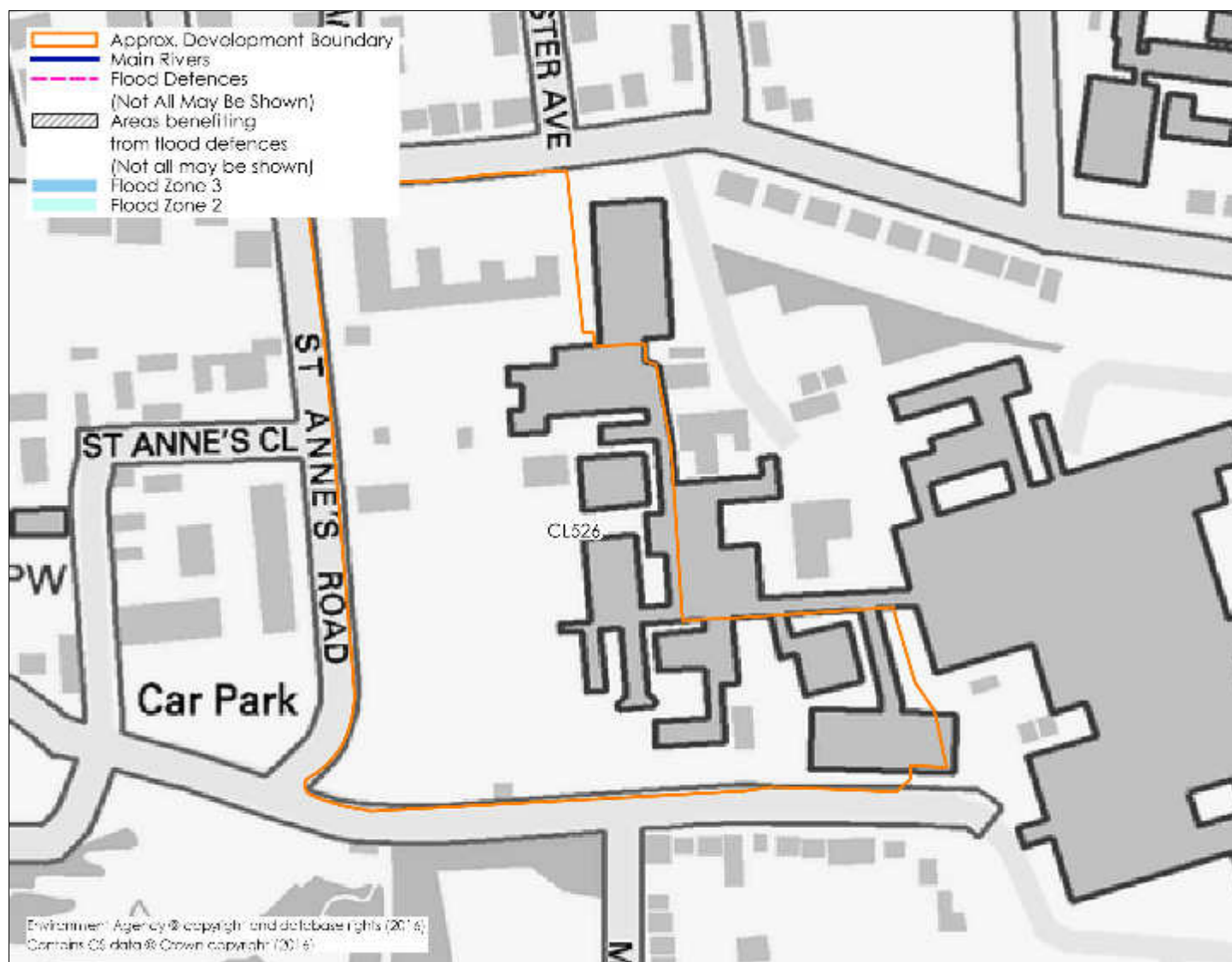
SITE DESCRIPTION

This site slopes down from the north and consists of old hospital buildings of up to 7 storeys, a listed nursing home and car park. Part of site is still in use, with a number of portable buildings on site. There are mature trees both bordering the site and located within it. There are residential areas to the north, west and south and there is also a park to the south. To the east is the new hospital.

| | |
|-------------------------|----------------|
| REFERENCE | CL526 |
| NATIONAL GRID REFERENCE | 498703, 371758 |
| SITE AREA (ha) | 4.2 ha |
| INTERNAL DRAINAGE BOARD | NA |

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| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Lincoln |
| LOCAL AUTHORITY | City of Lincoln |
| INDICATIVE CAPACITY | 126 |

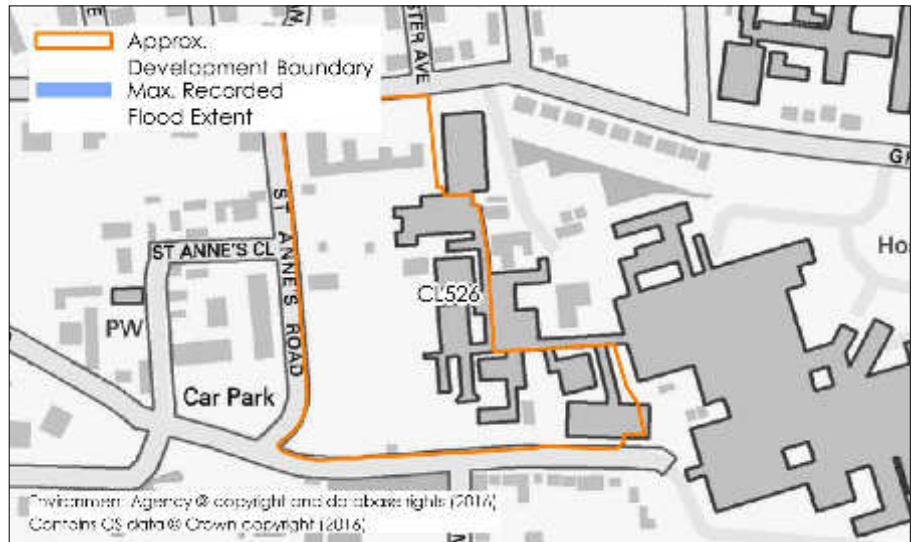
FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

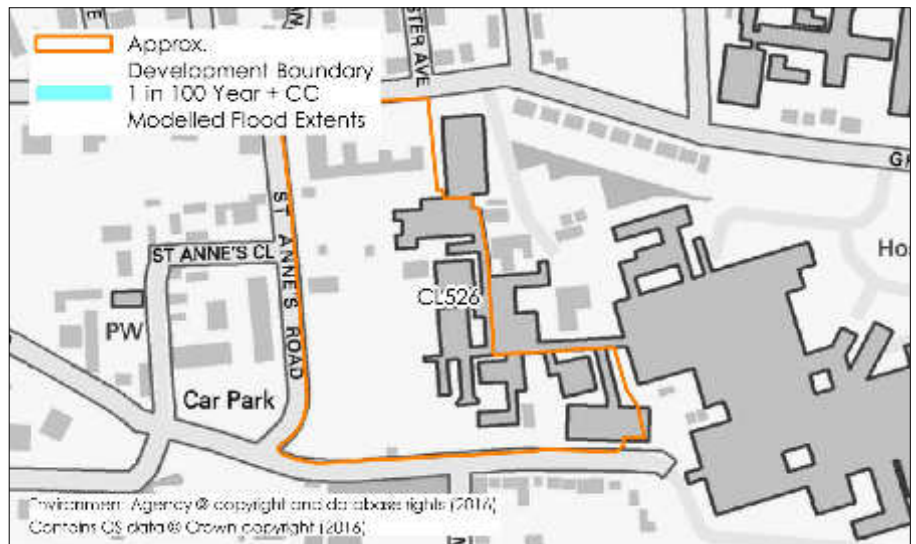
The Environment Agency do not have any records of the site previously being subjected to flooding.

The nearest historic flooding is located approximately 600m south of the site associated with flooding from the River Witham.



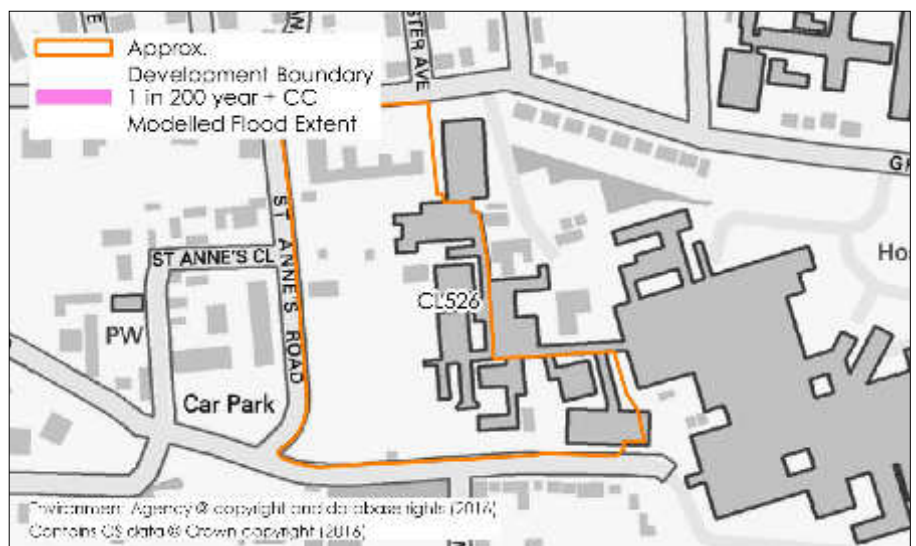
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

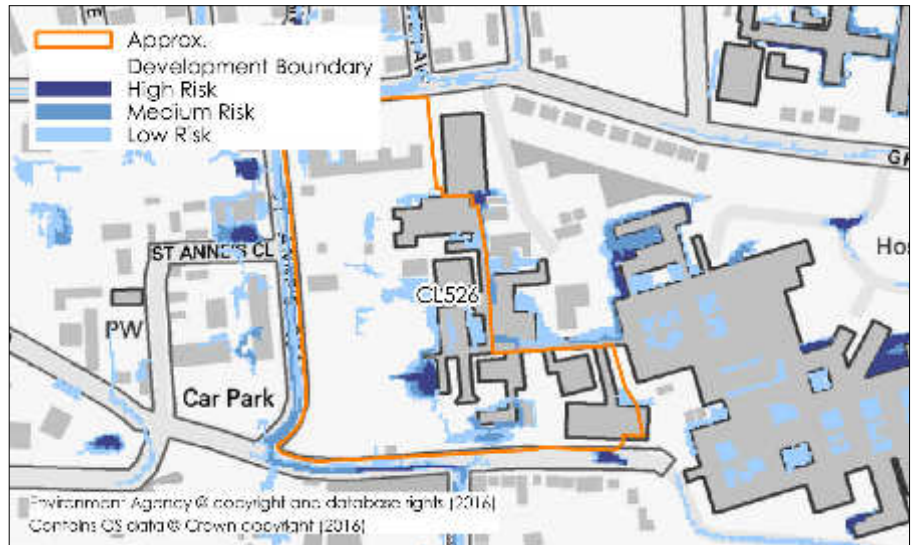
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that the majority of the site is not subjected to high or medium risk of surface water flooding.

There is a small area of high surface water flood risk identified towards the centre of the site. Detailed mapping suggests the water could reach depths of 0.3m, with velocities of up to 0.25m/s.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

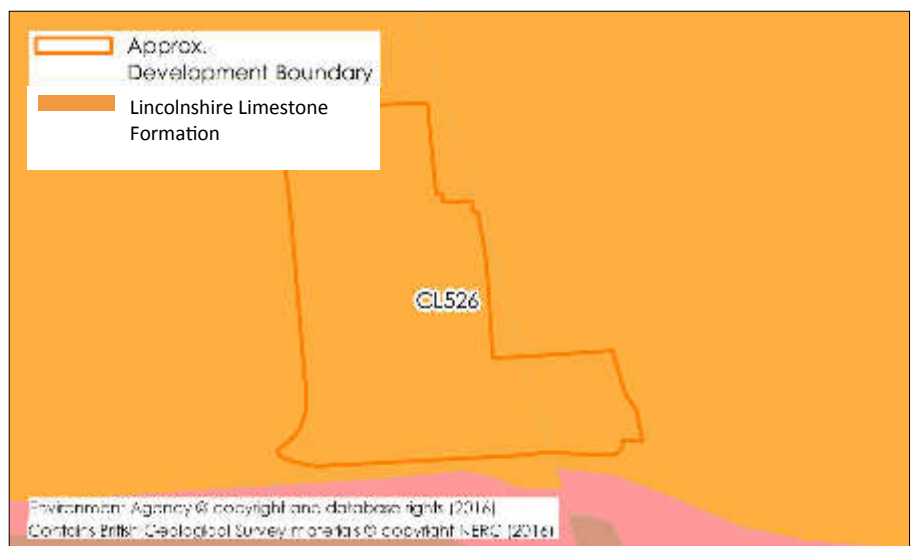
The site is shown to be outside of the area at risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not shown to be subject to fluvial flooding.
- The site is not shown to be subject to tidal flooding.
- A small portion of the site is subject to 0.3m deep flooding with a velocity of up to 0.25m/s. The majority of the site is not subjected to high or medium risk of surface water flooding.
- Soakaways might be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood Risk Assessments are indicated below.

- It is recommended that finished floor levels at the site are raised by a nominal level above the immediate surrounding ground levels to protect against the residual risk of flooding.
- Provide routes through development to maintain and improve flow paths for surface water
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment

LIMITATIONS

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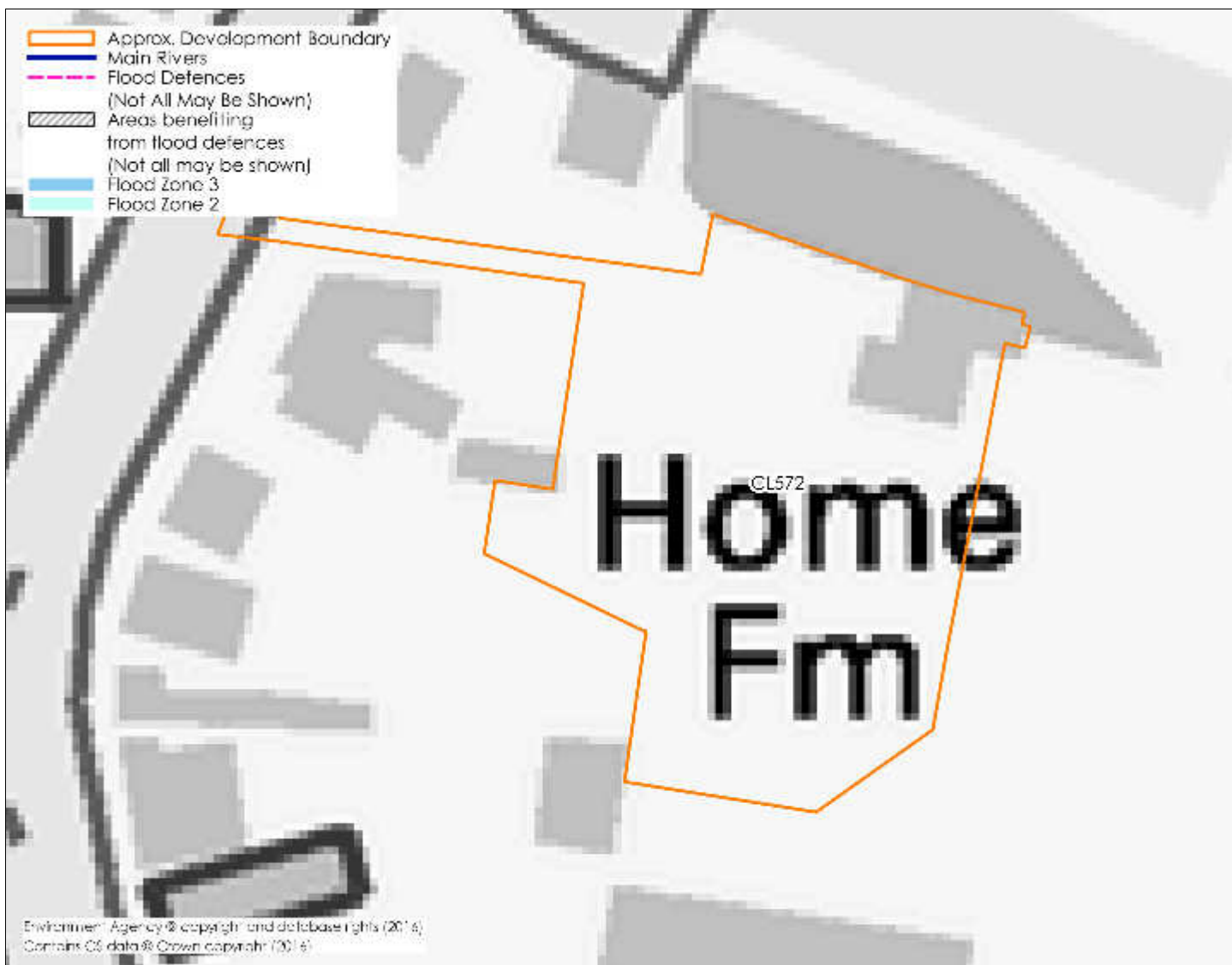
SITE DESCRIPTION

This site is a fairly flat house and garden. There is a large number of trees on and around the site. There is a row of shops to the west, a care home to the south, a medical centre to the north and a park to the east.

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| REFERENCE | CL572 |
| NATIONAL GRID REFERENCE | 496203, 369119 |
| SITE AREA (ha) | 0.4 |
| INTERNAL DRAINAGE BOARD | N/A |

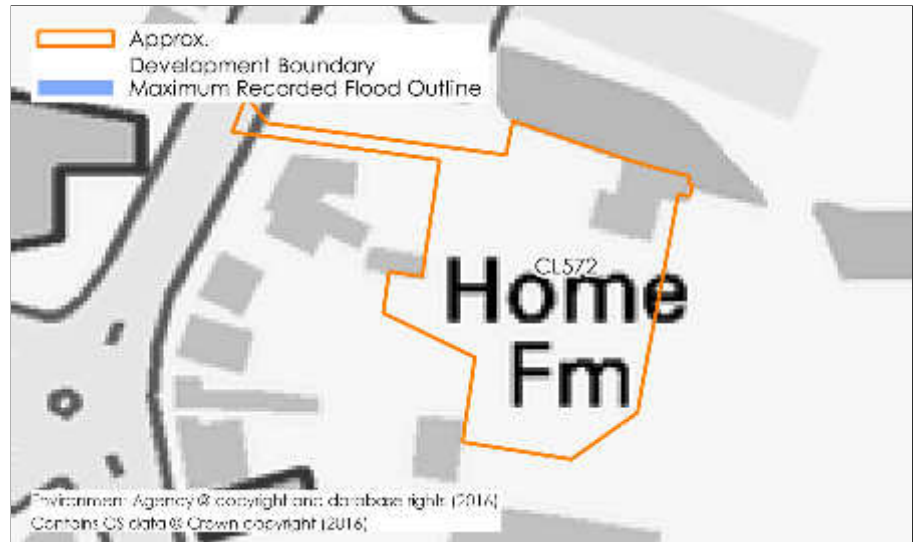
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Lincoln |
| LOCAL AUTHORITY | City of Lincoln |
| INDICATIVE CAPACITY | 36 |

FLOOD MAP FOR PLANNING



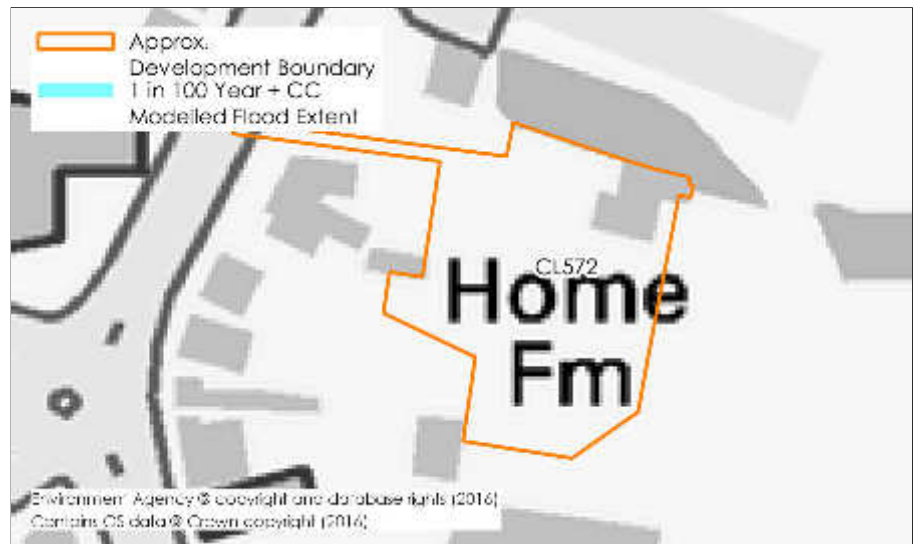
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



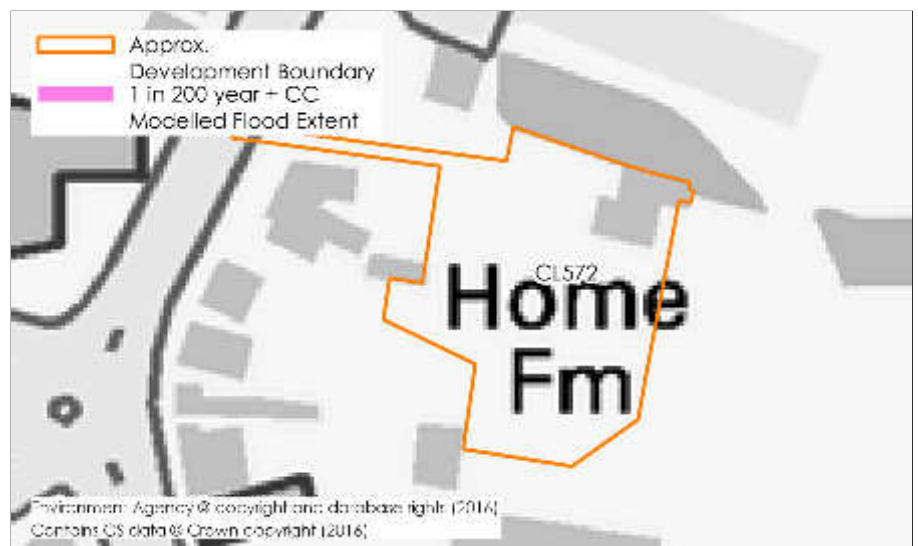
MODELLLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



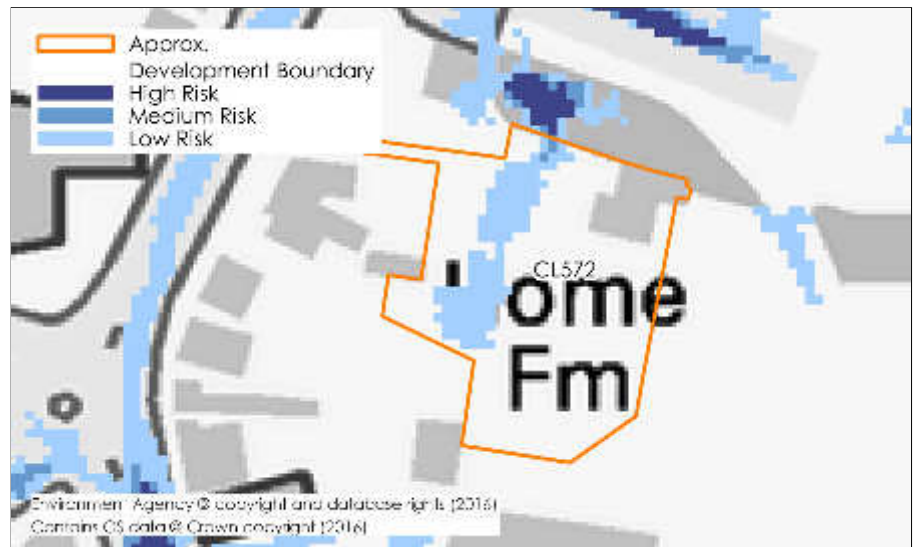
MODELLLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to high or medium risk of surface water flooding.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

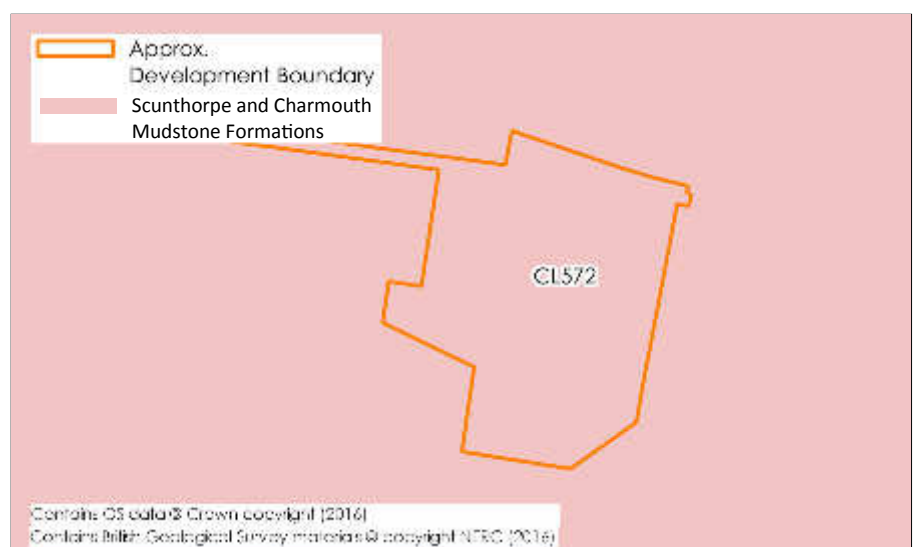
The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding up to the 1 in 100 year + CC event.
- The site is not subject to tidal flooding up to the 1 in 200 year event.
- The site is not subjected to high or medium risk of surface water flooding.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- It is recommended that finished floor levels at the site are raised by a nominal level above the immediate surrounding ground levels to protect against the residual risk of flooding.
- Provide sustainable drainage solutions to surface water disposal.

LIMITATIONS

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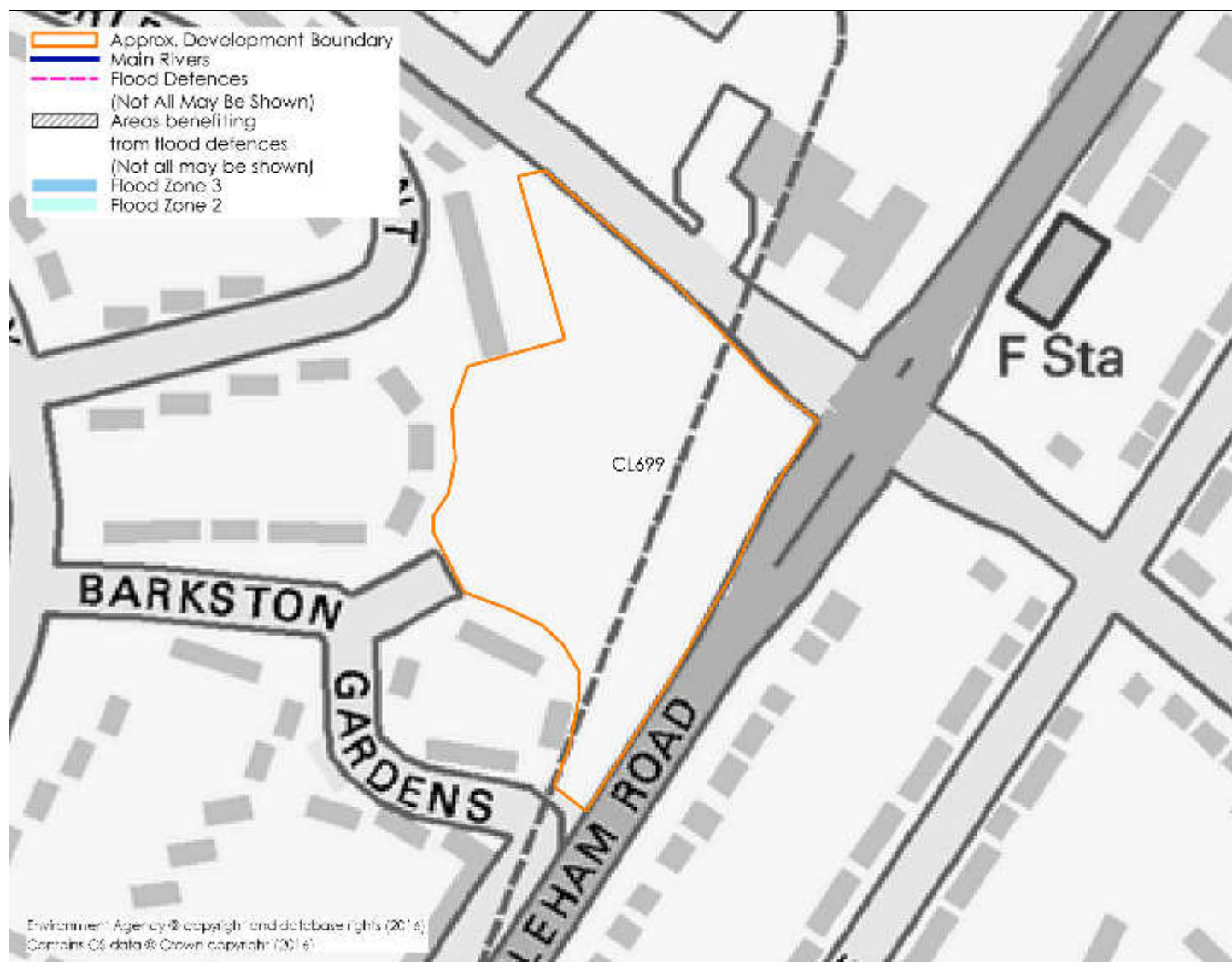
SITE DESCRIPTION

This flat area of public open space at the corner of a busy junction is bordered by hedgerows and closed board fences. There are houses and flats facing onto the site at the south and west boundaries. Across the road to the north is an office block, and to the east is housing.

| | |
|-------------------------|----------------|
| REFERENCE | CL699 |
| NATIONAL GRID REFERENCE | 498781, 373511 |
| SITE AREA (ha) | 1.14 ha |
| INTERNAL DRAINAGE BOARD | NA |

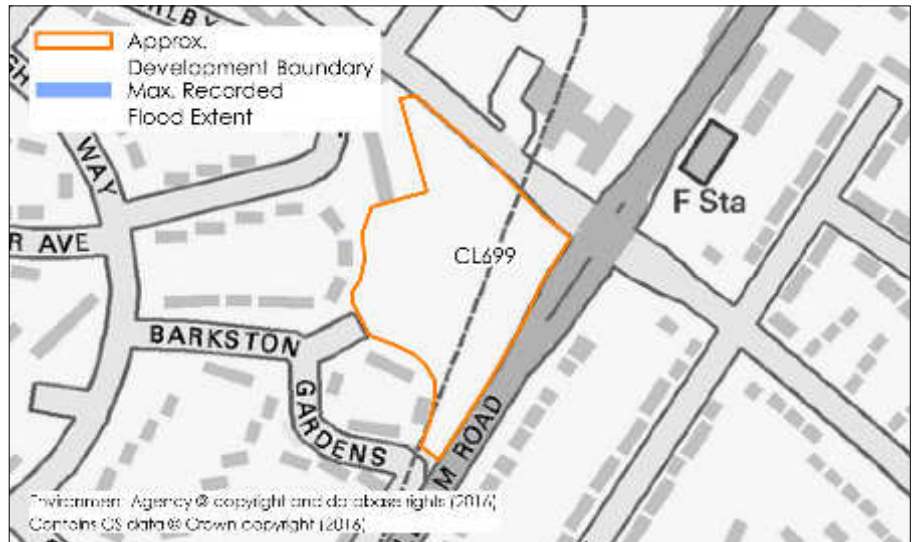
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Lincoln |
| LOCAL AUTHORITY | City of Lincoln |
| INDICATIVE CAPACITY | 39 |

FLOOD MAP FOR PLANNING



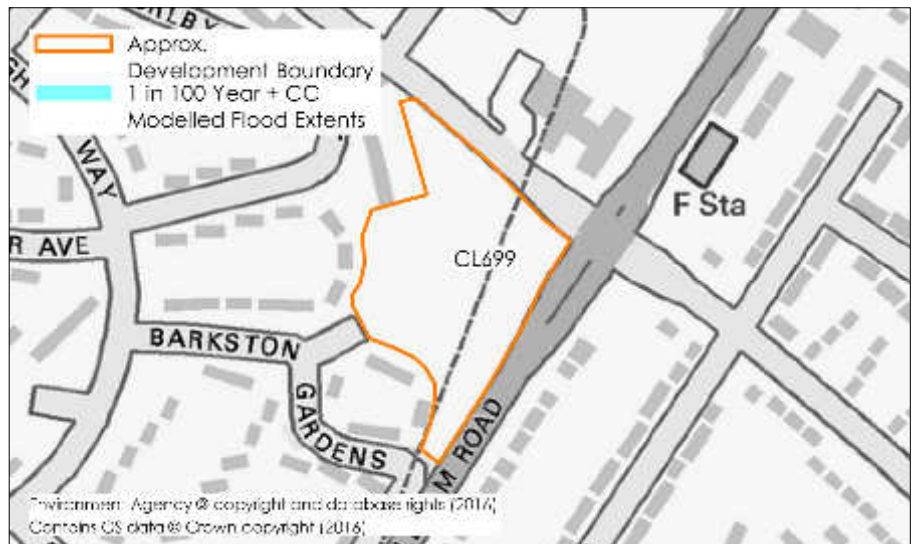
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding



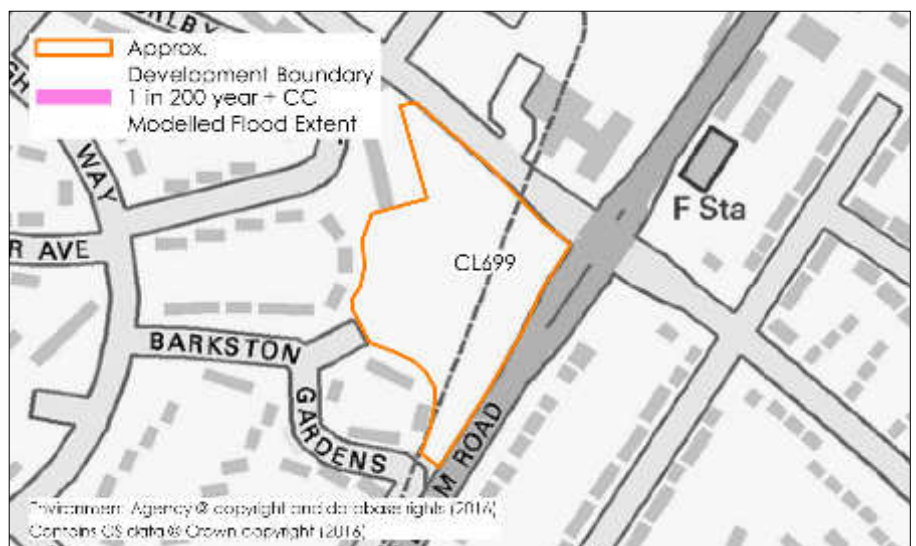
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

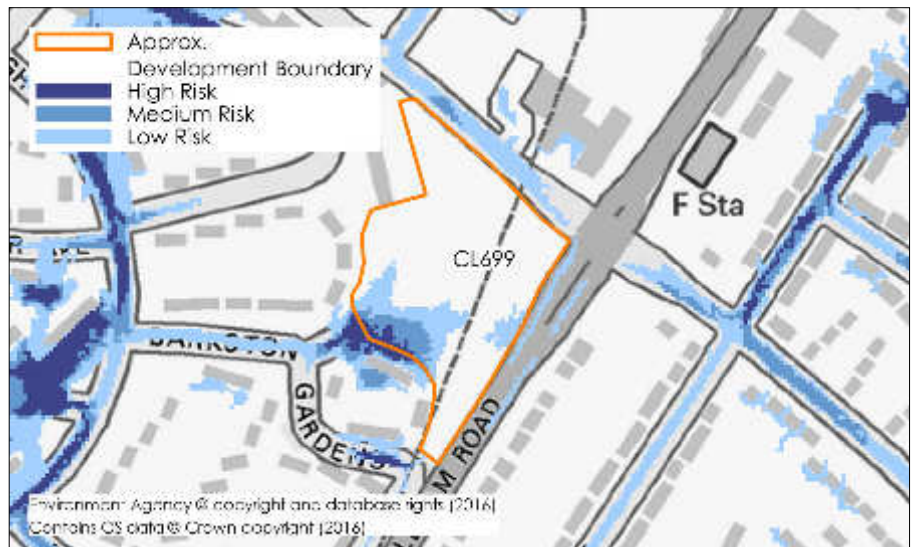
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that there is a small area to the west of the site in the high surface water flood risk area. The depth of flooding is estimated to be up to 0.3m with a velocity of up to 0.25m.

In addition, there is evidence of a low risk flow path through the site from east to west.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

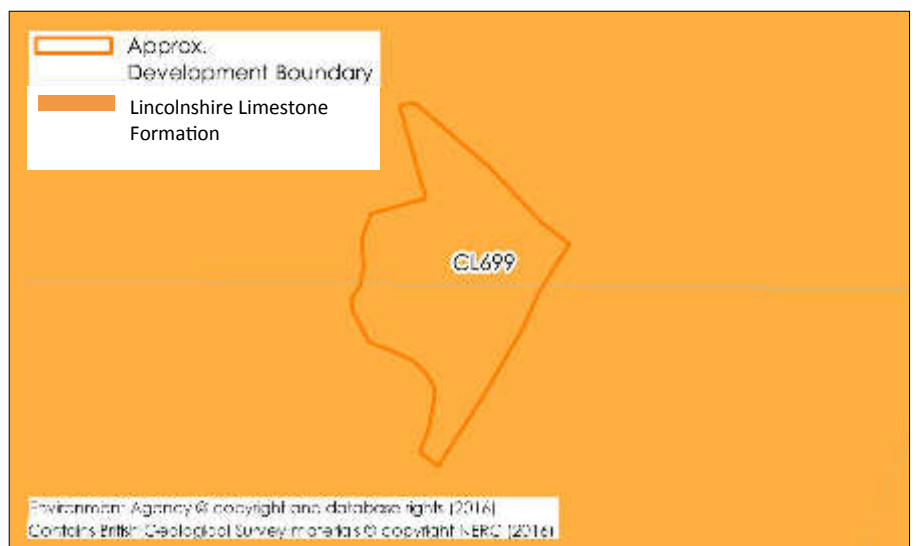
The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- There is a small area to the west of the site that is subject to up to 0.3m of flooding with a velocity of up to 0.25m/s in the high surface water flood risk area.
- Soakaways might be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood Risk Assessments are indicated below.

- It is recommended that finished floor levels at the site are raised by a nominal level above the immediate surrounding ground levels to protect against the residual risk of flooding.
- It is recommended that adequate routes are provided through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions for surface water disposal.

LIMITATIONS

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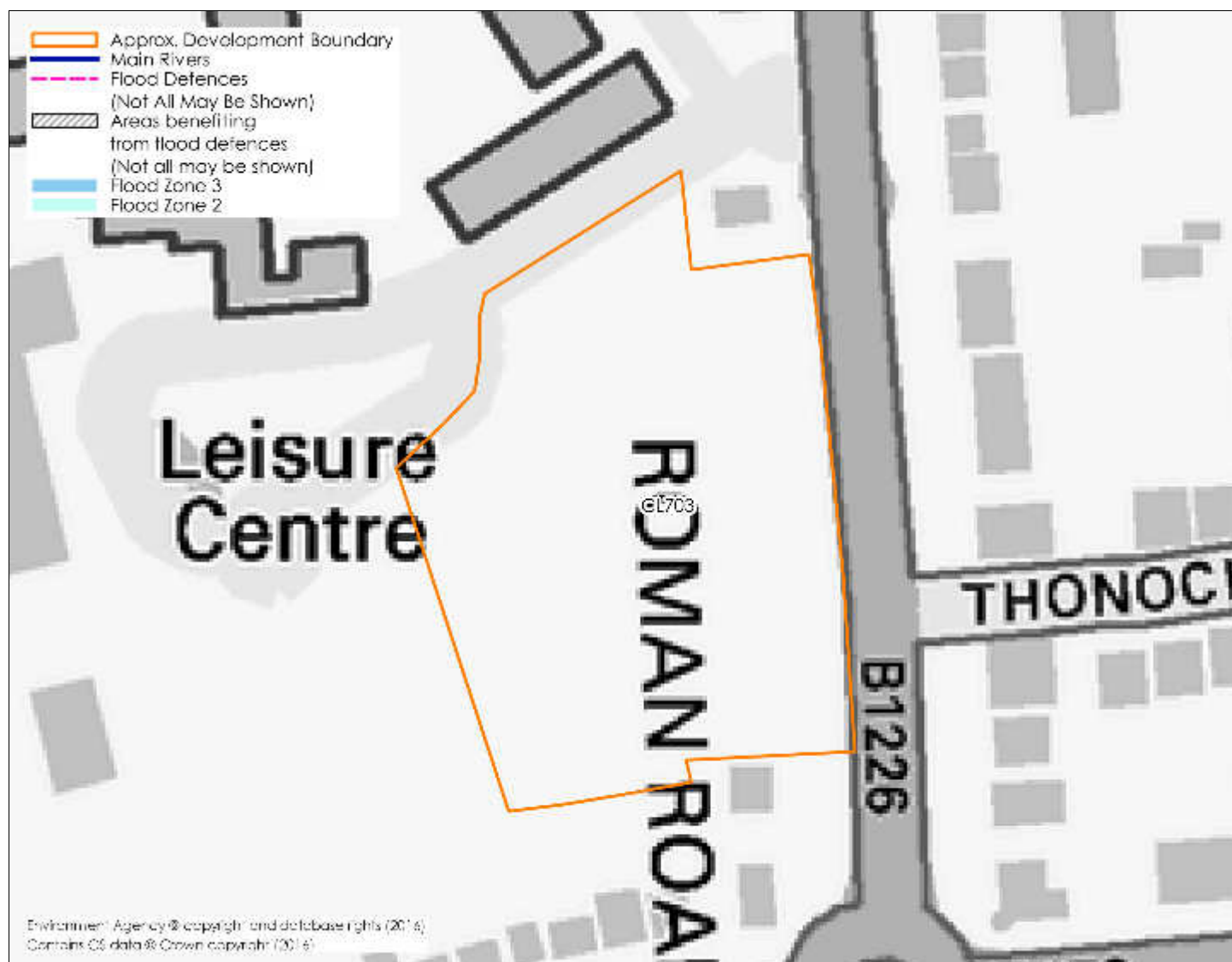
SITE DESCRIPTION

Open grassed area with trees and bushes around and a car park area. To the north of the site is a school, to the west is a leisure centre and youth centre. To the south there are some houses backing onto the site and to the east, across the road, are houses.

| | |
|-------------------------|----------------|
| REFERENCE | CL703 |
| NATIONAL GRID REFERENCE | 497598, 373082 |
| SITE AREA (ha) | 1.16 ha |
| INTERNAL DRAINAGE BOARD | NA |

| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Lincoln |
| LOCAL AUTHORITY | City of Lincoln |
| INDICATIVE CAPACITY | 39 |

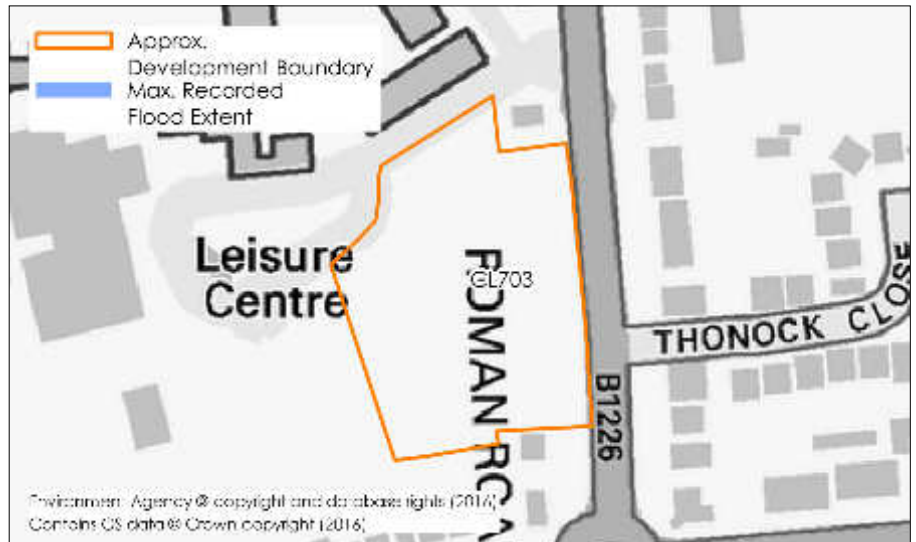
FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

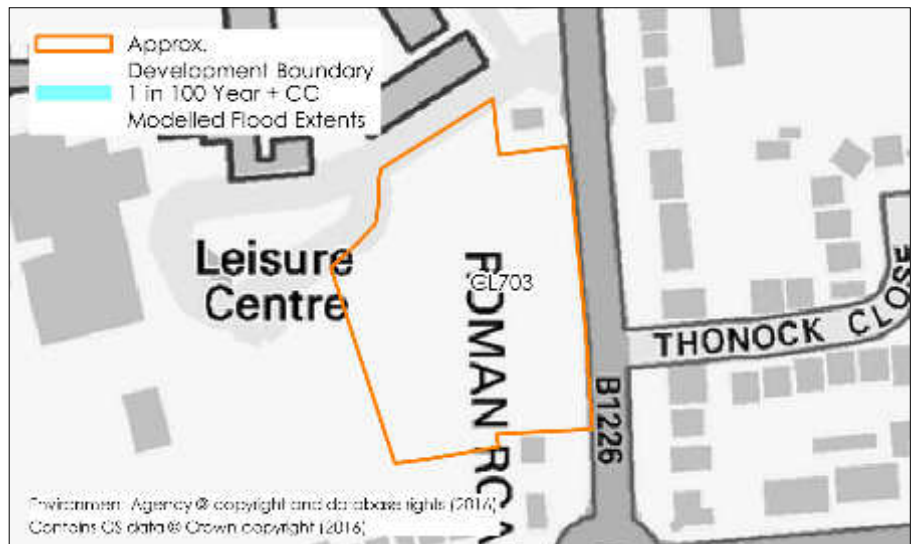
The Environment Agency do not have any records of the site previously being subjected to flooding.

The nearest recorded flood events are located over 1.8km south of the site beyond Lincoln centre.



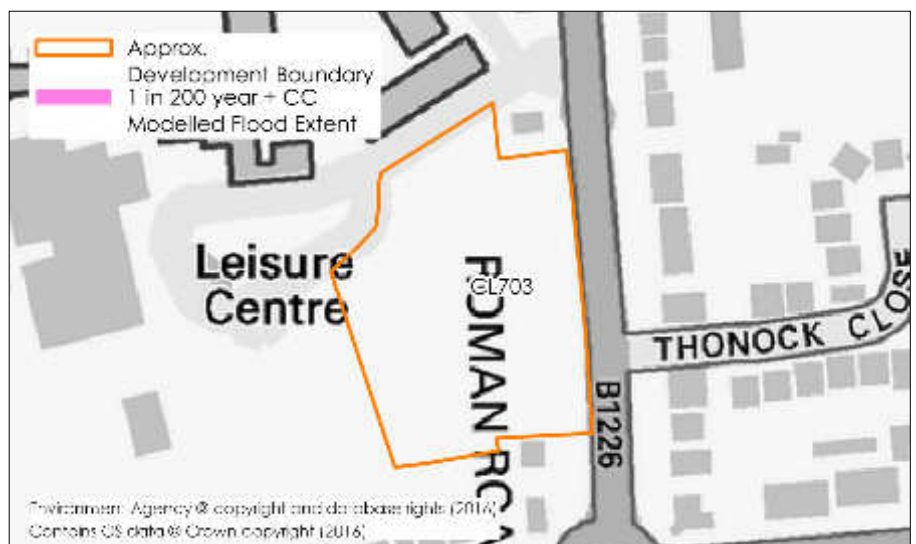
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

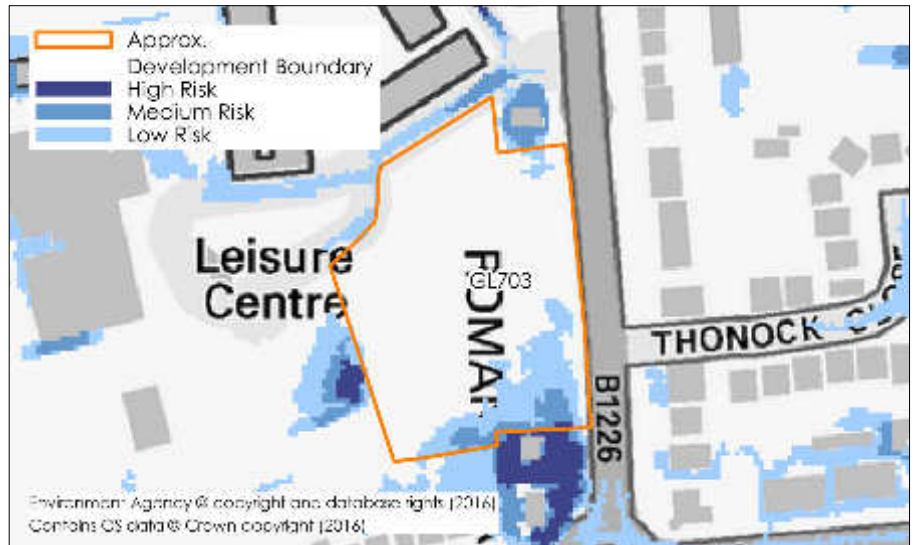
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the small area of medium surface water flood risk area to the south east of the site, the depth of flooding is estimated to reach up to 0.3m with a velocity of up to 0.25m.

In addition, there is evidence of a high risk area located adjacent to the south of the site with depths up to 0.3m and velocities of up to 0.5m/s.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

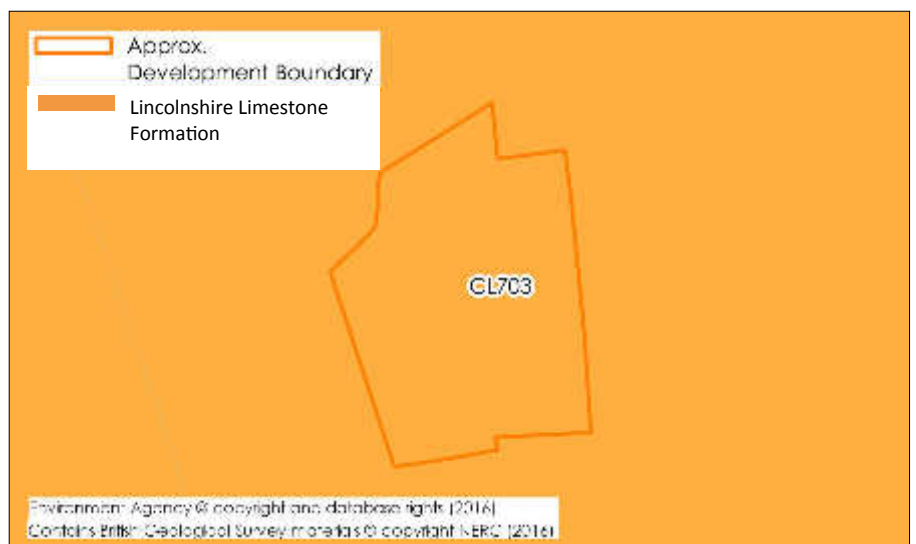
The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- There is a small area to the south of the site that is subject to up to 0.3m of flooding with a velocity of up to 0.25m/s in the medium surface water flood risk area.
- Soakaways might be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood Risk Assessments are indicated below.

- It is recommended that finished floor levels at the site are raised by a nominal level above the immediate surrounding ground levels to protect against the residual risk of flooding.
- It is recommended that adequate routes are provided through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions for surface water disposal.

LIMITATIONS

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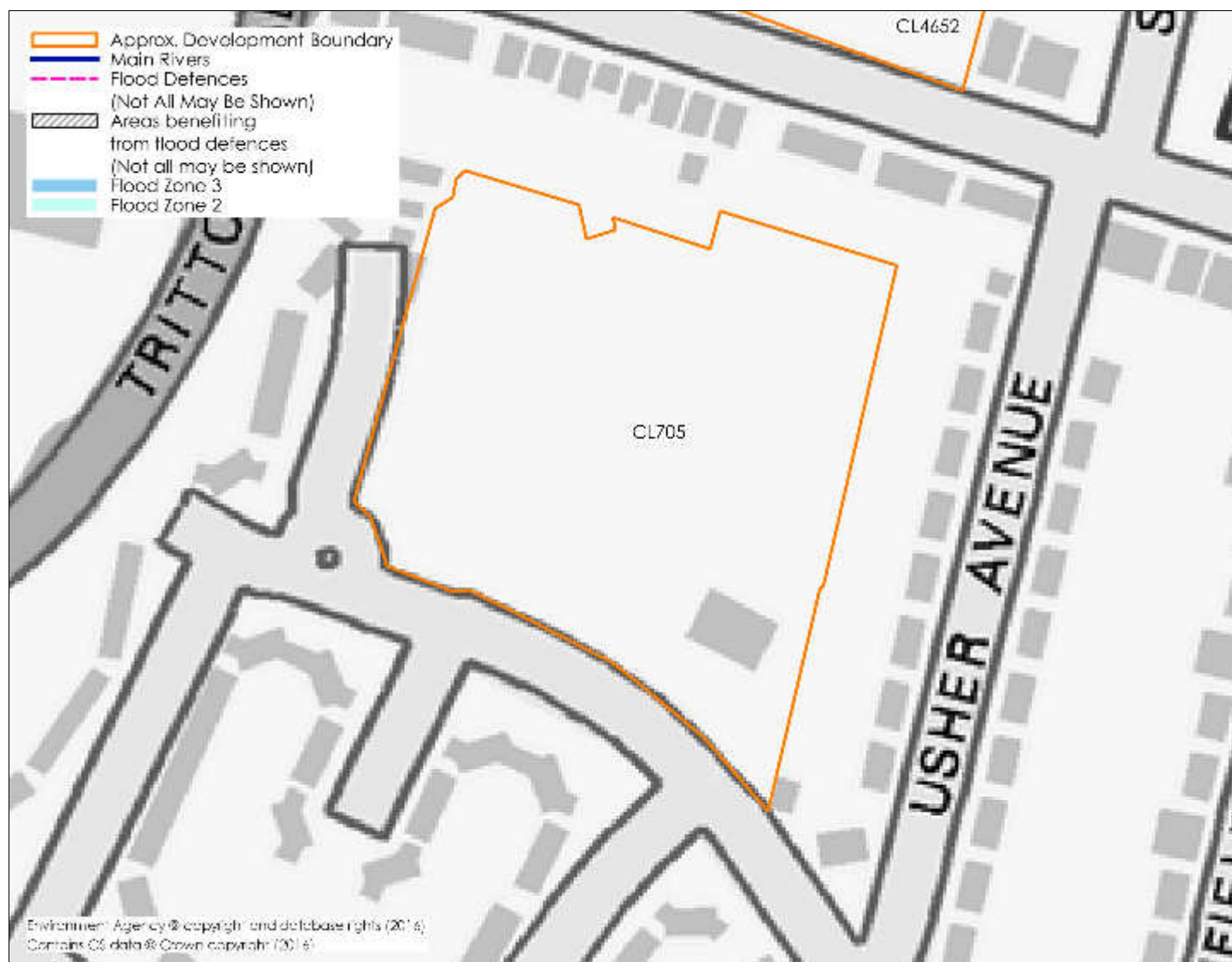
SITE DESCRIPTION

This former school site is now cleared of buildings, although a small building remains in the south east corner but is now boarded up. There is some hardstanding across the site and security fencing and trees and bushes around edge of site. The site is surrounded by houses which back onto it.

| | |
|-------------------------|----------------|
| REFERENCE | CL705 |
| NATIONAL GRID REFERENCE | 495674, 369123 |
| SITE AREA (ha) | 1.4 ha |
| INTERNAL DRAINAGE BOARD | NA |

| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Lincoln |
| LOCAL AUTHORITY | City of Lincoln |
| INDICATIVE CAPACITY | 48 |

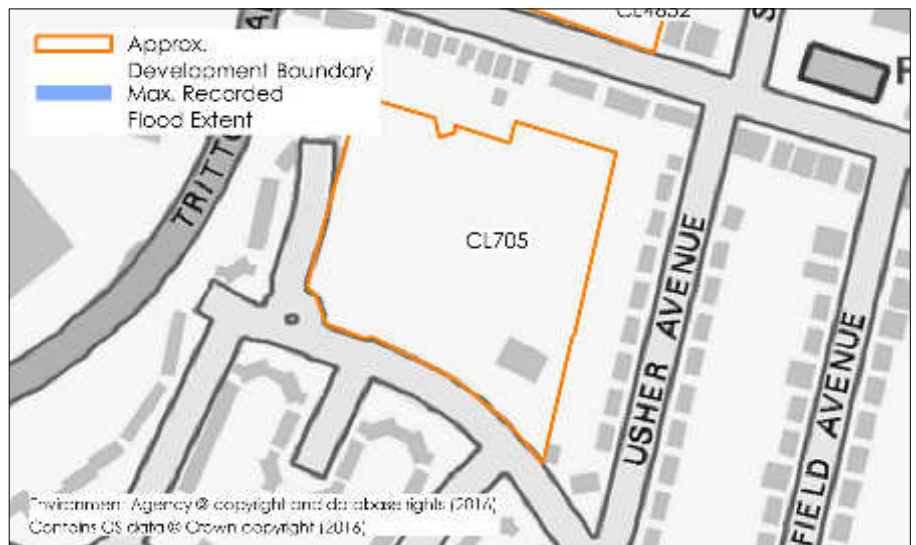
FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

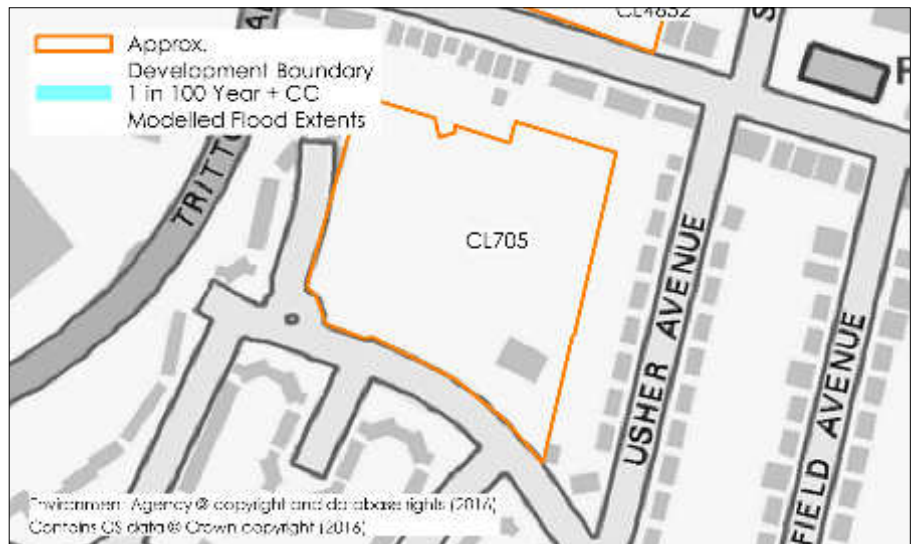
The Environment Agency do not have any records of the site previously being subjected to flooding.

The nearest recorded flood extent is located in close proximity to the Boultham Catchwater approx. 500m northeast of the site.



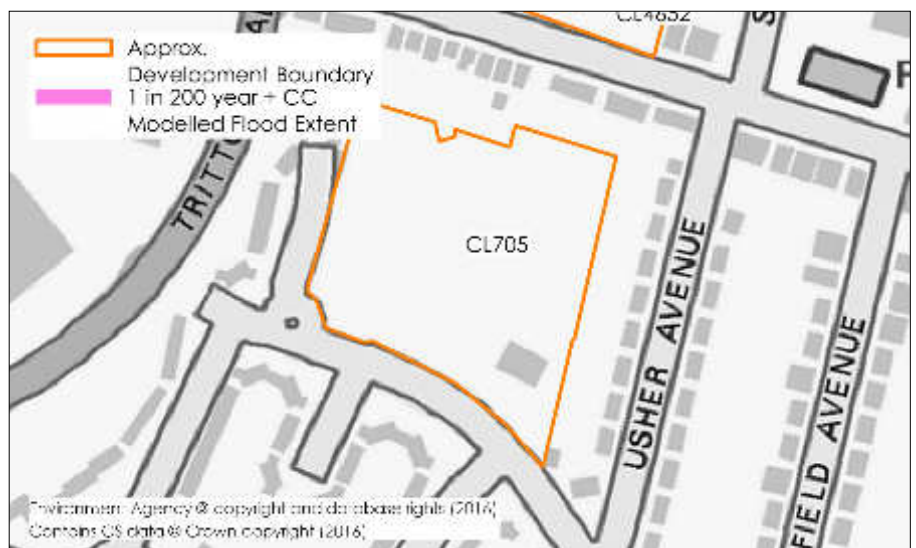
MODELLLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLLED TIDAL RISKS

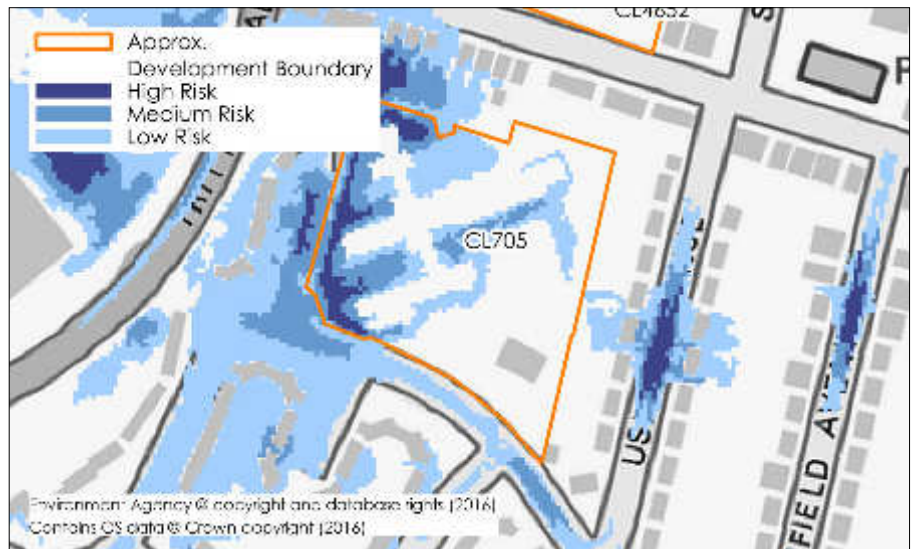
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be up to 0.3m with a velocity of up to 0.25m/s.

In addition, there is evidence of a medium to low risk flow path through the site from south to north. The pluvial flood extents correlate with the position of the former buildings that have now been demolished.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

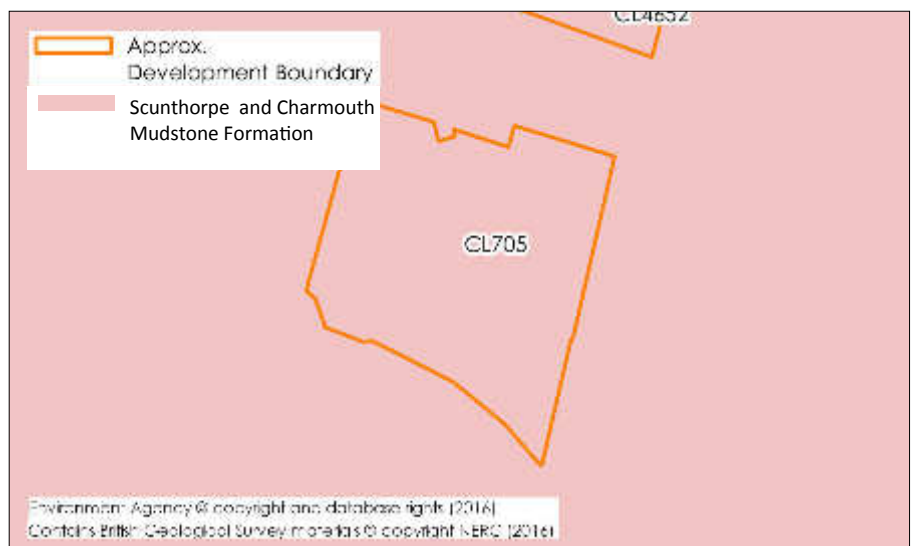
Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.

The presence of superficial deposits of Balderton sands and gravels means that there may be limited scope to dispose of surface water by infiltration and further testing should be sought to support an application for the site's development.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to up to 0.3m of flooding with a velocity of 0.25m/s in the high surface water flood risk area.
- Soakaways may be viable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood Risk Assessments are indicated below.

- It is recommended that finished floor levels at the site are raised by a nominal level above the immediate surrounding ground levels to protect against the residual risk of flooding.
- It is recommended that adequate routes are provided through the development to maintain and improve flow paths for overland flow routes.
- Provide sustainable drainage solutions for surface water disposal, including further investigation into the potential for infiltration.

LIMITATIONS

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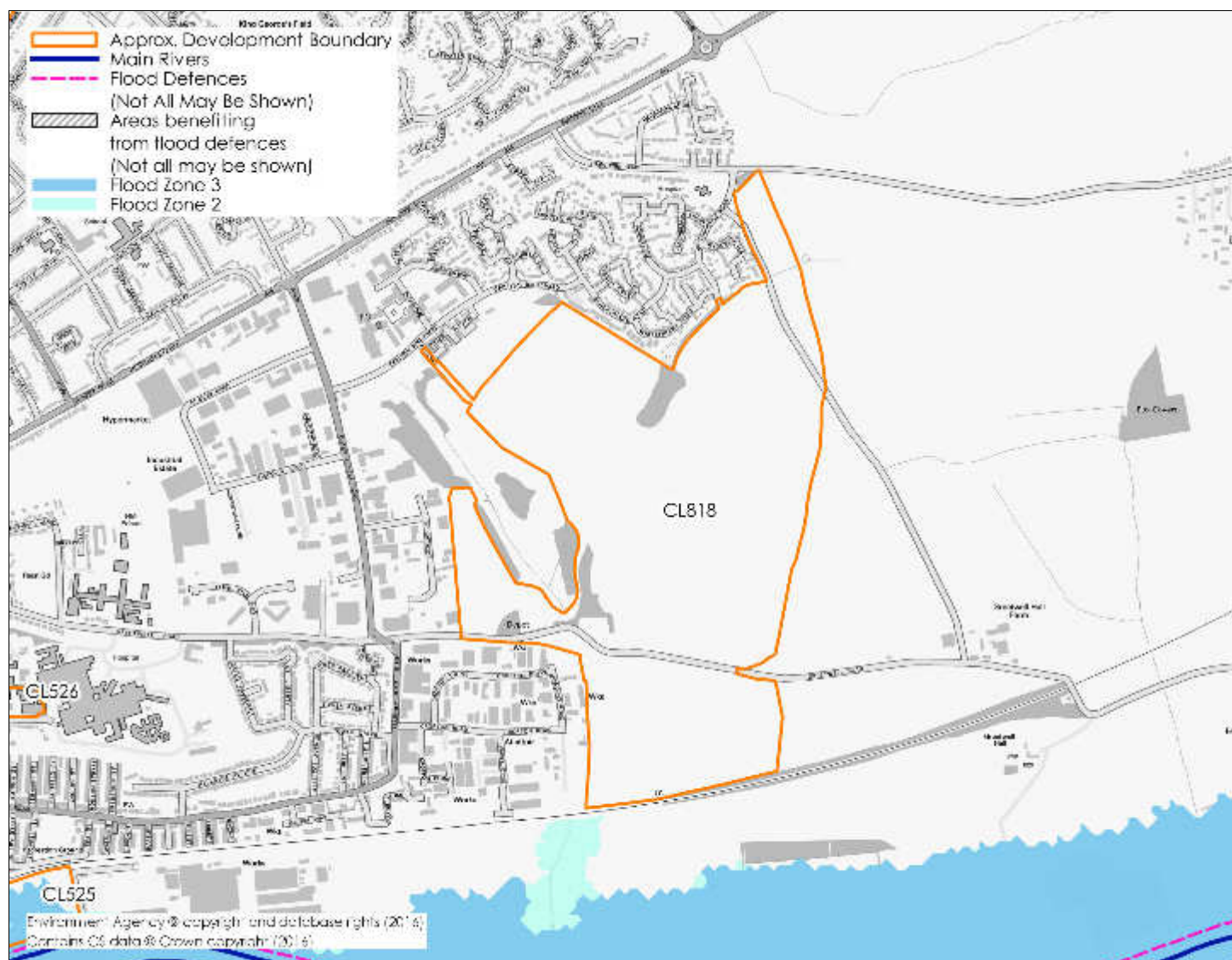
SITE DESCRIPTION

The site is located to the east of the urban conurbation of Lincoln. Residential properties lie to the north and the west of the site, whilst farmland surrounds the site from the east and the south. The plot is currently formed of farmland to the south, with two roads running across the site to the south and to the north east. The land also includes a public footpath and a former quarry.

| | |
|-------------------------|----------------|
| REFERENCE | CL818 |
| NATIONAL GRID REFERENCE | 500431, 372147 |
| SITE AREA (ha) | 83.44 ha |
| INTERNAL DRAINAGE BOARD | N/A |

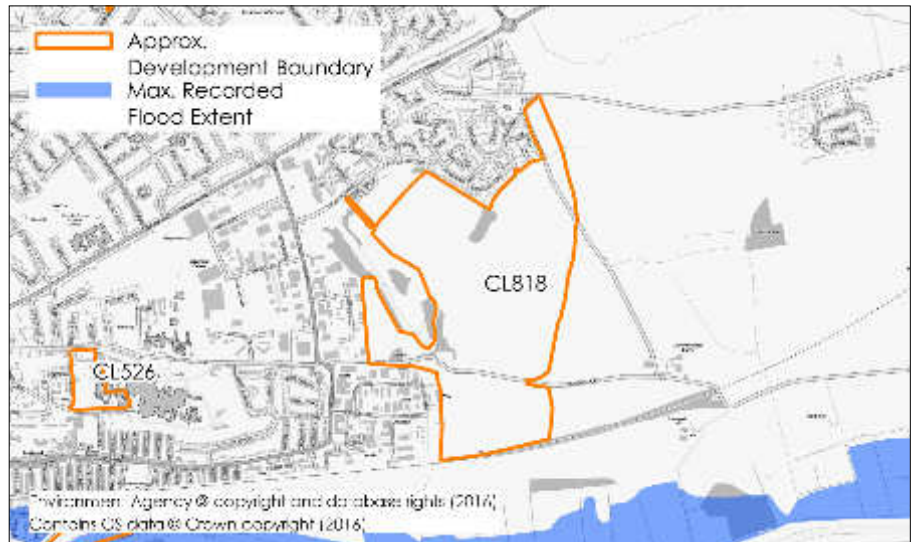
| | |
|---------------------|---------------------------------------|
| LOCAL PLAN STATUS | Preferred Sustainable Urban Extension |
| LOCATION | Lincoln |
| LOCAL AUTHORITY | City of Lincoln |
| INDICATIVE CAPACITY | 1400 |

FLOOD MAP FOR PLANNING



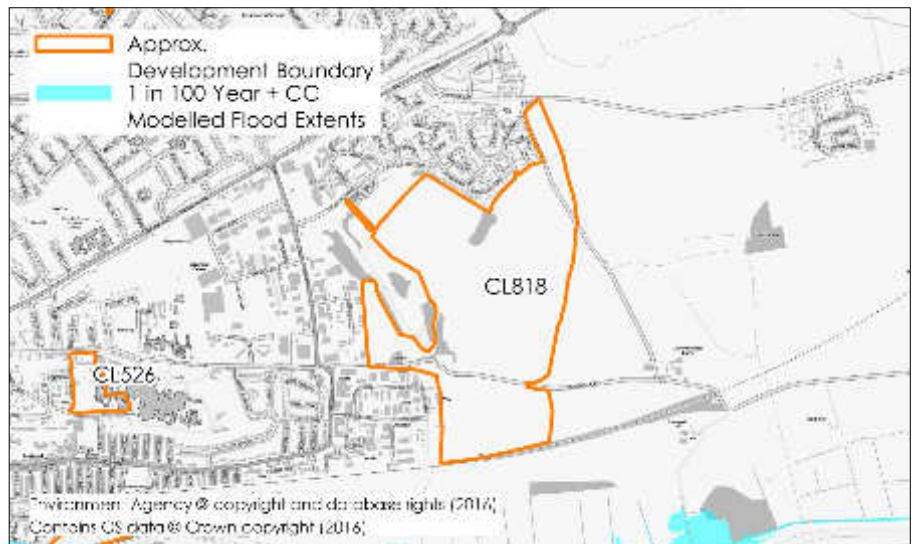
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



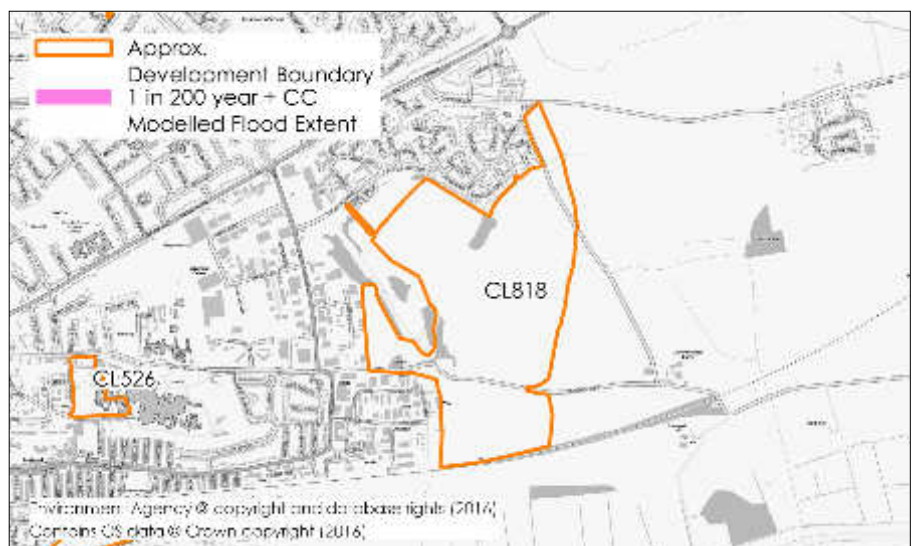
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.

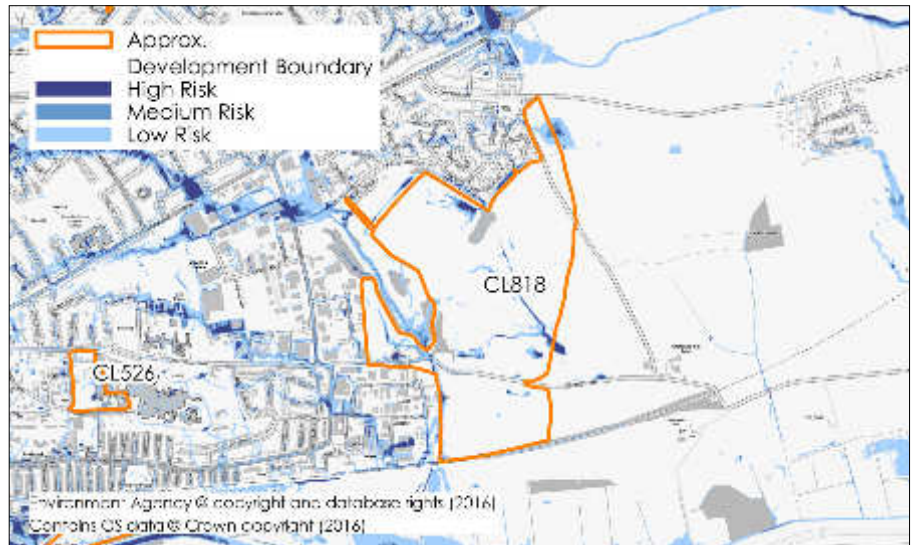


MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be up to 0.9m with a velocity of up to 1.0m/s.

In addition, there is evidence of a medium risk flow path through the west of the site.

The extents of modelled surface water risk are however minimal.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

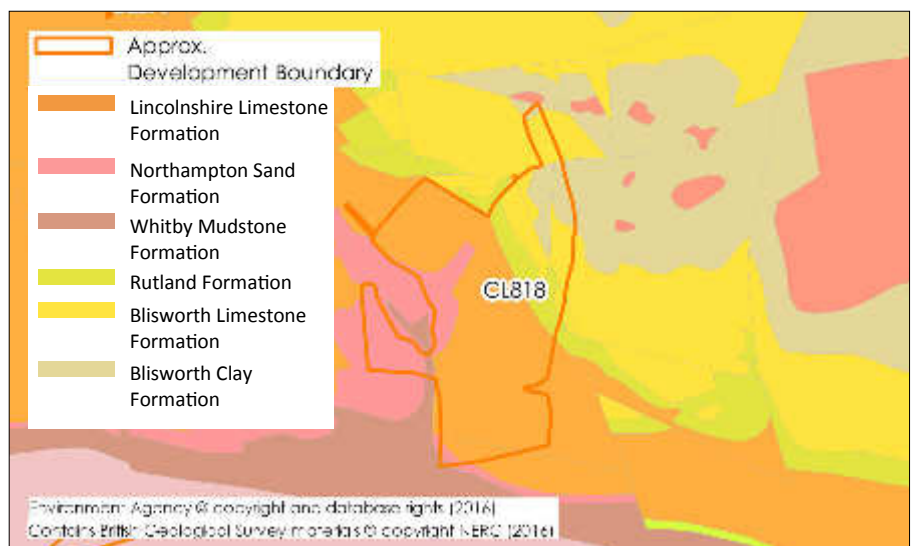
The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water. However, due to the large variety of ground conditions under the site, infiltration testing would have to be undertaken to gain a better understanding of infiltration rates across the plot.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is subject to 0.9m deep flooding with a velocity of 1.0m/s in the limited high surface water flood risk area.
- the site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood Risk Assessments are indicated below.

- Raise land levels to provide development platform above residual flood risk from surface water on site.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.
- Raise finished floor levels 300mm above existing ground level.

LIMITATIONS

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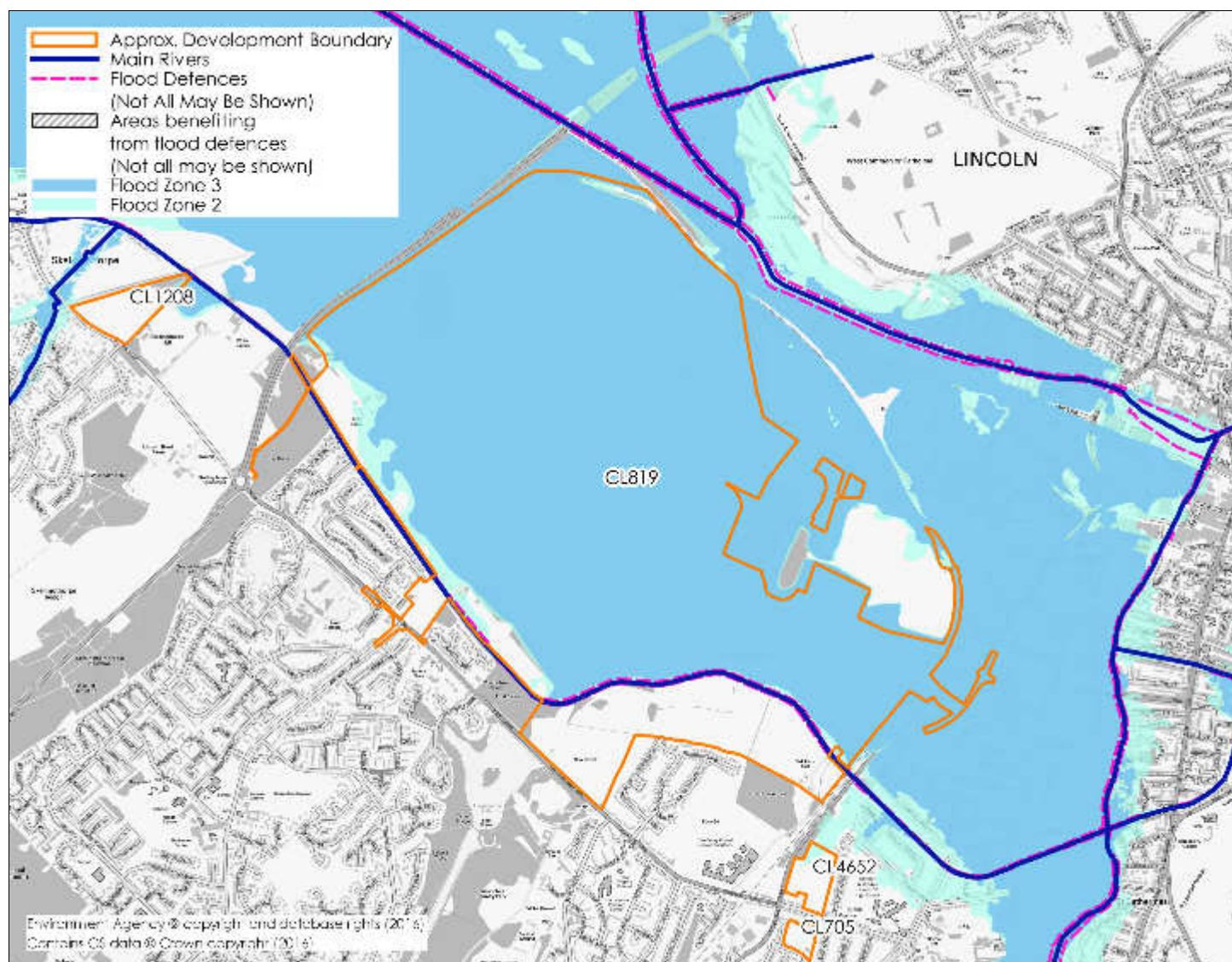
SITE DESCRIPTION

The Western Growth Corridor is an existing local plan allocation to the west of the city of Lincoln. The site includes an old landfill site to the east and is predominantly formed by farmed fields and old farm buildings. A footpath to southern edge of the site lies next to a raised bank. There are ditches through the site and an Environment Agency Main River running through the southern part of the site.

| | |
|-------------------------|----------------|
| REFERENCE | CL819 |
| NATIONAL GRID REFERENCE | 494893, 370924 |
| SITE AREA (ha) | 355 ha |
| INTERNAL DRAINAGE BOARD | UPPER WITHAM |

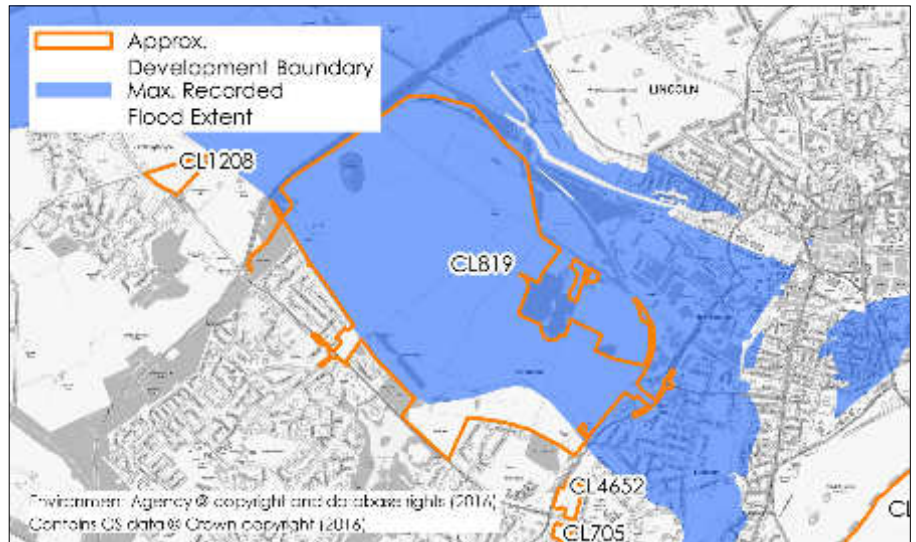
| | |
|---------------------|---------------------------------------|
| LOCAL PLAN STATUS | Preferred Sustainable Urban Extension |
| LOCATION | Lincoln |
| LOCAL AUTHORITY | City of Lincoln |
| INDICATIVE CAPACITY | 3200 |

FLOOD MAP FOR PLANNING



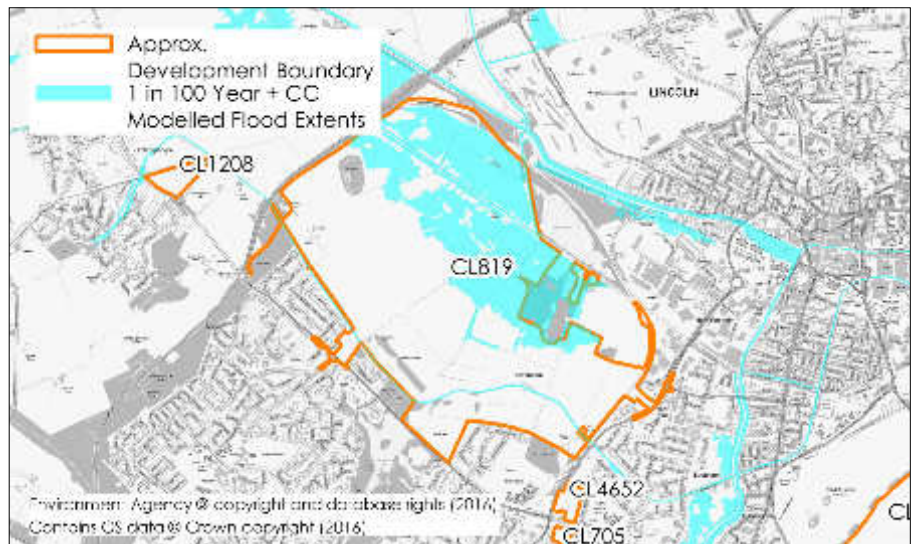
HISTORICAL FLOODING

Historical flooding information provided by the Environment Agency indicates that the site has been subjected to flooding in 1795 from the River Trent and in 1947 from the River Witham.



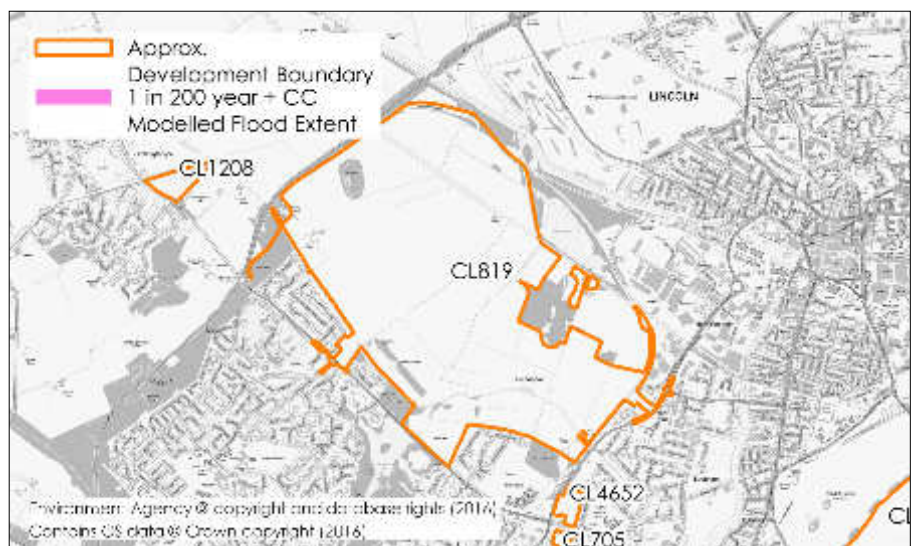
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the 1 in 100 year + CC fluvial flood extent falls within the northern boundary of the site. The Environment Agency's hydraulic flood model would allow for an analysis of flood depths across this extent to be undertaken, and the advice of a flood risk specialist should be sought when preparing a planning application for the site.



MODELLED TIDAL RISKS

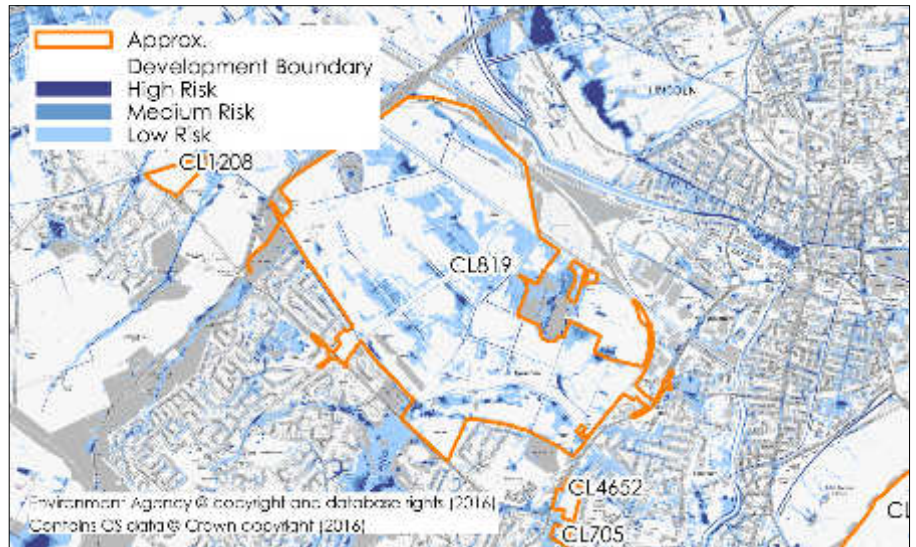
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be up to 0.3m with a velocity of less than 0.25m/s.

In addition, there is evidence of medium and low risk flow paths throughout the site.



OTHER SOURCES OF FLOOD RISK

Breaching of Flood Defences

The River Witham, Fosdyke Canal and Boultham Catchwater have a number of defences associated with them, which are actively maintained by the Environment Agency. There is generally a low probability that these could fail, however the consequences of such failure could be significant.

The information made available by the Environment Agency for this investigation does not provide sufficient data to report on this risk. However, the Environment Agency's hydraulic flood model would allow for this analysis to be undertaken, and the advice of a flood risk specialist should be sought when preparing a planning application for the site.

Reservoir Flooding

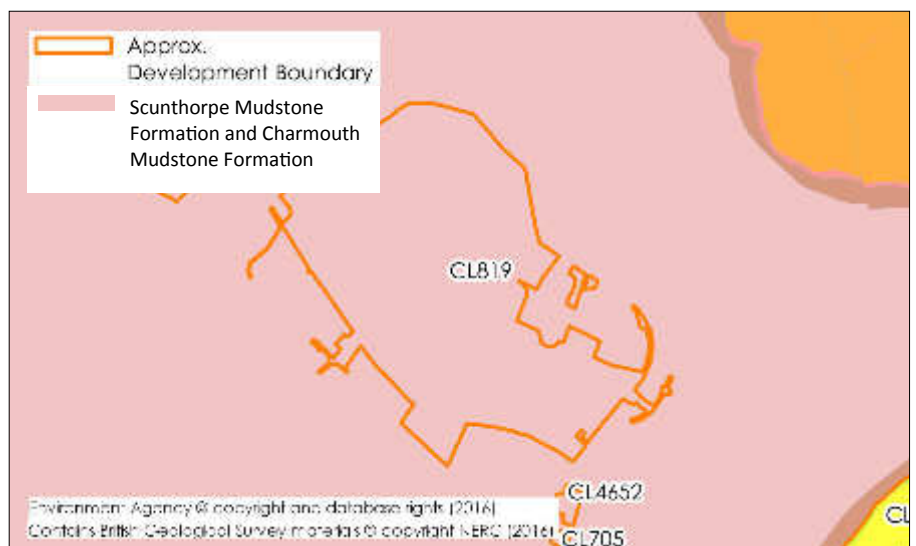
The site is shown to be within the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- Approximately 90% of the site is shown to be within Flood Zones 2 and 3.
- The site has previously been subjected to flooding in 1795 and 1947.
- The 1 in 100 year + CC fluvial flood extent encroaches into the site.
- The site is not subject to tidal flooding.
- The site is subject to 0.3m deep flooding with a velocity of less than 0.25 m/s in the high surface water flood risk area.
- The site is at residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.

NOTE:

Significant site specific flood risk modelling work has been undertaken on the Western Growth Corridor in acknowledgment of the fact that the site is proposed as one of 8 Sustainable Urban Extensions in the emerging Central Lincolnshire Local Plan. A technical group consisting of representatives from Central Lincolnshire LPA's, the Environment Agency, Upper Witham Internal Drainage Board and Lincolnshire County Council (as Lead Local Flood Authority) has been established to test the impact of land raising options and examine how flood risk is affected through land raising. This work has been done through the Environment Agency's approved flood model for the area.

The results of this work are available in a report titled 'Lincoln Western Growth Corridor, Technical Working Group Flood Risk Report Update 10th September 2015' which is on the Planning Policy Library section of the Central Lincolnshire Local Plan website at <http://www.central-lincs.org.uk/>

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood Risk Assessments are indicated below.

- Raise land levels to provide development platform above flood level on site with corresponding loss of floodplain mitigation.
- Raise finished floor levels 300mm above flood level on site and provide flood resilient construction an additional 300mm above flood level.
- Sequential arrangement of development within site boundary.
- Construct minimum two storey houses with no habitable accommodation on the ground floor.
- Construct flats/apartments above commercial development.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

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SITE DESCRIPTION

This site is located to the east of the village of Heckington. It consists of two fairly flat arable and pasture fields with hedgerows surrounding it and crossing it to separate the fields. There are some mature trees in the hedgerows and in the northern part of the site and pylons cross it. To the west is housing, to the north is pasture land, to the east is an isolated house and garden and arable fields and to the south is a cemetery and houses.

| | |
|-------------------------|----------------|
| REFERENCE | CL875 |
| NATIONAL GRID REFERENCE | 514784, 344048 |
| SITE AREA (ha) | 4.72 ha |
| INTERNAL DRAINAGE BOARD | NA |

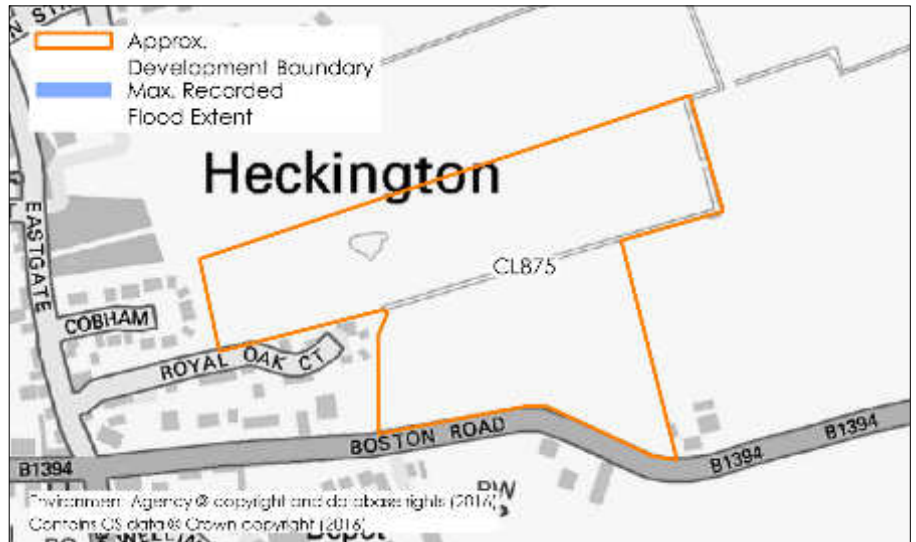
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Heckington |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 106 |

FLOOD MAP FOR PLANNING



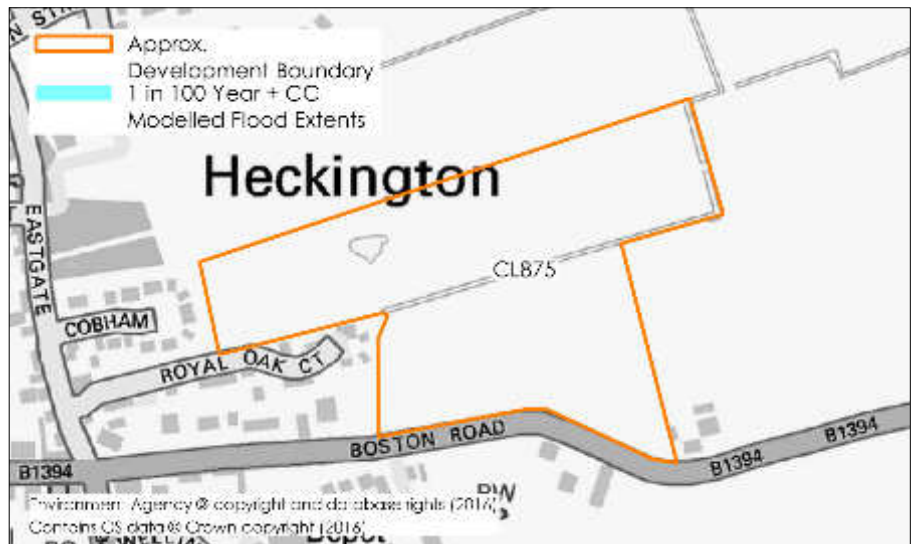
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



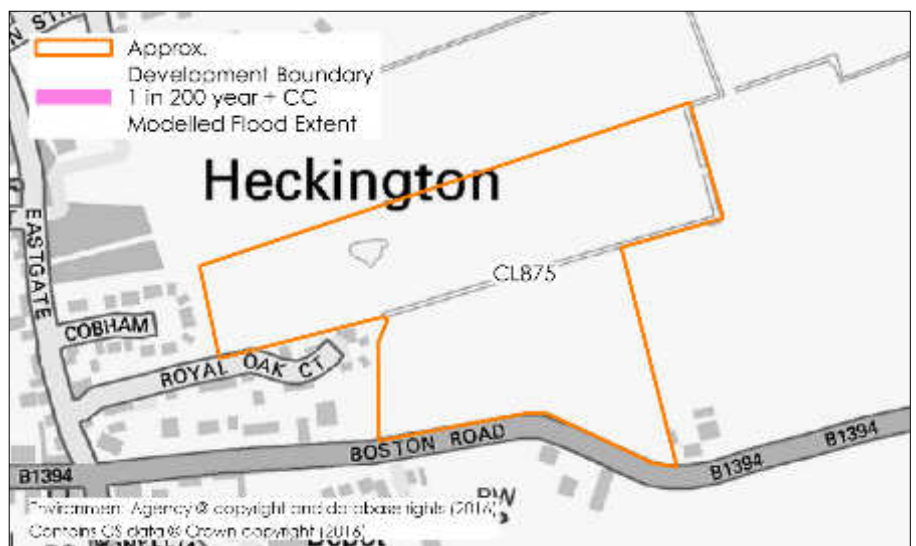
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



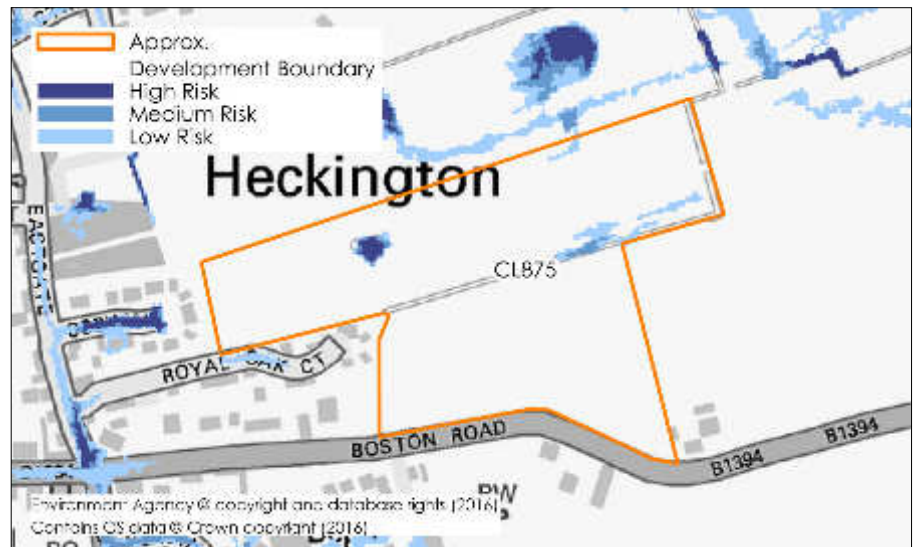
MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that there is a high surface water flood risk area where the depth of flooding is estimated to be 0.6 metres with a velocity of less than 0.25 m/s. In addition, there is evidence of a low risk flow path through the site to the east.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

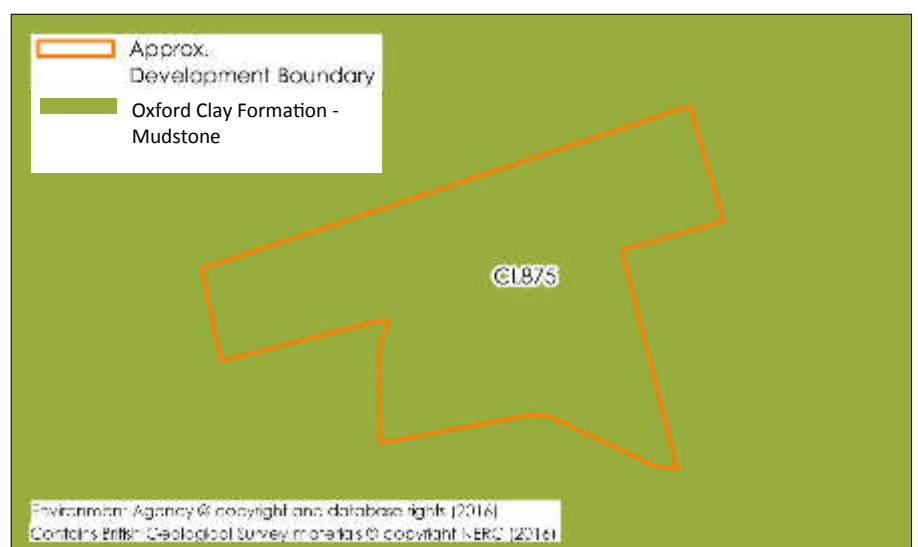
The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is subject to 0.6m deep flooding with a velocity of up to 0.25 m/s in the high surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Raise finished floor levels 300mm above existing ground level to provide residual protection from pluvial flood risk.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

LIMITATIONS

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Land off Winton Road, Navenby

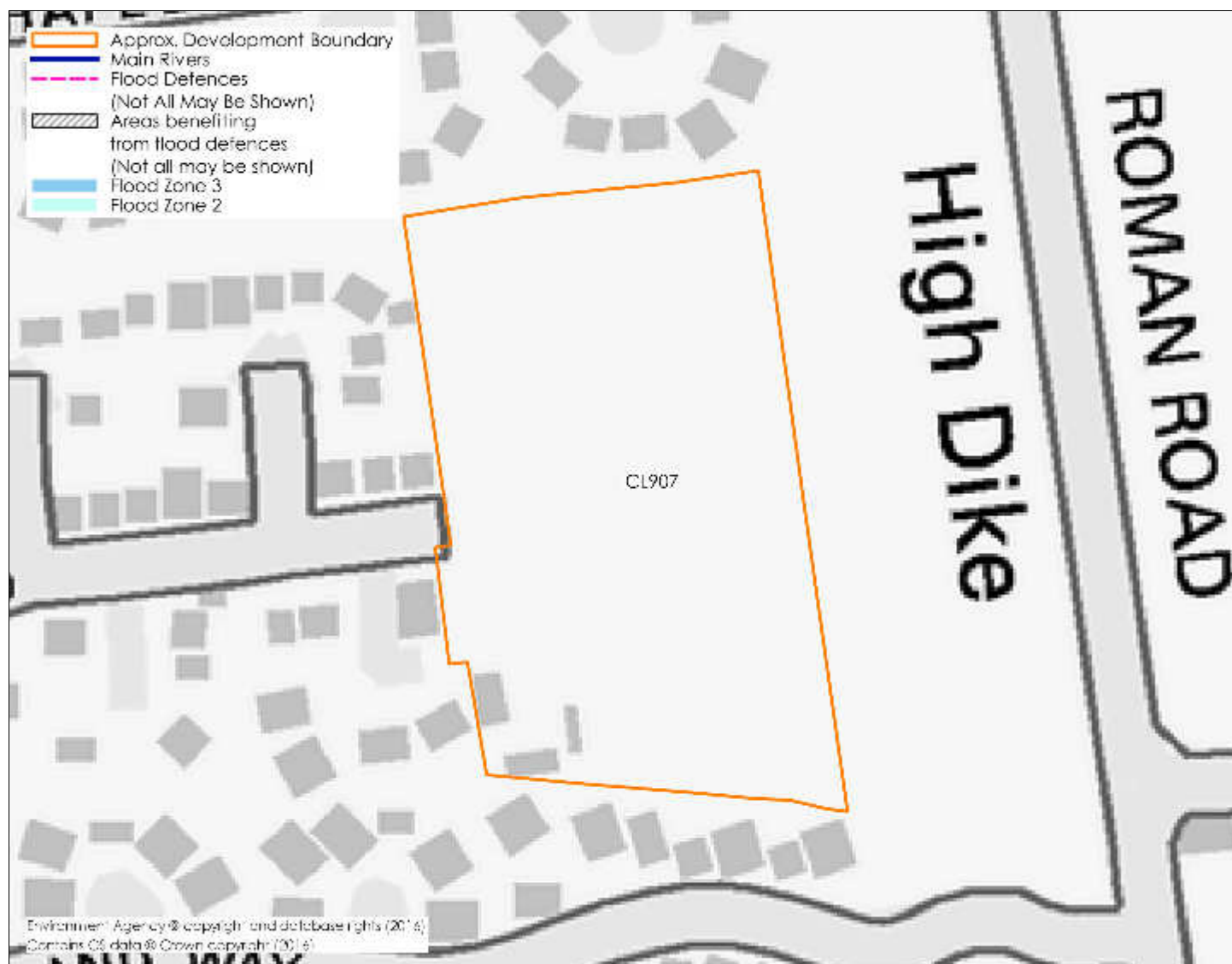
SITE DESCRIPTION

The site is located to the south east of Navenby. It is a fairly flat undeveloped grassy area with a section of hard standing with a portable building and it is fenced off. There is a hedgerow at the eastern and southern boundaries. There is a residential estate wrapping around the site to the north, west and south and there is an accessible area of open space to the east.

| | |
|-------------------------|----------------|
| REFERENCE | CL907 |
| NATIONAL GRID REFERENCE | 499227, 357477 |
| SITE AREA (ha) | 1.54 ha |
| INTERNAL DRAINAGE BOARD | NA |

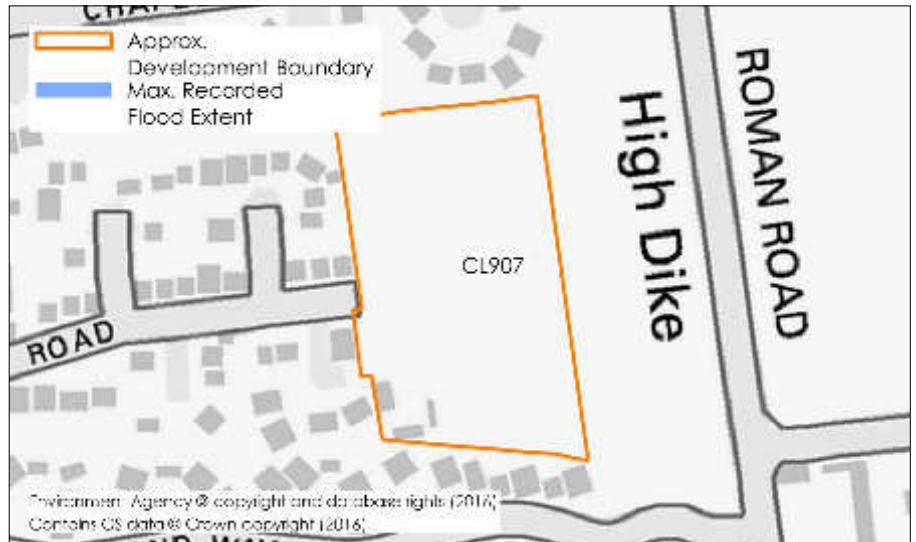
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Navenby |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 42 |

FLOOD MAP FOR PLANNING



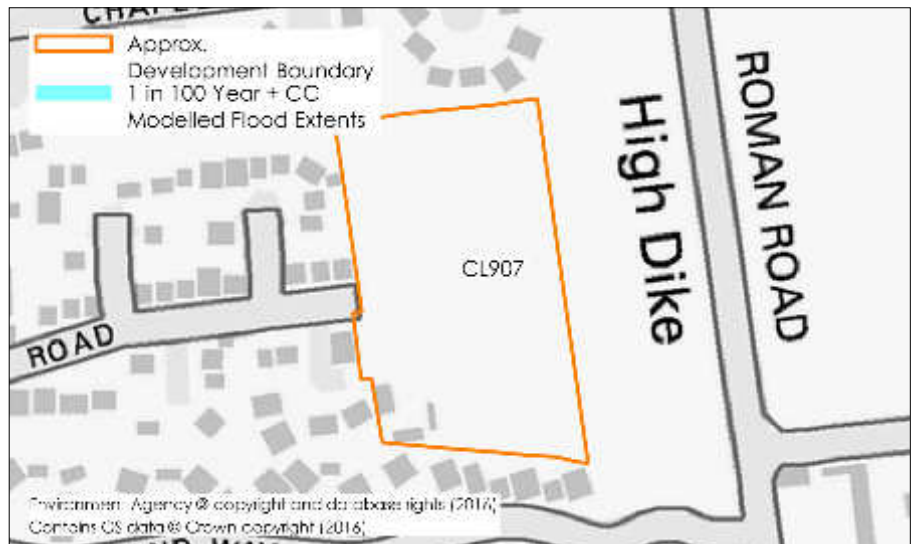
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



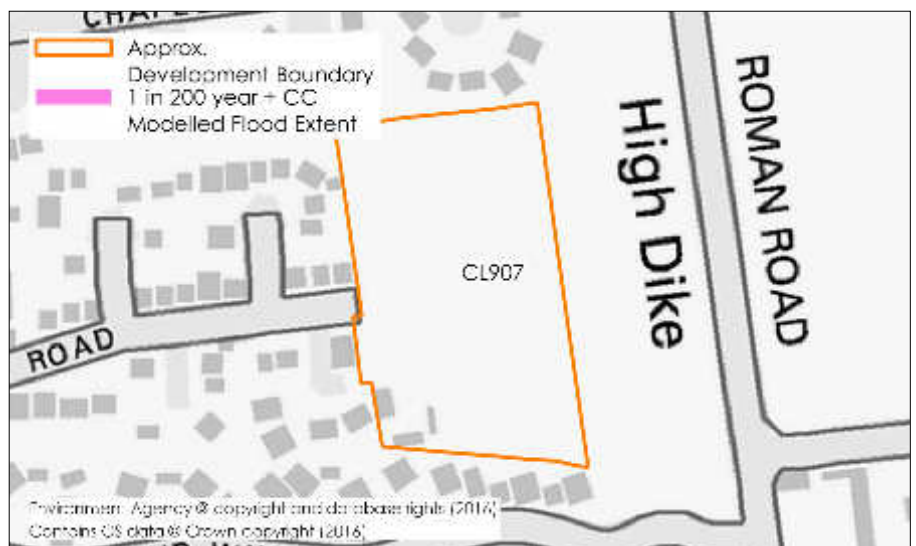
MODELLLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



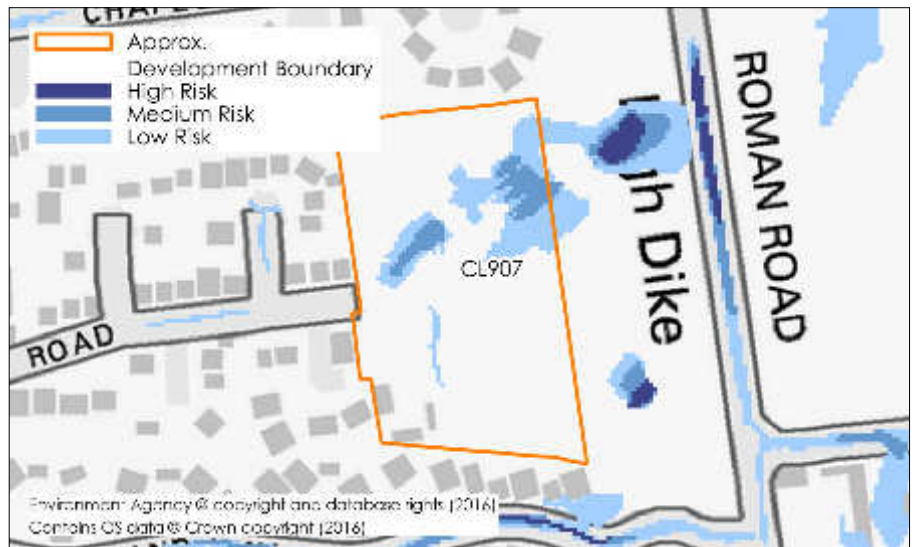
MODELLLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the medium surface water flood risk area the depth of flooding is estimated to be 0.15 metres with a velocity of less than 1 m/s.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

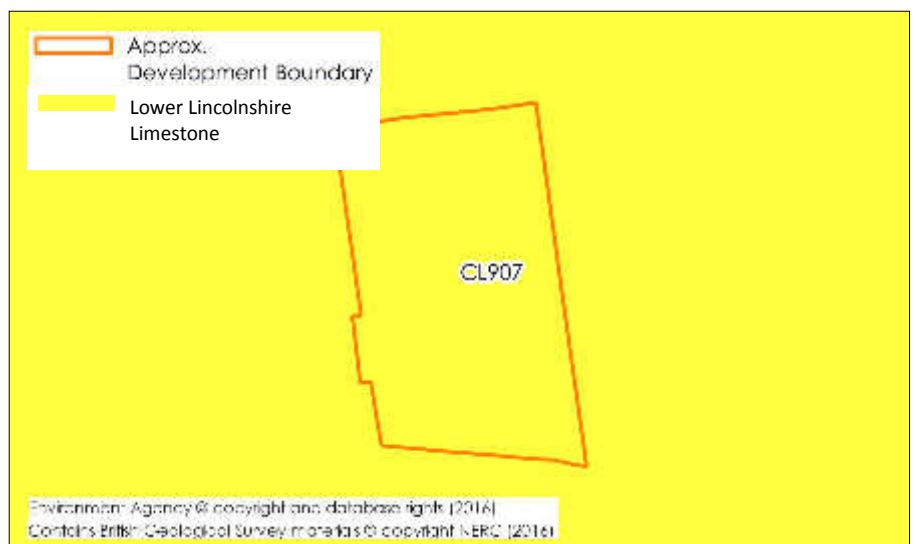
The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is subject to 0.15m deep flooding with a velocity of 1 m/s in the medium surface water flood risk area.
- Soakaways might be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Raise finished floor levels 300mm above existing ground level to provide residual protection from pluvial flood risk.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

LIMITATIONS

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Land at Whitehouse Road, Ruskington

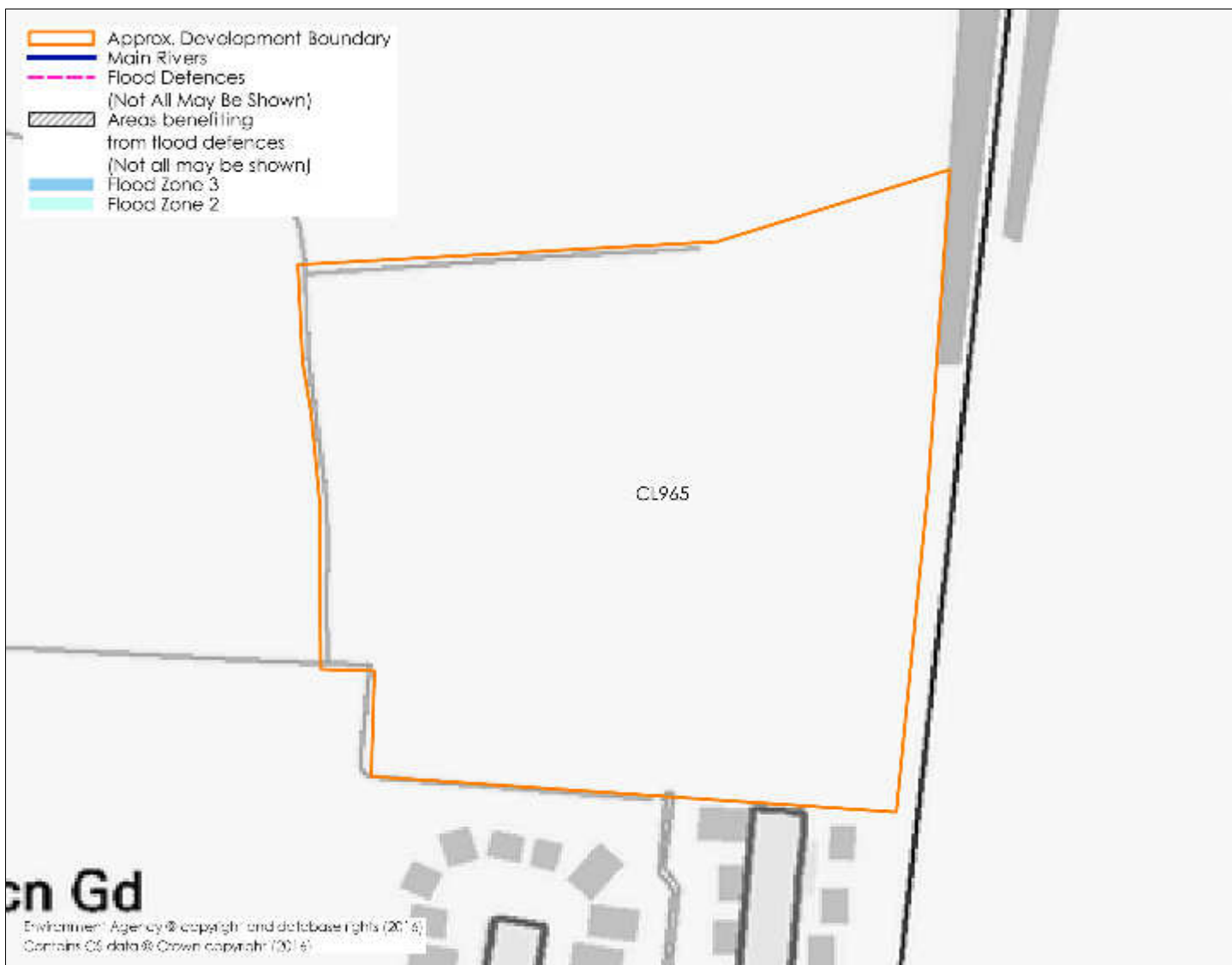
SITE DESCRIPTION

The site is shown to lie to the north east of Ruskington. It is fairly flat with a slight slope up to the north east and is used for arable farming. There is a hedgerow to the north, west and east boundaries.

| | |
|-------------------------|----------------|
| REFERENCE | CL965 |
| NATIONAL GRID REFERENCE | 508690, 351526 |
| SITE AREA (ha) | 3.24 ha |
| INTERNAL DRAINAGE BOARD | NA |

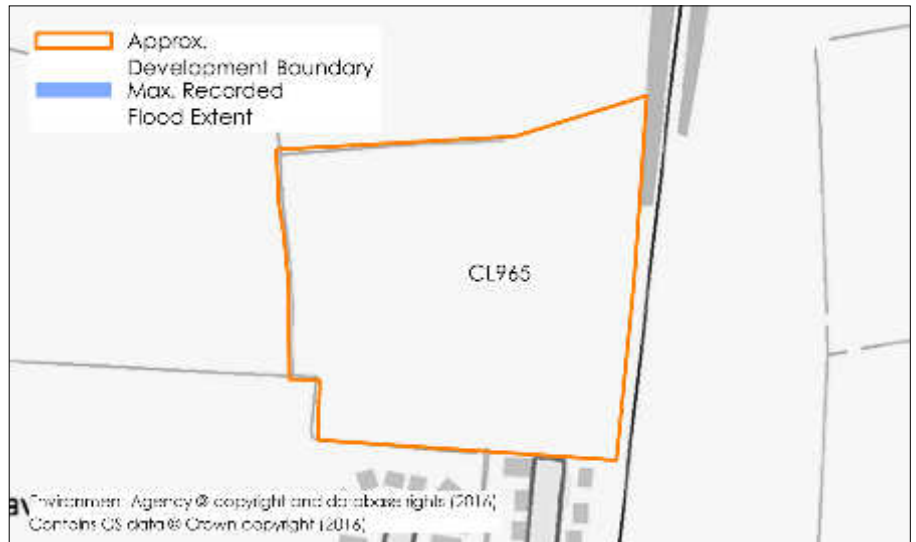
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Ruskington |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 73 |

FLOOD MAP FOR PLANNING



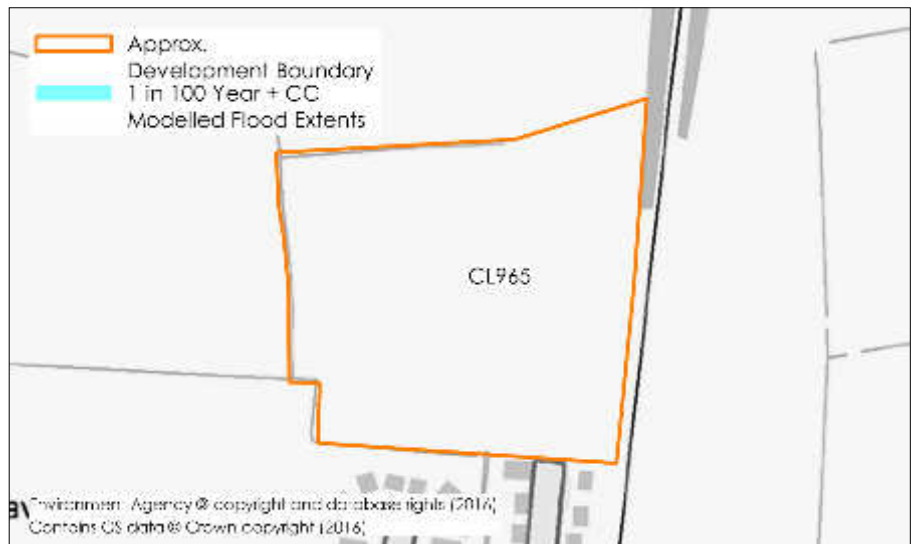
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



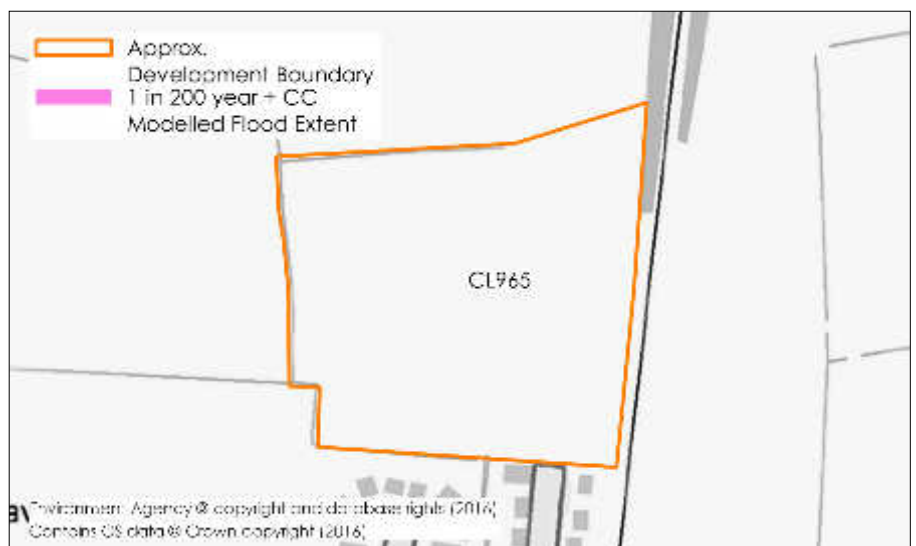
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

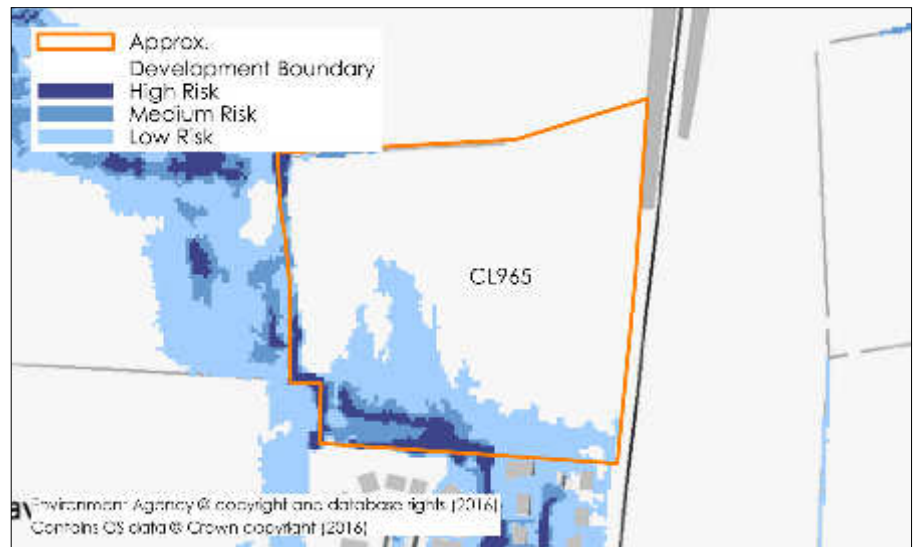
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be 0.6 metres with a velocity of less than 1 m/s.

In addition, there is evidence of a low risk flow path through the southern portion of the site.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is subject to 0.6m deep flooding with a velocity of up to 1 m/s in the high surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Raise finished floor levels 300mm above existing ground level to provide residual protection from pluvial flood risk.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

LIMITATIONS

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SITE DESCRIPTION

This site is a fairly flat area used as paddocks, and includes a substation in the north east corner and some bushes on site. There are hedgerows at the boundaries with trees on the eastern boundary. There is a housing estate to the north, a field with planning permission for housing to the east, large industrial and retail buildings to the south and farm buildings and fields to the west.

| | |
|-------------------------|----------------|
| REFERENCE | CL1002 |
| NATIONAL GRID REFERENCE | 505842, 344253 |
| SITE AREA (ha) | 6.81 ha |
| INTERNAL DRAINAGE BOARD | NA |

| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Sleaford |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 204 |

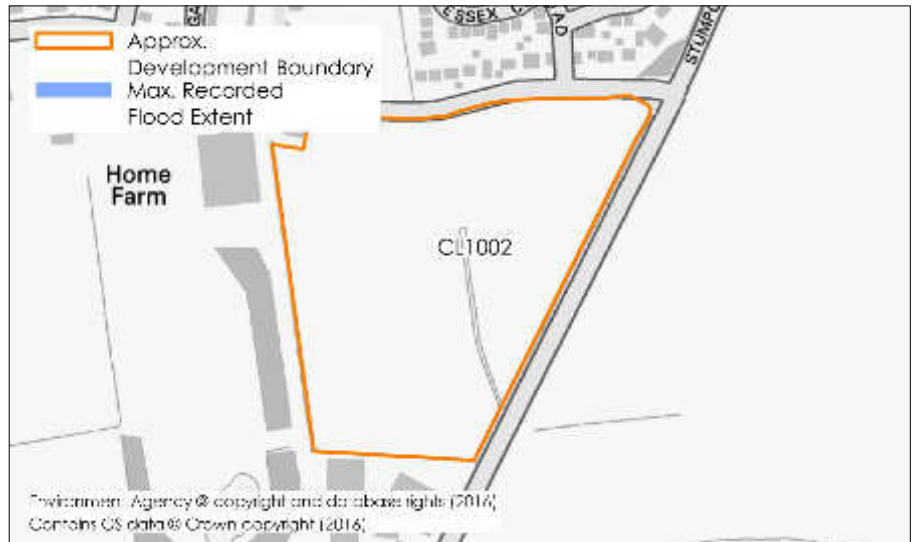
FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

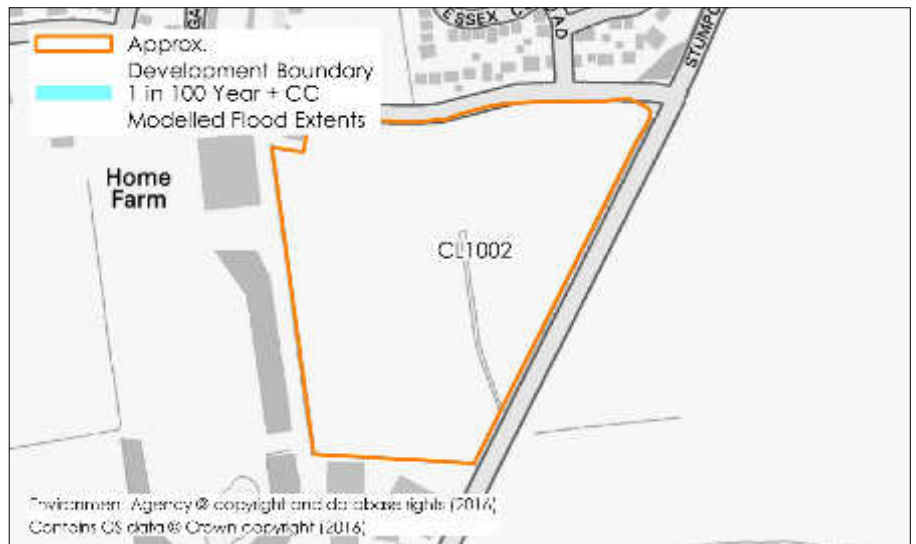
The Environment Agency do not have any records of the site previously being subjected to flooding.

The nearest recorded flooding is 1.3km to the north west where areas of the River Slea and surrounding area flooded due to a high water table and groundwater levels. There was no impact on the site.



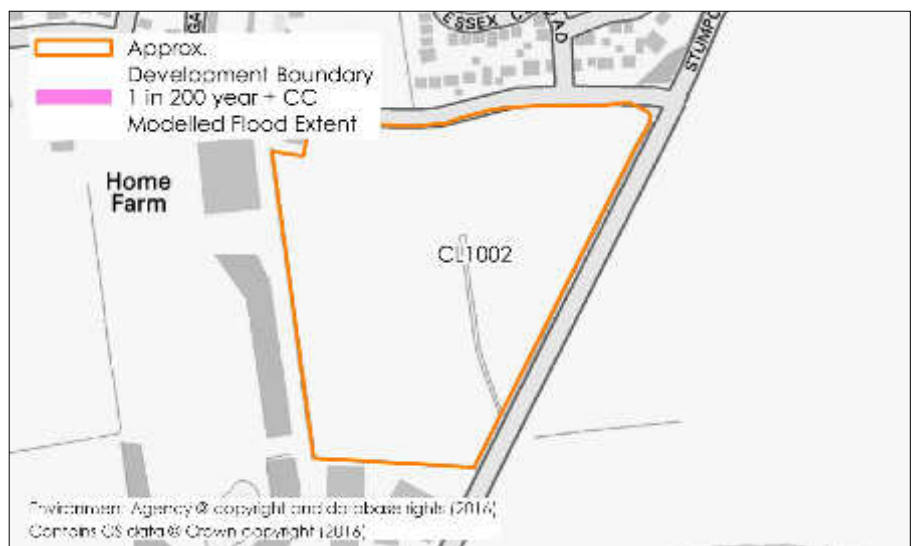
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

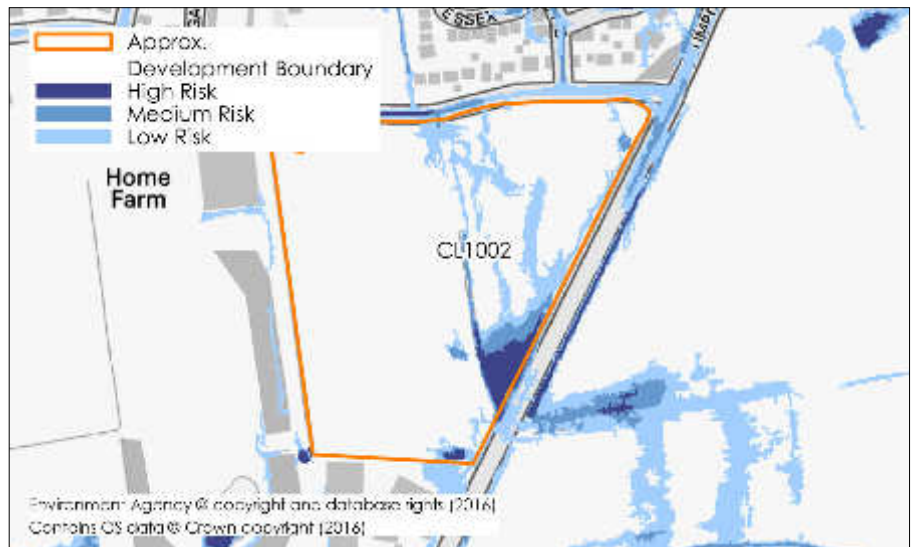
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be mostly less than 60cm but with some small areas expected to be up to 90cm. The velocity of high risk area is up to 0.5m/s.

In addition, there is evidence of a low risk flow path through the site from the north to south with the flow continuing east beyond the site boundary.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

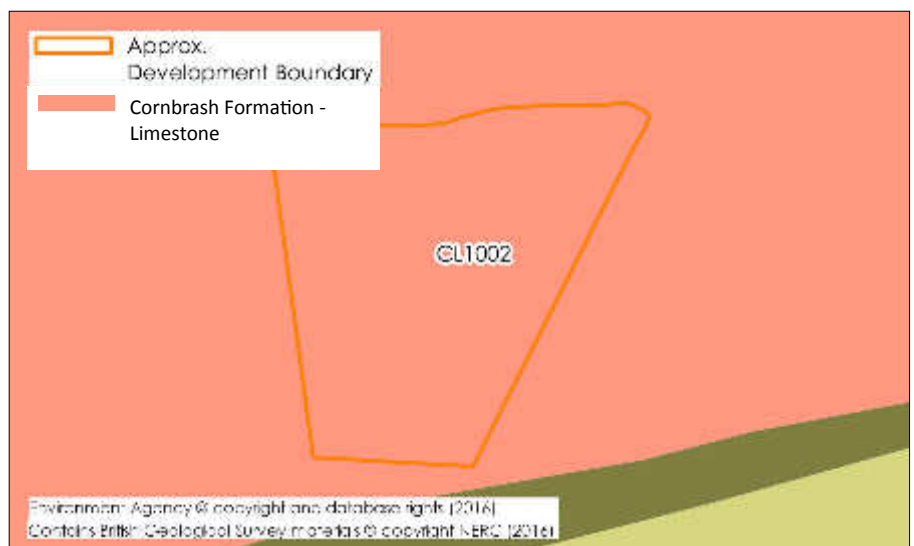
The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water.

The site lies upon Secondary A bedrock aquifer which is permeable layers capable of supporting water supplies at a local rather than strategic scale.

There is a small risk of future incidents of groundwater flooding if prolonged rainfall events coincided with high water table levels.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to a maximum 90cm deep flooding with a velocity of 0.5m/s in the high surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might be acceptable for the disposal of surface water.
- Groundwater flooding could be a possible at the site as there is a history of nearby groundwater flooding occurring at the site.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Locate all development out of the surface water flooding portion of the site where possible.
- Raise finished floor levels nominally above surrounding ground levels to provide protection against flooding.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

LIMITATIONS

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The Hoplands Depot, Boston Road, Sleaford

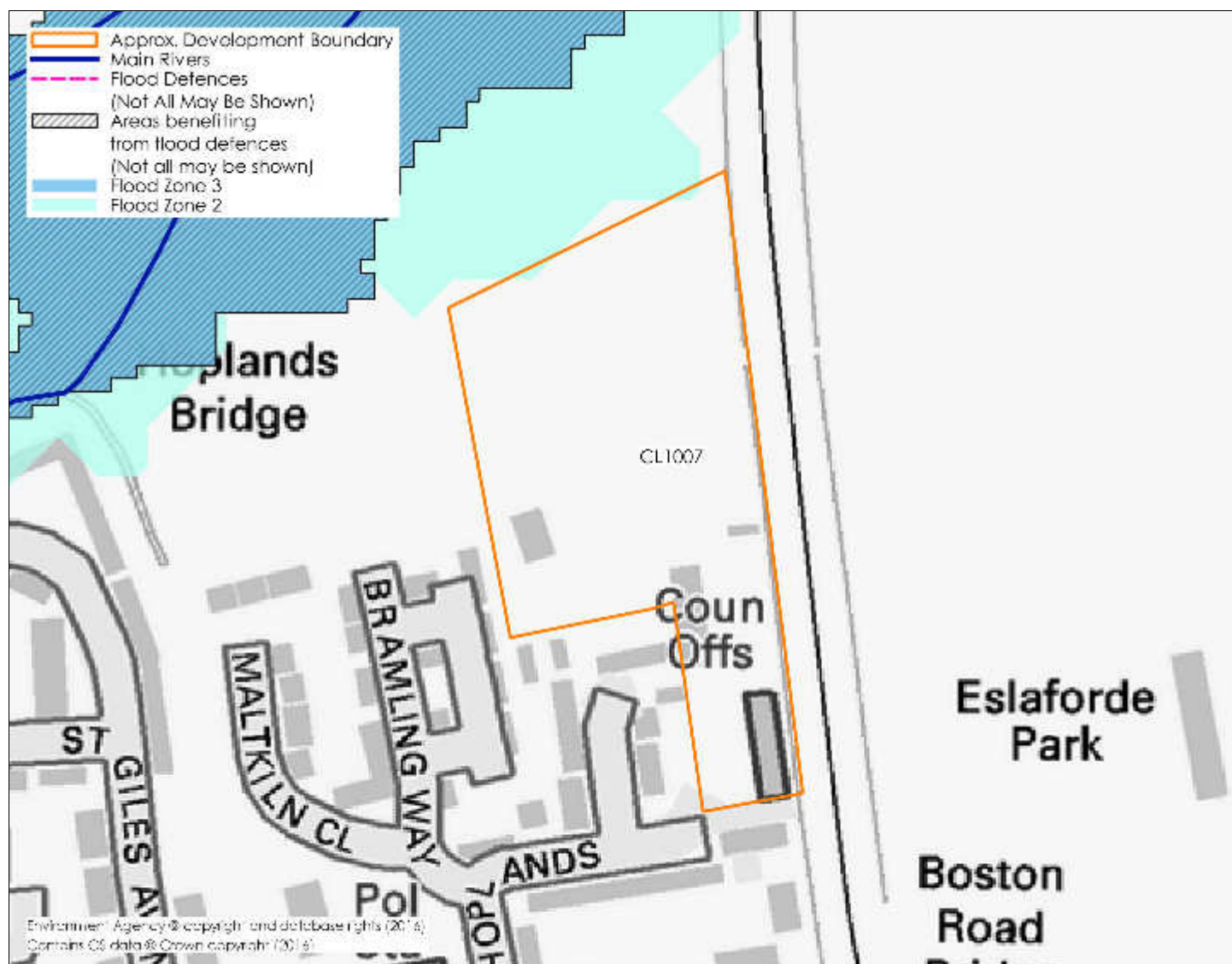
SITE DESCRIPTION

This brownfield site is fairly flat and has a number of disused buildings on it. There are some trees at the site's boundaries. The railway line runs along the eastern boundary and beyond is a sports centre. There are houses to the south and west and fields to the north and west. The River Slea runs through these fields and is the closest river to the site.

| | |
|-------------------------|----------------|
| REFERENCE | CL1007 |
| NATIONAL GRID REFERENCE | 507891, 346061 |
| SITE AREA (ha) | 1.84 ha |
| INTERNAL DRAINAGE BOARD | NA |

| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Sleaford |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 63 |

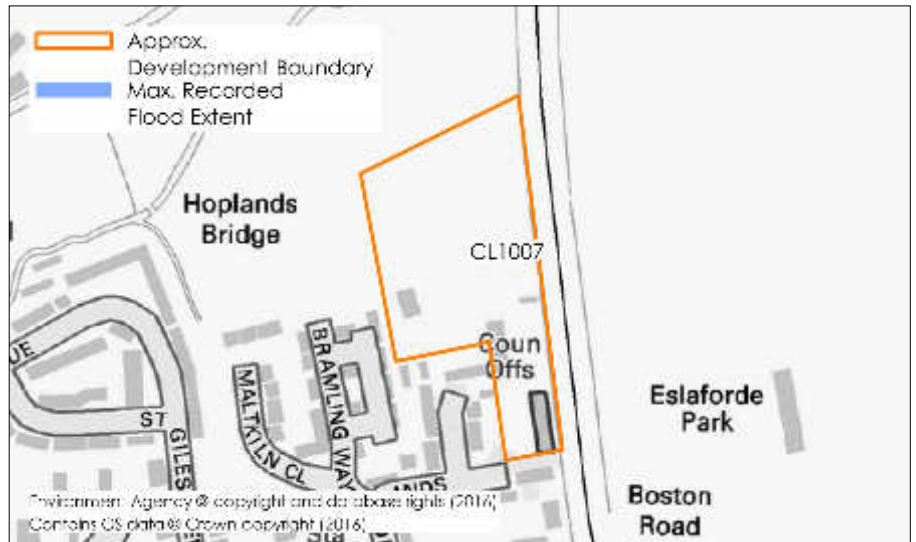
FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

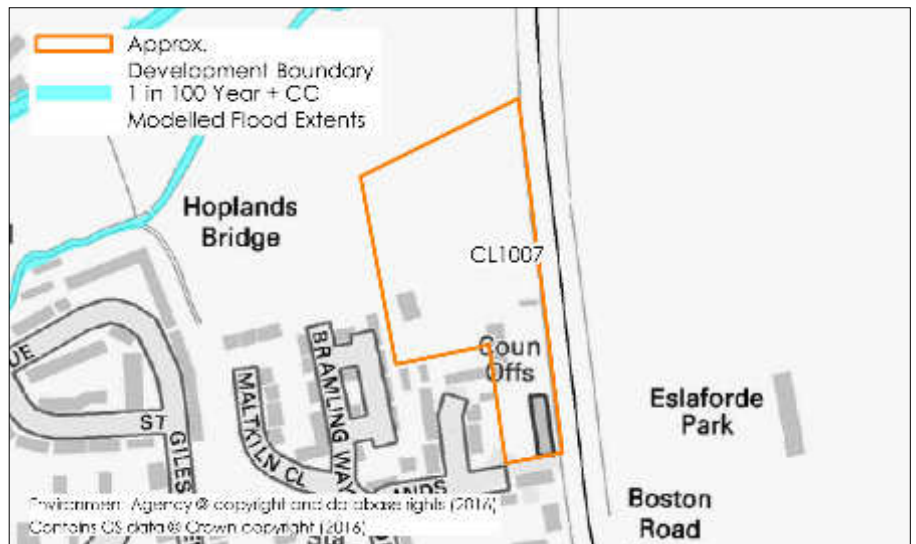
The Environment Agency do not have any records of the site previously being subjected to flooding.

The closest recorded flooding event was 1.5km west where groundwater caused flooding to some residential properties.



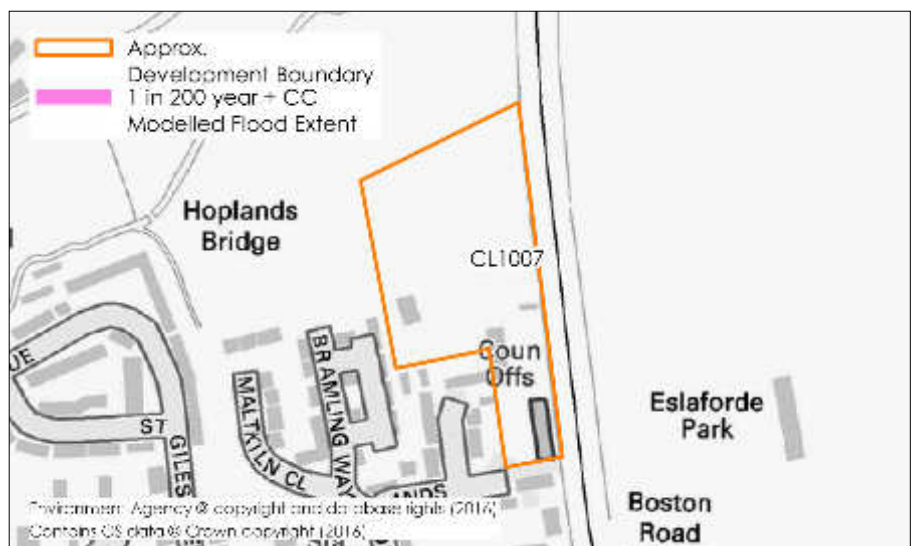
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

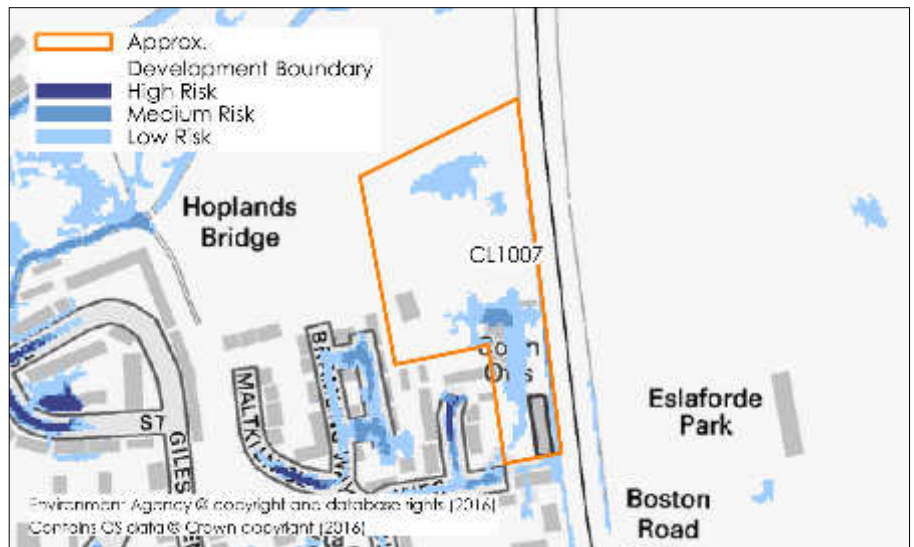
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the medium surface water flood risk area the depth of flooding is estimated to be less than 30cm with a velocity of less than 0.25m/s.

There is no evidence of a flow path through the site.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

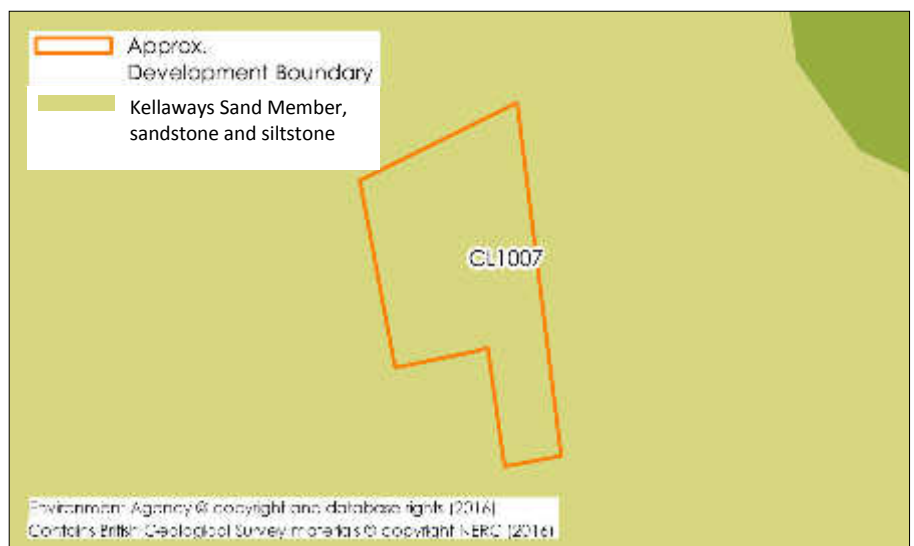
The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water.

Online BGS maps identify the underlying bedrock and superficial deposits to be secondary A aquifers. These are permeable layers capable of supporting water supplies at a local rather than strategic scale.

Previous records of groundwater flooding have taken place near the site and so there is a high likelihood that groundwater flooding could occur again in the future.



SUMMARY OF FLOOD RISK

- The site is shown to be partially within Flood Zone 2.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to 30cm deep flooding with a velocity of less than 0.25m/s in the medium surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might be acceptable for the disposal of surface water.
- There is a history of groundwater flooding in the wider area and so it is expected during periods of intense rainfall and high groundwater levels flooding could occur.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Locate all development out of the surface water flooding portion of the site where possible.
- Raise finished floor levels nominally above surrounding ground levels to provide protection against flooding.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

LIMITATIONS

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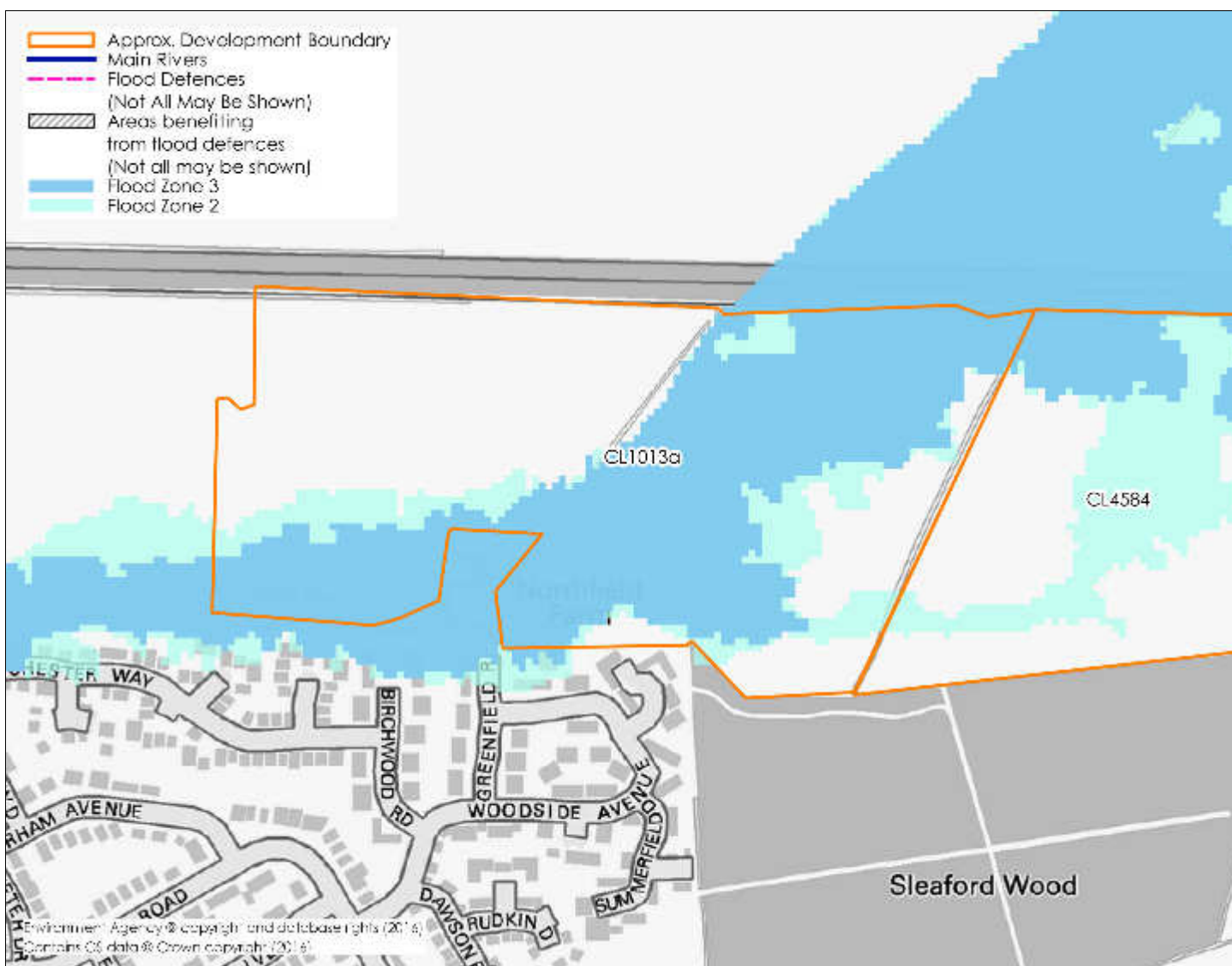
SITE DESCRIPTION

This site is a flat arable field, with a beck flowing through the site and some bushes and trees at the boundaries and along the beck. The A17 marks the northern boundary and beyond this is arable farm land. There are further fields to the west and south, although there is planning permission for residential development to the west. There is a housing estate and a woodland to the south.

| | |
|-------------------------|----------------|
| REFERENCE | CL1013a |
| NATIONAL GRID REFERENCE | 506813, 347226 |
| SITE AREA (ha) | 13.4 |
| INTERNAL DRAINAGE BOARD | N/A |

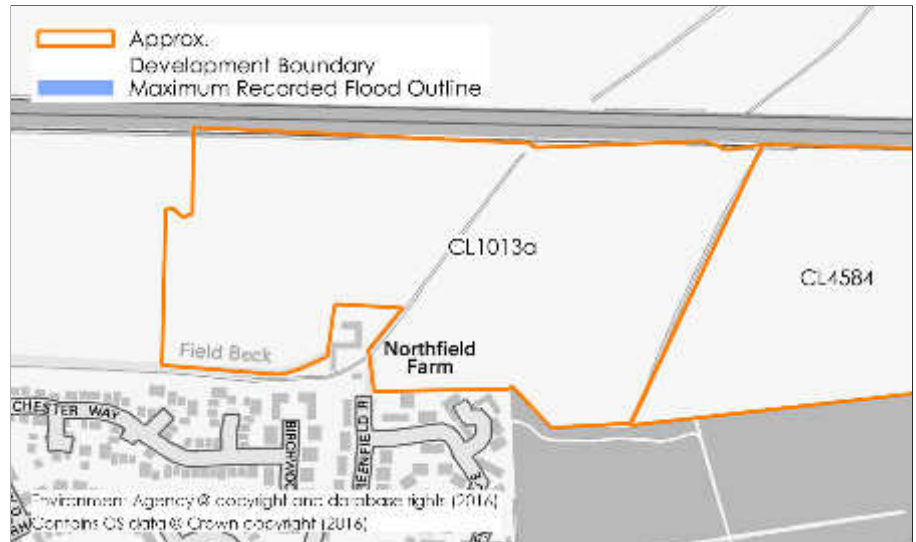
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Sleaford |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 200 |

FLOOD MAP FOR PLANNING



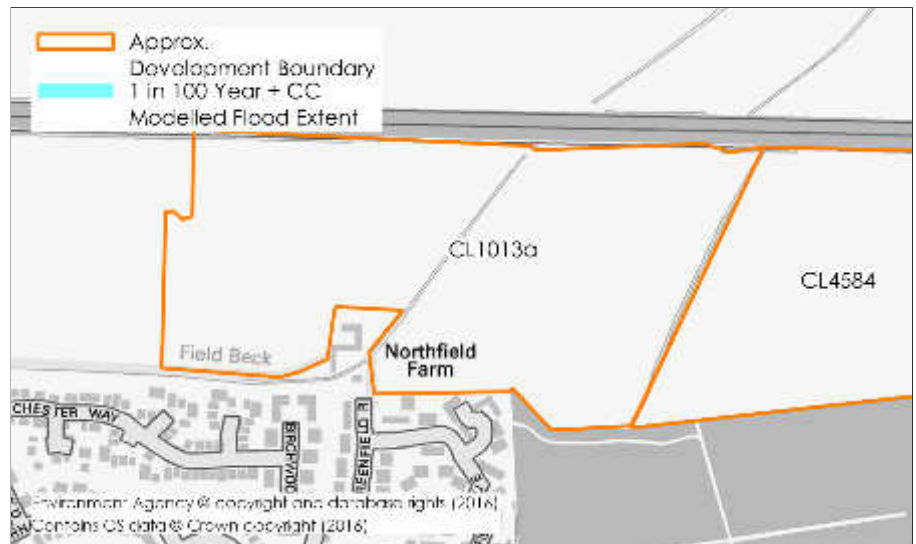
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding. The nearest recorded flooding is 1.5km to the south west of the site.



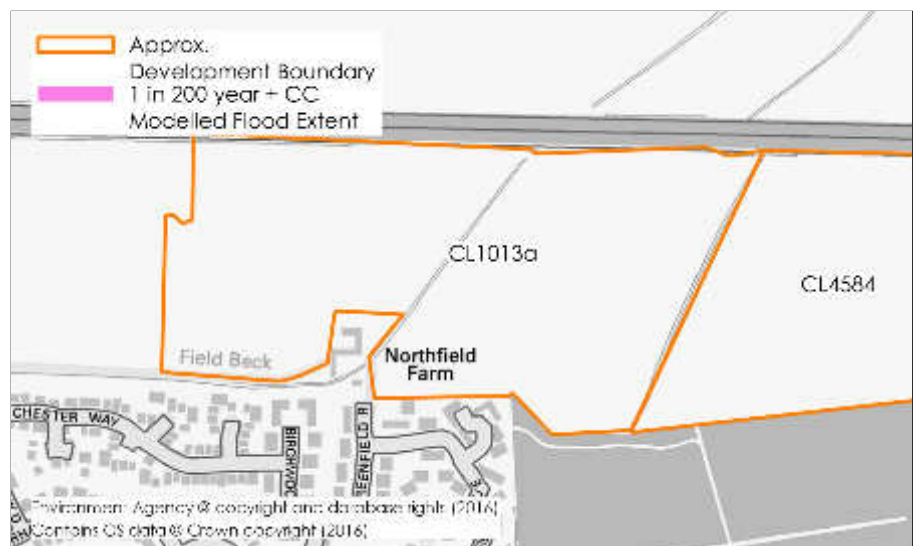
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

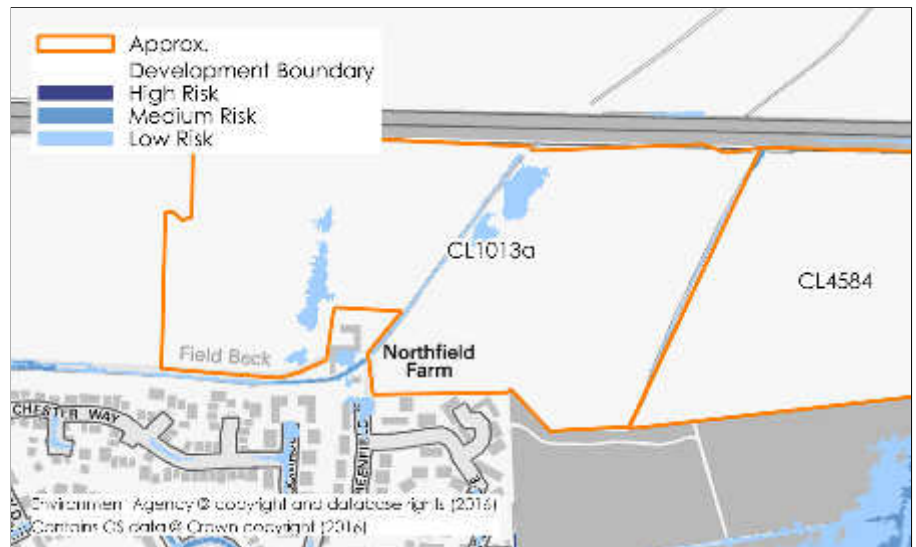
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to high or medium risk of surface water flooding.

In addition, there is evidence of a low risk flow path through the site aided by the Field Brook with some water pooling around the edges of the beck.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

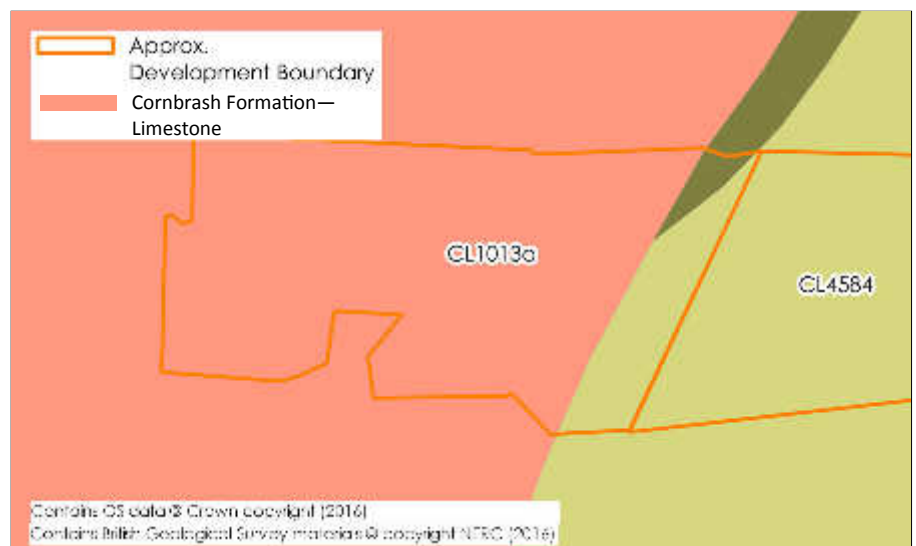
Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water. BGS maps show the bedrock across most of the site to be Cornbrash Formation Limestone.

Due to the permeable nature of Limestone bedrocks there is a potential risk from groundwater flooding.



SUMMARY OF FLOOD RISK

- Approximately 50% of the site is shown to be within Flood Zones 2 and 3.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding for the 1 in 100 year + CC event.
- The site is not subject to tidal flooding.
- The site is not subjected to high or medium risk of surface water flooding. A low risk surface water pathway exists across the site but only creates a small area of pooling water and can be attributed to the Beck.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences as there are no defences associated with the nearest watercourse.
- Soakaways might be acceptable for the disposal of surface water.
- Groundwater flooding may be a risk to the site due to the permeable nature of the limestone bedrock.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood Risk Assessments are indicated below.

- Locate all development in Flood Zone 1 portion of the site.
- Raise land levels to provide development platform above flood level on site with corresponding loss of floodplain mitigation.
- Raise finished floor levels 300mm above flood level on site and provide flood resilient construction 300mm above residual flood level.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.
- Raise finished floor levels 300mm above existing ground level.

LIMITATIONS

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Land to the north of Witham St. Hughs (Phase 3)

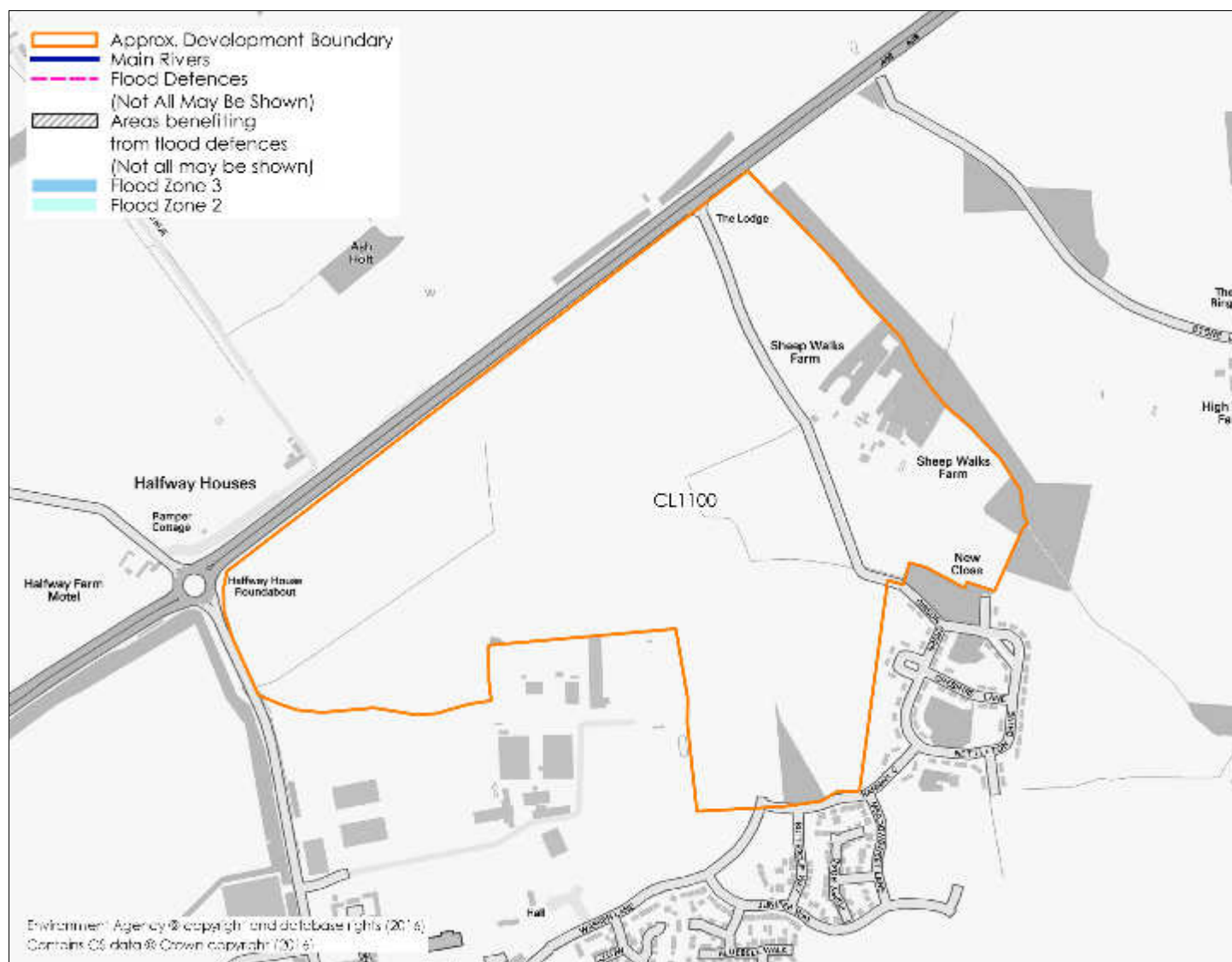
SITE DESCRIPTION

This site is a number of large arable fields, which slopes up slightly to the north. There are some farm buildings in the eastern part of the site with hedgerows marking the boundaries of most fields. There are trees in some parts of the site and drainage ditches in some areas. The A46 forms the northern boundary and beyond is arable fields, there is a disused RAF base to the west, an industrial estate to the south and housing and fields to the east.

| | |
|-------------------------|----------------|
| REFERENCE | CL1100 |
| NATIONAL GRID REFERENCE | 489598, 362979 |
| SITE AREA (ha) | 69.95 ha |
| INTERNAL DRAINAGE BOARD | Trent Valley |

| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Witham St Hughs |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 1259 |

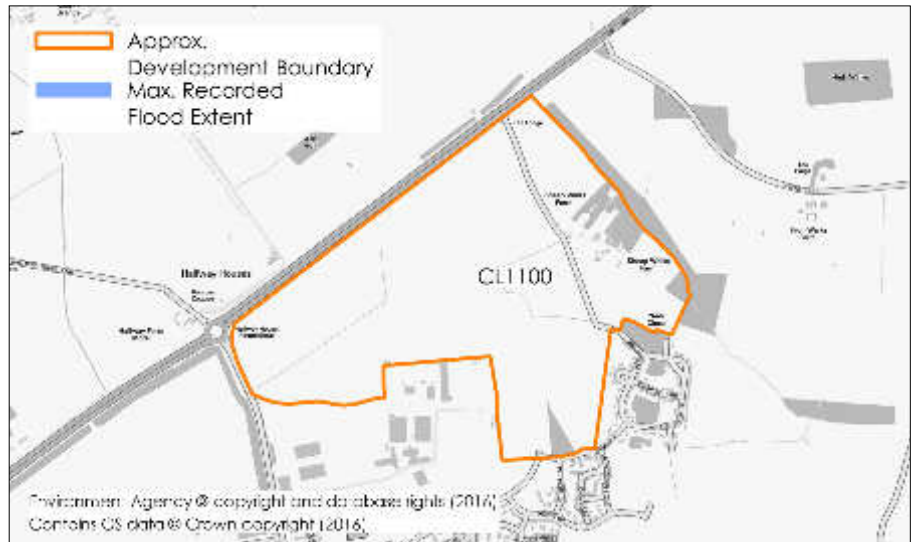
FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

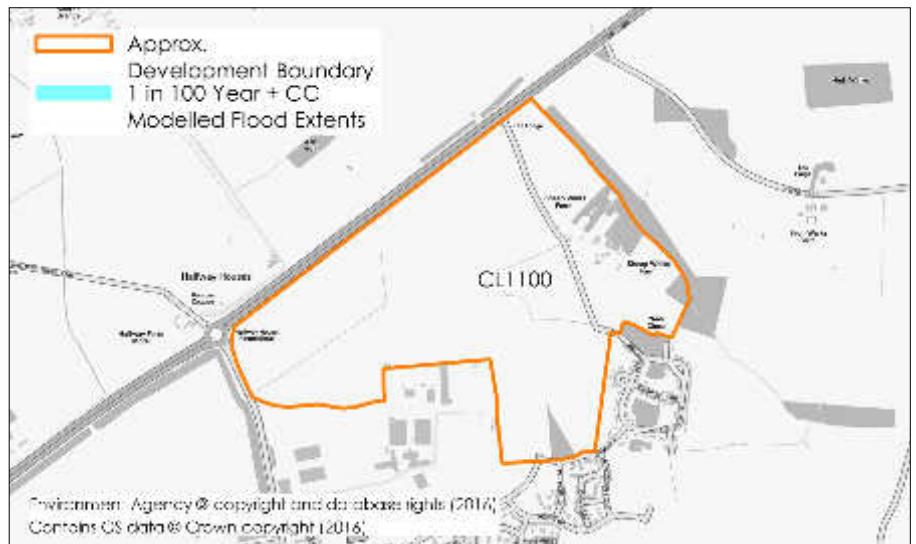
The Environment Agency do not have any records of the site previously being subjected to flooding.

The closest historic flooding is 2km to the east where the River Witham flooded in November 2000. There was no impact on the site from this event.



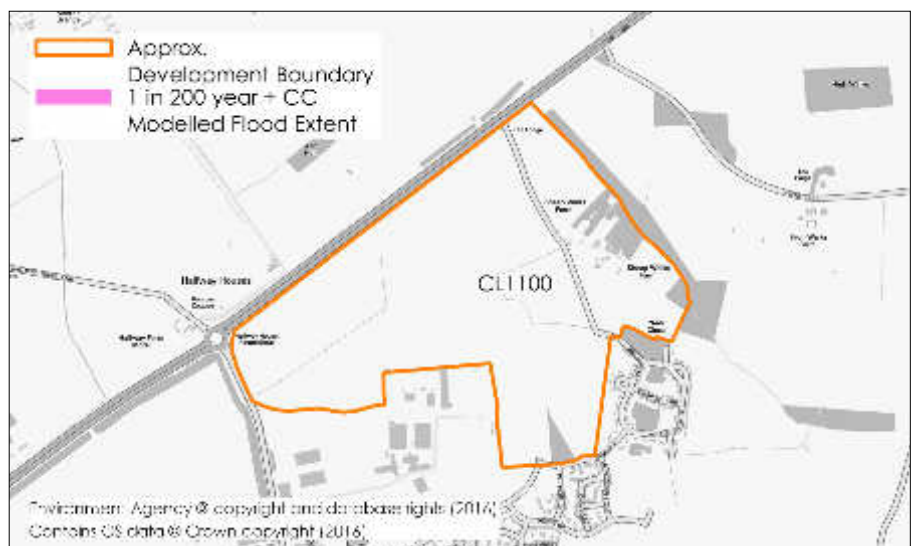
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

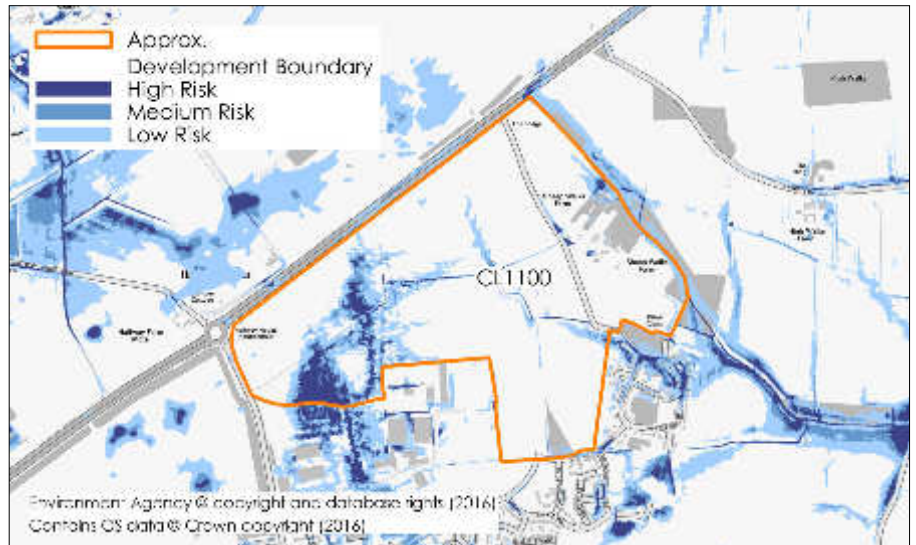
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be up to 60cm with a velocity of less than 0.5 m/s indicating pooling water across the site.

In addition, there is evidence of a low risk flow path through the site in the western area from the north to south. A second low risk flow pathway is identified on the north eastern boundary of the site that flows from the north in a south easterly direction.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

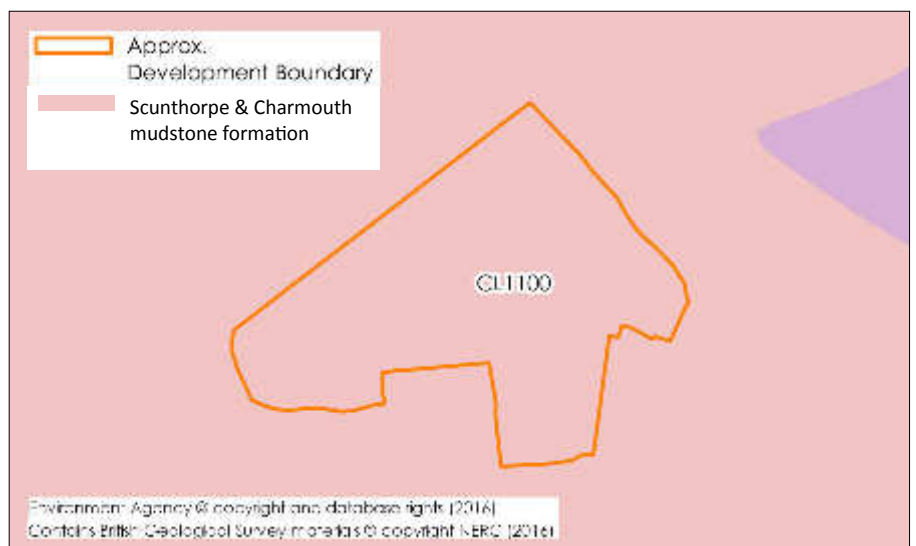
The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.

Online BGS maps identify the bedrock to be a secondary B aquifer with no superficial deposit aquifers.

Due to the lower permeability layers which may store and yield limited amounts of groundwater there is no anticipated ground-water flooding issues.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to 60cm deep flooding with a velocity of 0.5m/s in the high surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.
- Groundwater flooding is not expected to be an issue at the site due to the underlying bedrocks.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Build only in the areas not affected by surface water flooding where possible.
- Raise finished floor levels nominally above surrounding ground levels to provide protection against flooding.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.
- Raise finished floor levels 300mm above existing ground level to mitigate new surface water flood routes.

LIMITATIONS

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SITE DESCRIPTION

This field has a gentle slope south and westwards. There is a pond in the south-west corner surrounded by trees and a stream along the western edge. A new housing estate lies to the north, arable farm land to the south, west, and to the east.

| | |
|-------------------------|----------------|
| REFERENCE | CL1170 |
| NATIONAL GRID REFERENCE | 510808, 400775 |
| SITE AREA (ha) | 5.68 ha |
| INTERNAL DRAINAGE BOARD | NA |

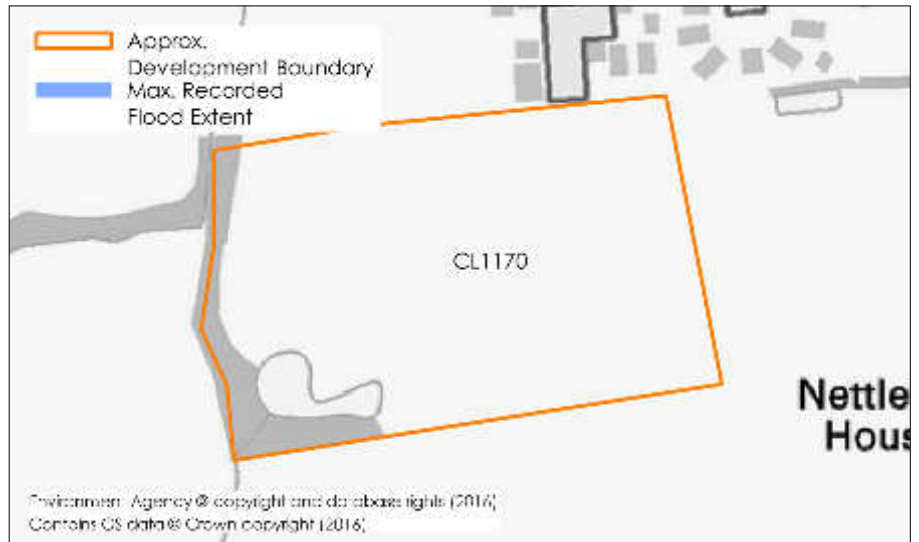
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Caistor |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 128 |

FLOOD MAP FOR PLANNING



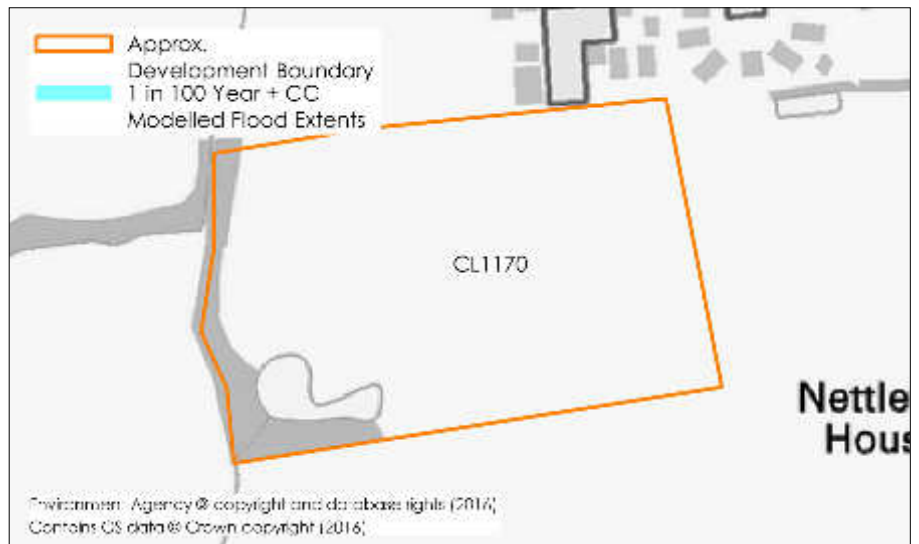
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding. There is no record of flooding within 2km of the site.



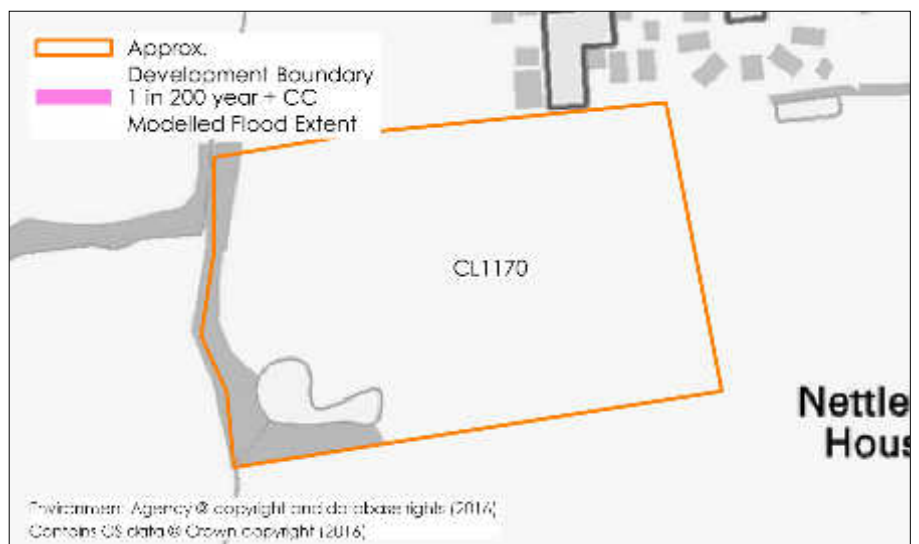
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

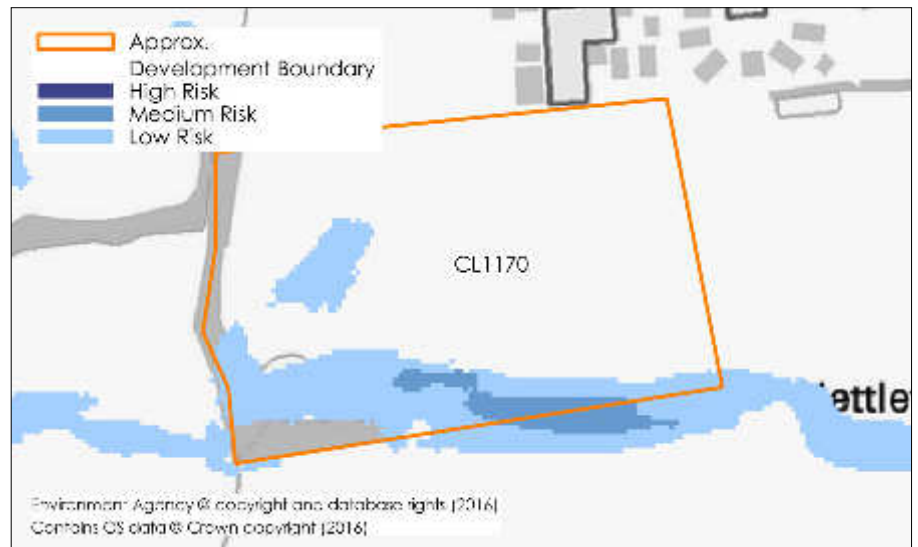
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the medium surface water flood risk area the depth of flooding is estimated to be less than 15cm with a velocity of up to 1 meter per second.

In addition, there is evidence of a low risk flow path through the site from the east to the pond in the west corner of the site.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

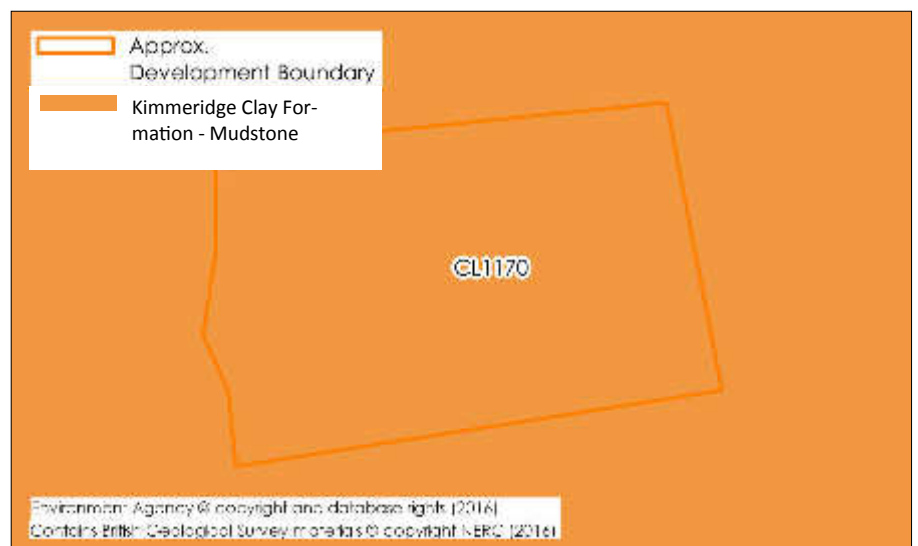
The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water.

BGS aquifer maps indicate the site lies outside of the bedrock principle aquifer region but there are superficial deposit aquifers classified as Secondary A.

Due to the nearby principle aquifer present and the secondary A aquifers under the site it is possible that future cases of groundwater flooding could occur due to the volume of water stored in the bedrock.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to 15cm deep flooding with a velocity of up to 1m/s in the medium surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might be acceptable for the disposal of surface water.
- Groundwater flooding has the potential to affect the site in the future due to the proximity of a principal aquifer and the presence of a superficial deposit secondary A aquifer.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Locate all development out of the surface water zone of the site where possible.
- Raise finished floor levels nominally above surrounding ground levels to provide protection against flooding.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

LIMITATIONS

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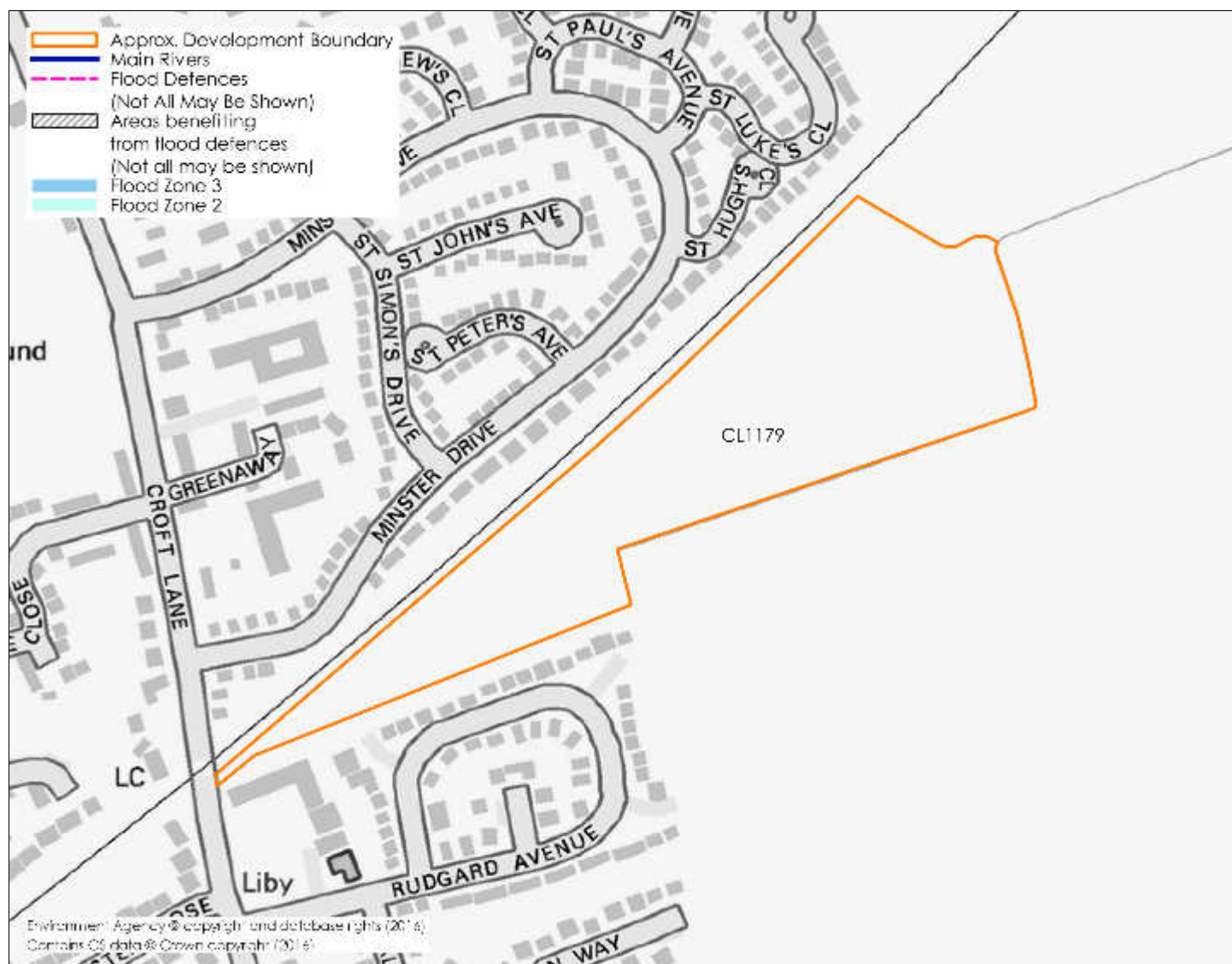
SITE DESCRIPTION

This site is fairly flat with the western part used as paddock including small stables and the eastern part used for arable farming. There are trees and hedgerows at the north and south boundaries and across the site. The railway line runs along the north boundary. Residential estates are to the north and south with arable fields to the east.

| | |
|-------------------------|----------------|
| REFERENCE | CL1179 |
| NATIONAL GRID REFERENCE | 503488, 373012 |
| SITE AREA (ha) | 1.57 ha |
| INTERNAL DRAINAGE BOARD | NA |

| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Cherry Willingham |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 40 |

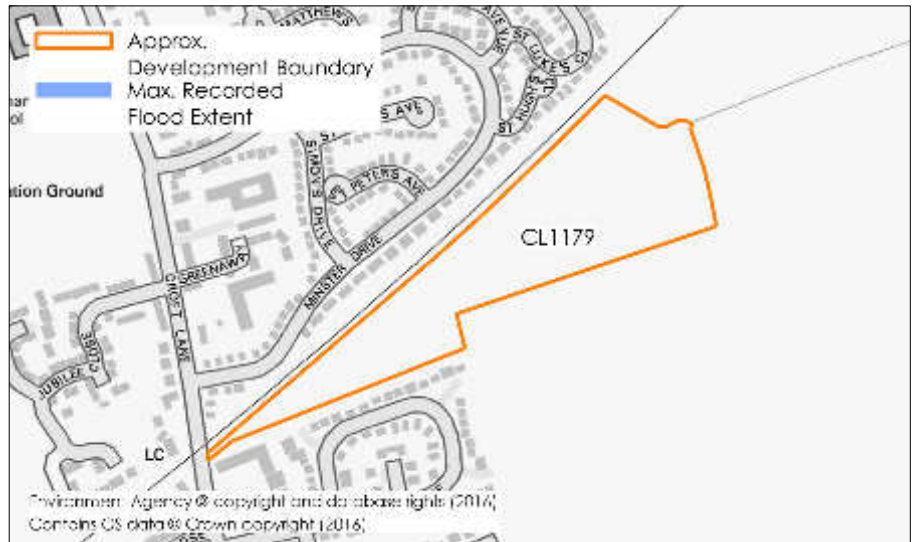
FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

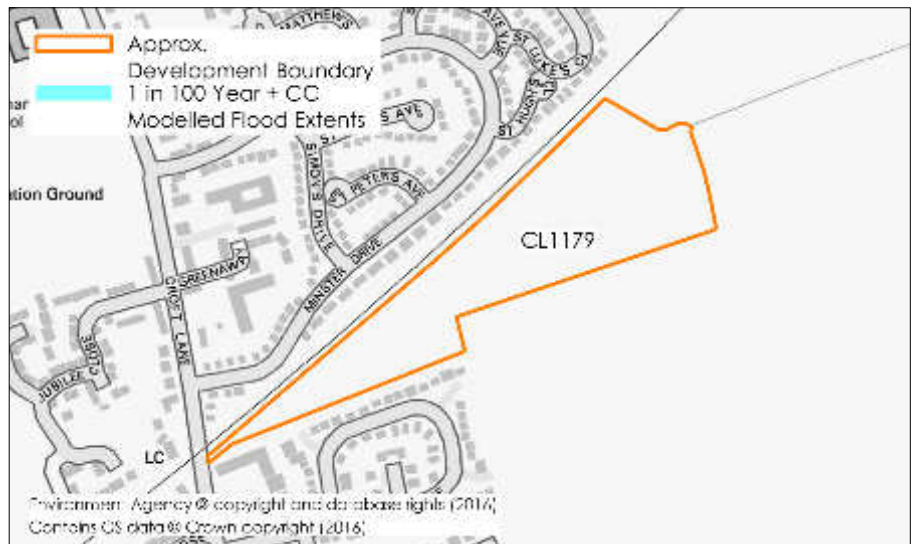
The Environment Agency do not have any records of the site previously being subjected to flooding.

The flood defences on the River Witham failed in both October 1993 and April 1981. Even with these failures of the defences the maximum flood waters were over 1km south of the site.



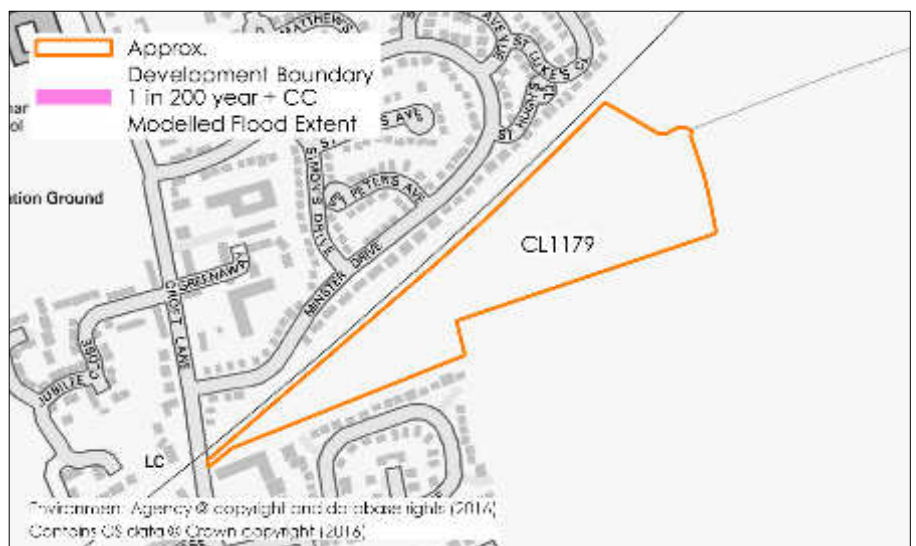
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.

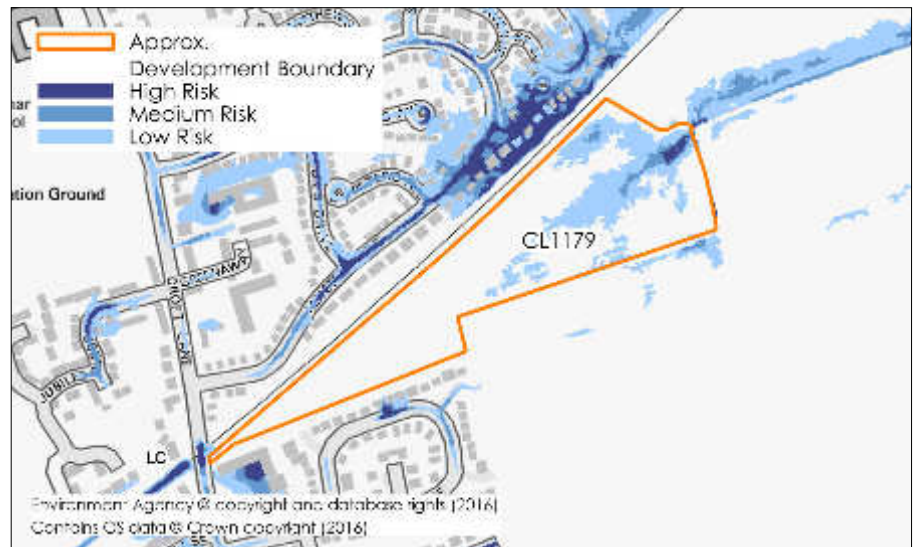


MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be 30cm deep with a velocity of less than 0.25 meters per second. The extent of this flooding is only to the eastern edge of the site.

The majority of the flooding indicated is low risk and has depths of less than 30cm.

There is no evidence of a high or medium risk flow path through the site.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

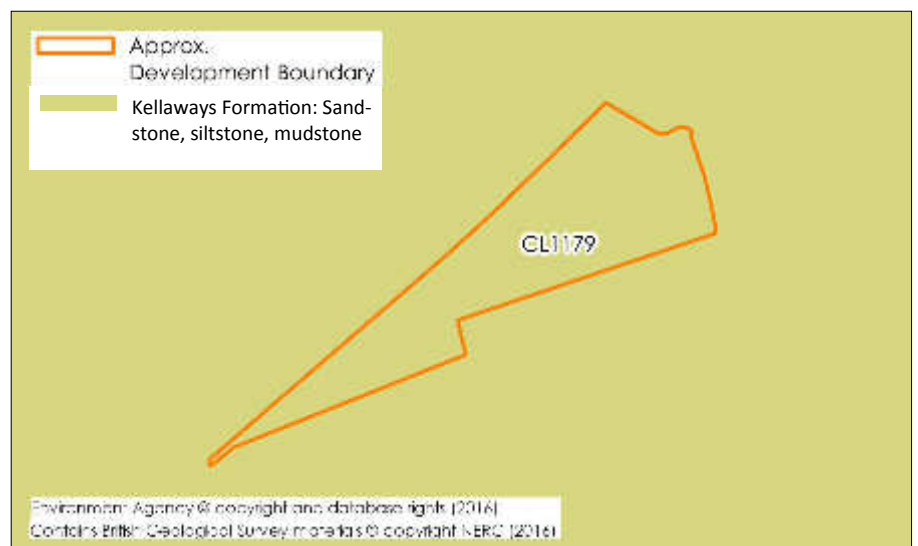
Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey (BGS) maps indicates that soakaways might be acceptable for the disposal of surface water.

BGS maps indicate the site to be located on a Secondary A aquifer, permeable layers capable of supporting water supplies at a local rather than strategic scale.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to 30cm deep flooding with a velocity of 0.25m/s in the high surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Raise finished floor levels 300mm above surface water flood level on site and provide flood resilient construction 300mm above flood level.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment

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Off Lincoln Road, Skellingthorpe

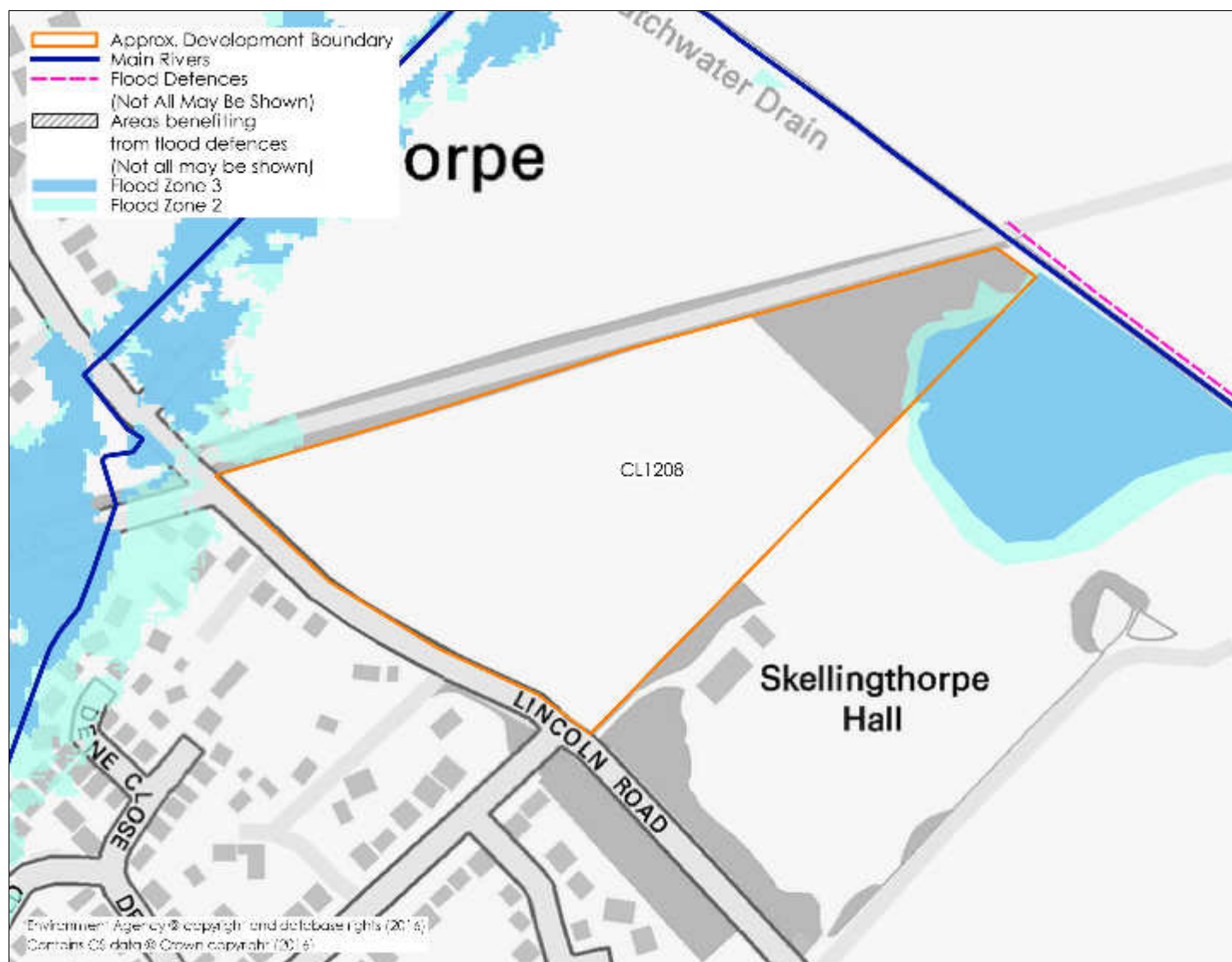
SITE DESCRIPTION

This site is a flat arable field bound by trees and hedgerows and a small wooded area at the north east corner. There is a right of way along the northern boundary and further to the north are arable fields. To the south east is Skellingthorpe Hall and surrounding park land. To the west and south west is housing.

| | |
|-------------------------|----------------|
| REFERENCE | CL1208 |
| NATIONAL GRID REFERENCE | 492978, 371649 |
| SITE AREA (ha) | 5.73 ha |
| INTERNAL DRAINAGE BOARD | NA |

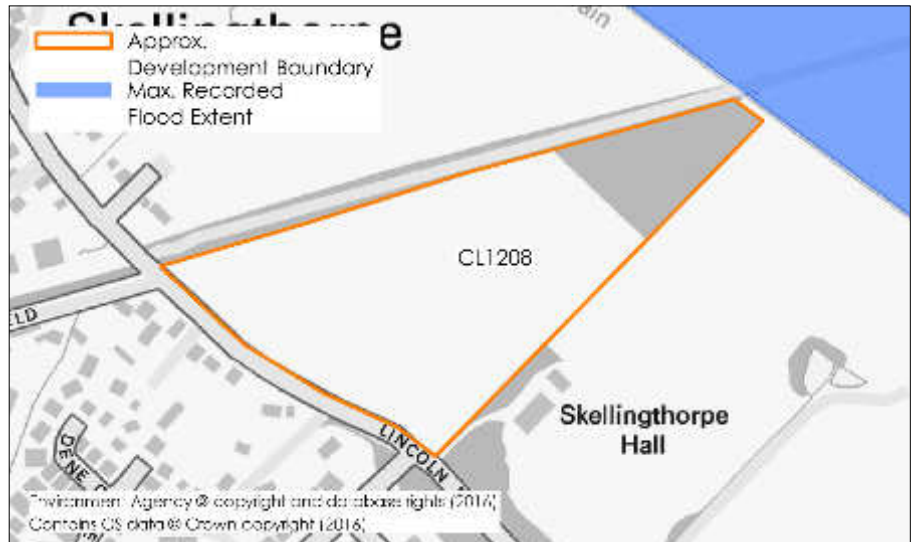
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Skellingthorpe |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 129 |

FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

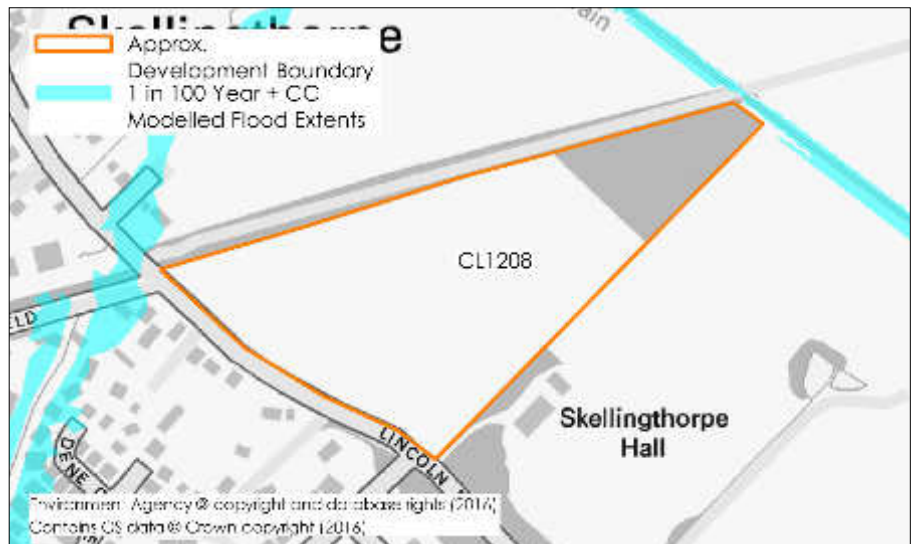
Historical flooding information provided by the Environment Agency indicates that the site has not been subject to flooding. There is a recorded flood event close to the site in February 1795. The recorded flood extent was not seen to affect the site.



MODELLED FLUVIAL RISKS

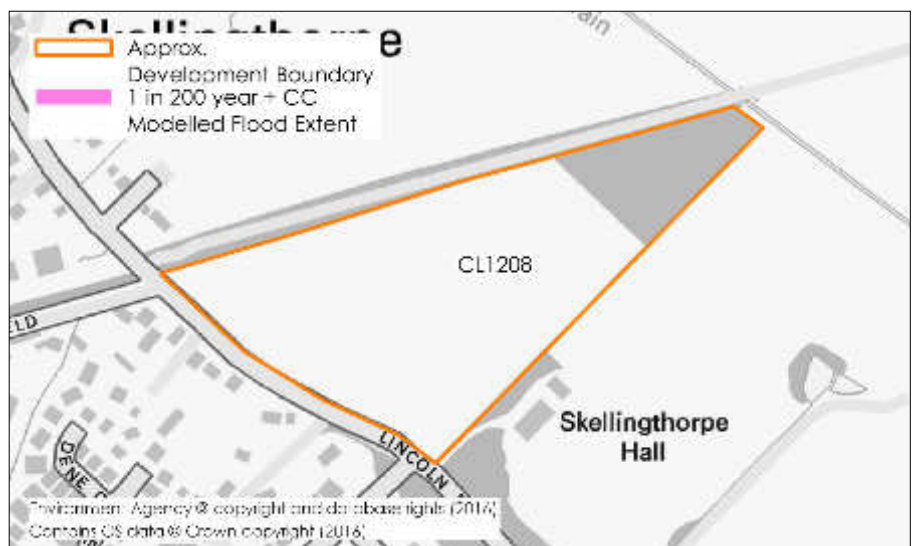
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.

The site is mostly in Flood Zone 1. There is a Flood Zone 2 and 3 area in the north east corner of the site but only a small area of the site is impacted.



MODELLED TIDAL RISKS

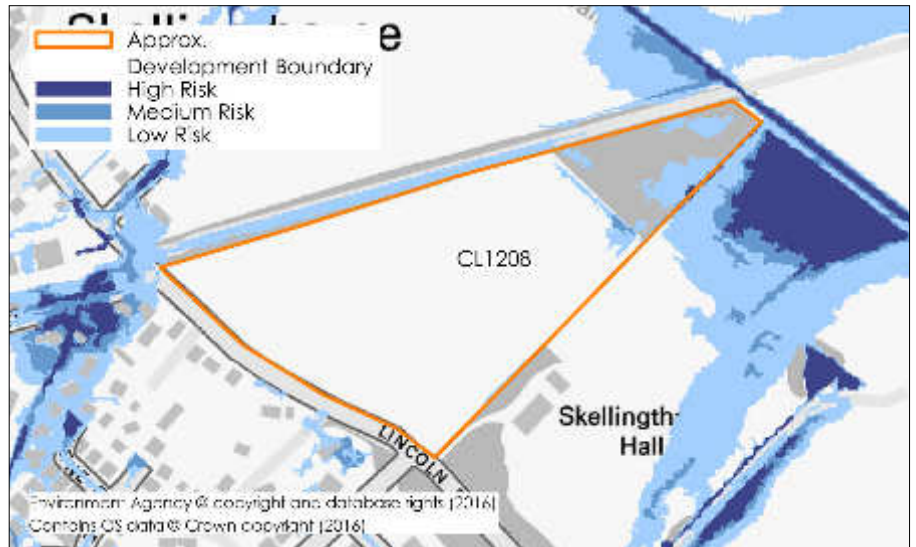
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be up to 60cm with a velocity of 0.25m/s.

There is no evidence of a surface water flow path through the site.



OTHER SOURCES OF FLOOD RISK

Breaching of Flood Defences

The Catchwater Drain has a number of defences associated with it, which are actively maintained by the Environment Agency. There is generally a low probability that these could fail, however the consequences of such failure could be significant.

The information made available by the Environment Agency for this investigation does not provide sufficient data to report on this risk. However, the Environment Agency's hydraulic flood model would allow for this analysis to be undertaken, and the advice of a flood risk specialist should be sought when preparing a planning application for the site.

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

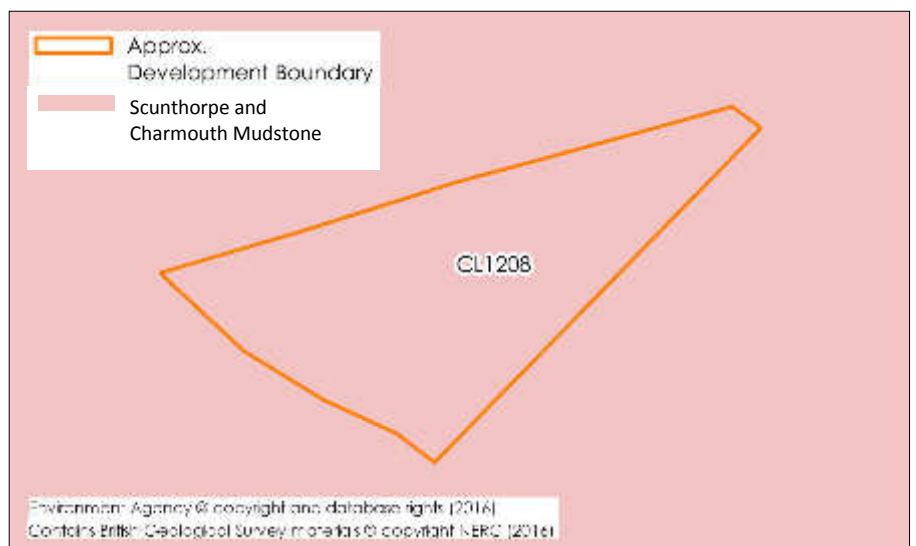
The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.

The site is located on an aquifer categorised as Secondary B, which are predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering.

Groundwater flooding is not expected to be a future issue at the site due to the limiting permeability of the bedrock layers.



SUMMARY OF FLOOD RISK

- Approximately 5% of the site is shown to be within Flood Zones 2 and 3.
- The site has previously been close to flooding in February 1795 but the site area was not impacted.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to up to 60cm deep flooding with a velocity of 0.25m/s in the medium surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.
- Groundwater flooding is not expected to be a issue to the site in the future due to the low permeability bedrock geology.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Locate all development in Flood Zone 1 portion of the site.
- Raise finished floor levels to surface water flood level on site and provide flood resilient construction 300mm above the surface water flood level.
- Raise finished floor levels 300mm above surface water flood level on site.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.
- Raise finished floor levels 300mm above existing ground level.

LIMITATIONS

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Land East of Belt Farm, Gainsborough

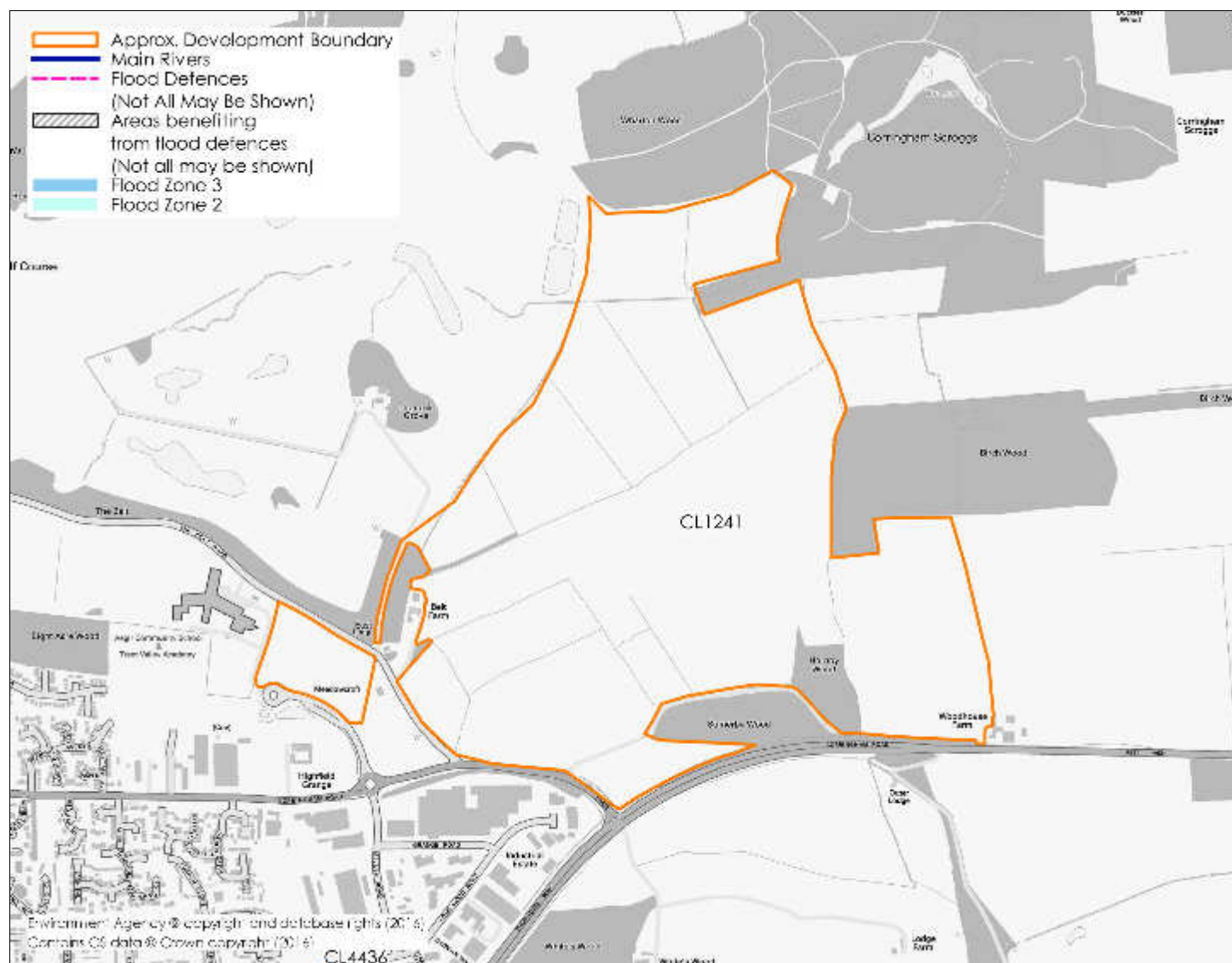
SITE DESCRIPTION

The site is located 2km north east of Gainsborough and is fairly flat. The west boundary of the site is limited by Gainsborough Golf Club and to the south the A631 bounds the site. To the north satellite imagery indicates large areas of wooded land and to the east open fields with some woodland. The land use on the site is presently open fields for arable farming.

| | |
|-------------------------|----------------|
| REFERENCE | CL1241 |
| NATIONAL GRID REFERENCE | 483876, 391089 |
| SITE AREA (ha) | 117.42 ha |
| INTERNAL DRAINAGE BOARD | NA |

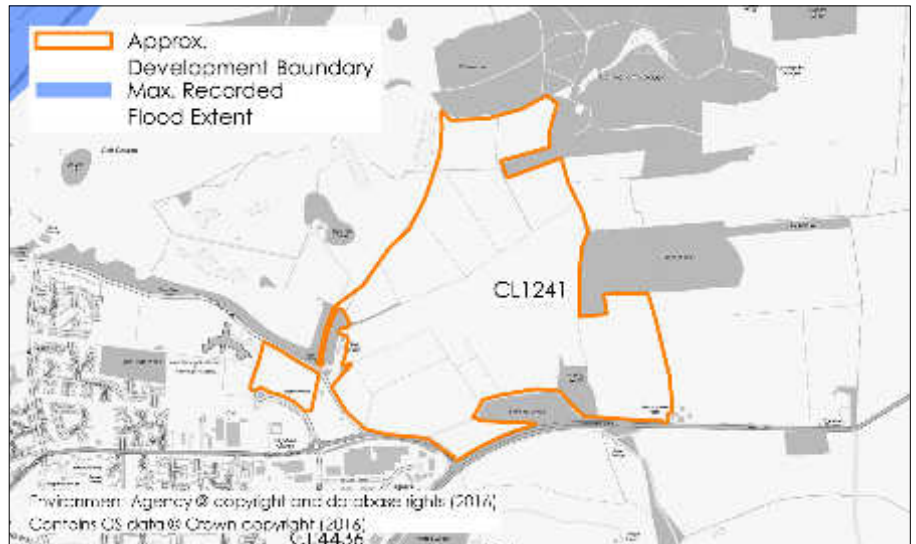
| | |
|---------------------|---------------------------------------|
| LOCAL PLAN STATUS | Preferred Sustainable Urban Extension |
| LOCATION | Gainsborough |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 1600 |

FLOOD MAP FOR PLANNING



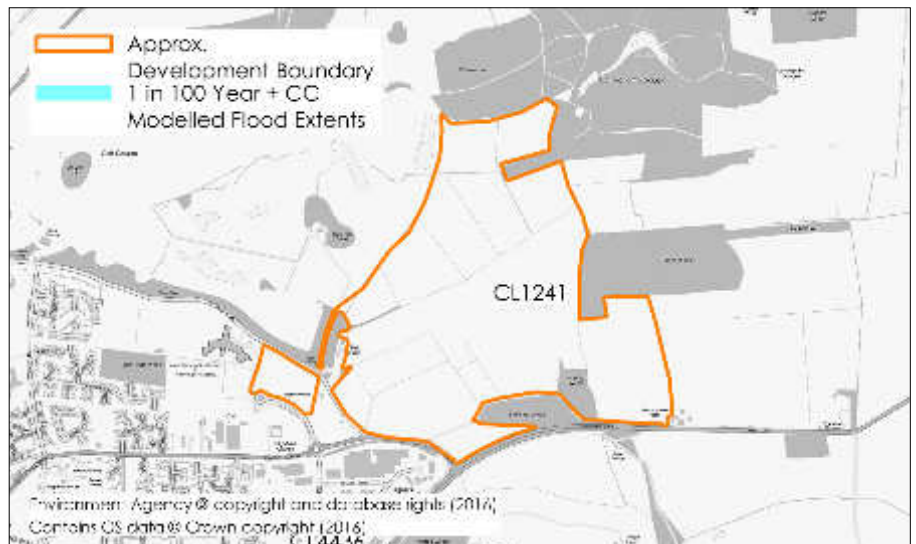
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding. The nearest flooding to the site recorded is 1.5km to the north west.



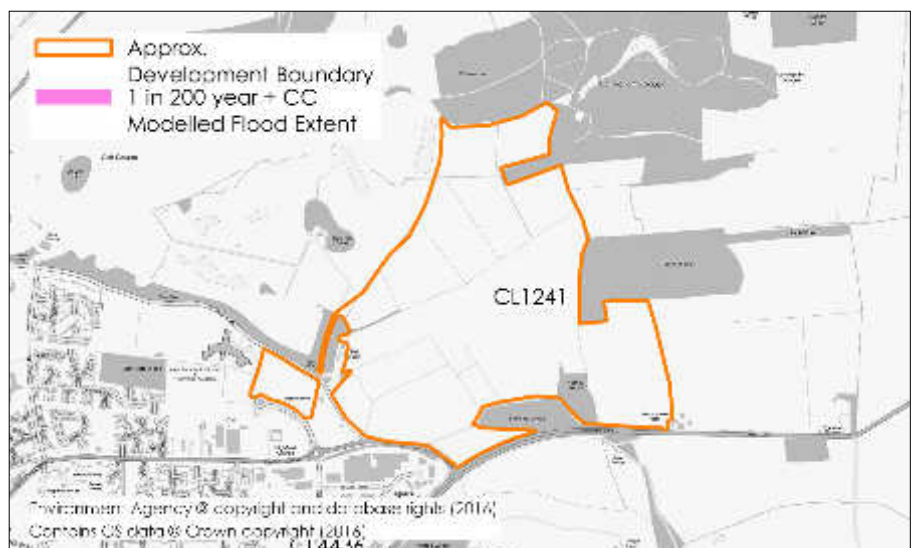
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

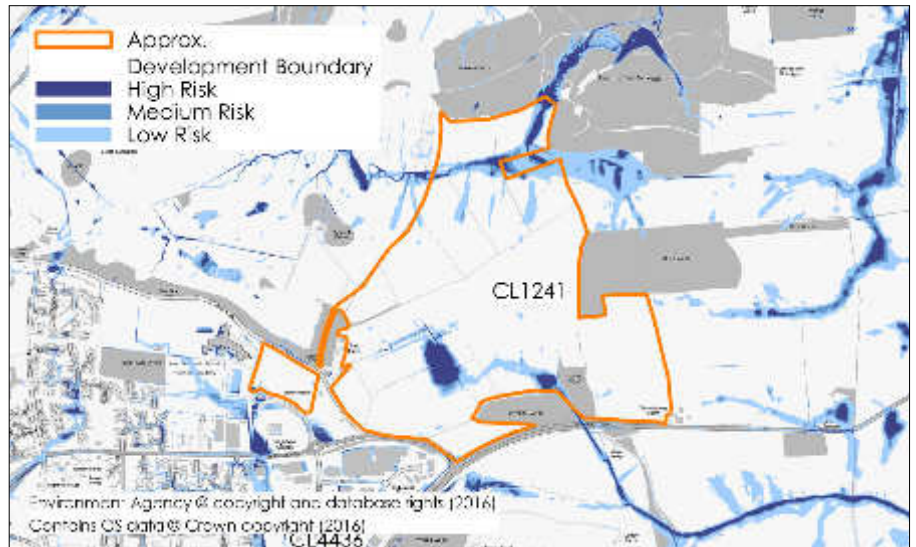
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be 60cm deep with a velocity of less than 0.5 meters per second.

In addition, there is evidence of a medium risk flow path through the site across the northern area.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

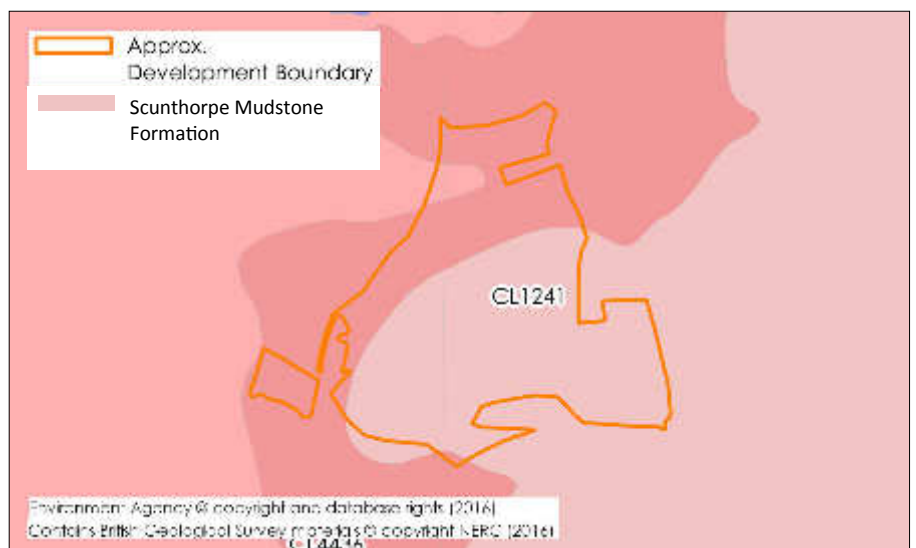
Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.

The site is located primarily on secondary B bedrock aquifer which are predominantly lower permeability layers that may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to 60cm deep flooding with a velocity of less than 0.5m/s in the high surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Locate all development in Flood Zone 1 portion of the site.
- Raise finished floor levels 300mm above surface water flood level on site and provide flood resilient construction 300mm above surface water flood level.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

LIMITATIONS

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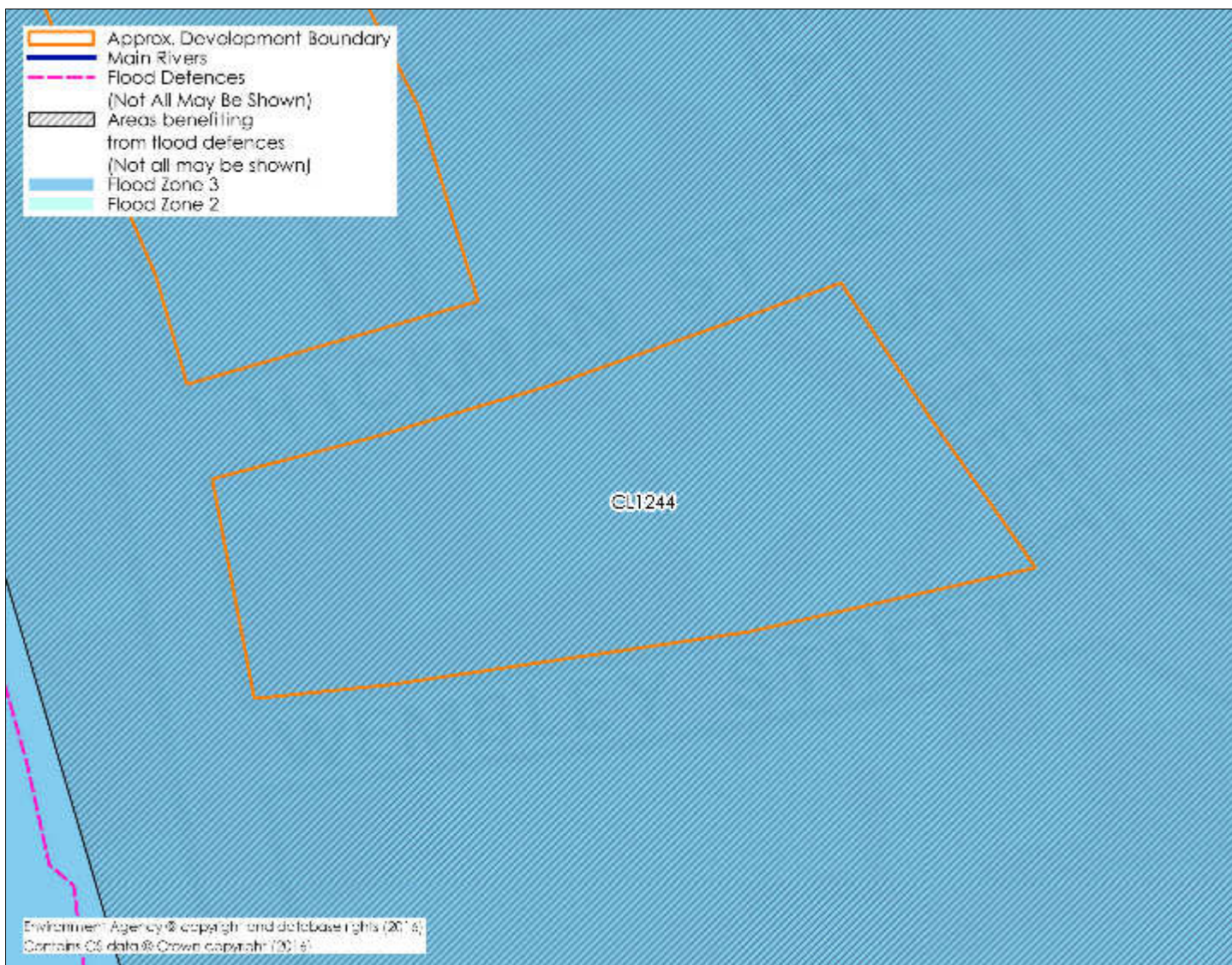
SITE DESCRIPTION

This flat town centre site is made up of some 3 storey blocks of flats in the east, large warehouses, a yard and a small retail parade. There is a residential area to the east, flats to the west, industrial/large retail buildings to the south, and a health centre and parking to the north.

| | |
|-------------------------|----------------|
| REFERENCE | CL1244 |
| NATIONAL GRID REFERENCE | 481546, 389610 |
| SITE AREA (ha) | 0.81 ha |
| INTERNAL DRAINAGE BOARD | NA |

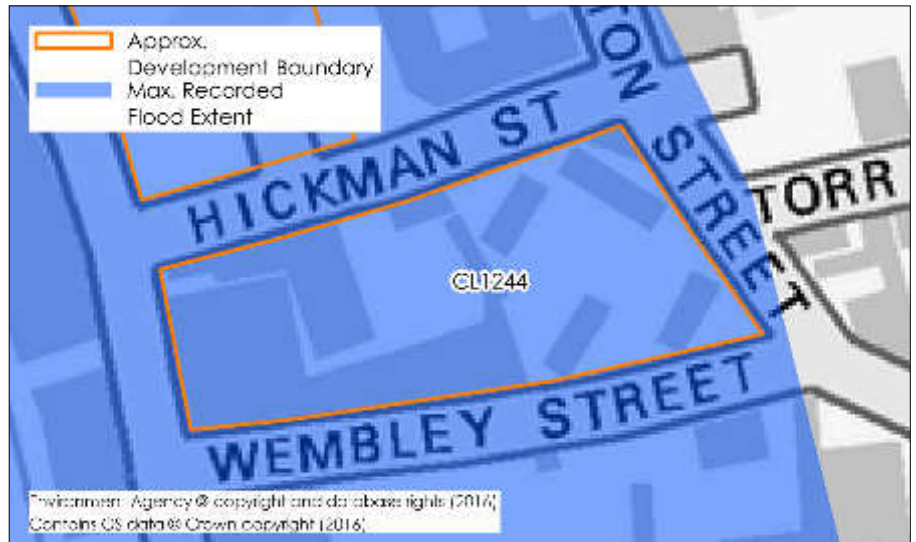
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Gainsborough |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 34 |

FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

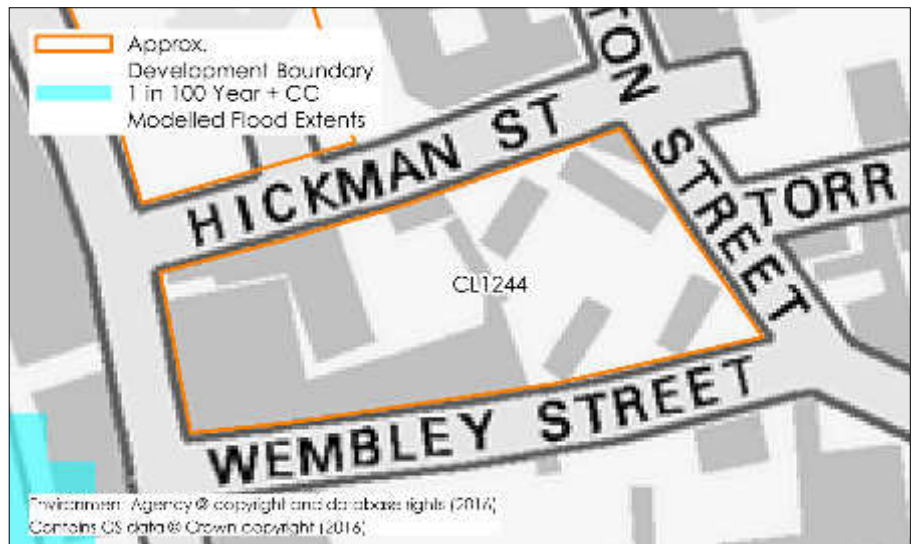
Historical flooding information provided by the Environment Agency indicates that the site has been subjected to flooding in March 1947.



MODELLED FLUVIAL RISKS

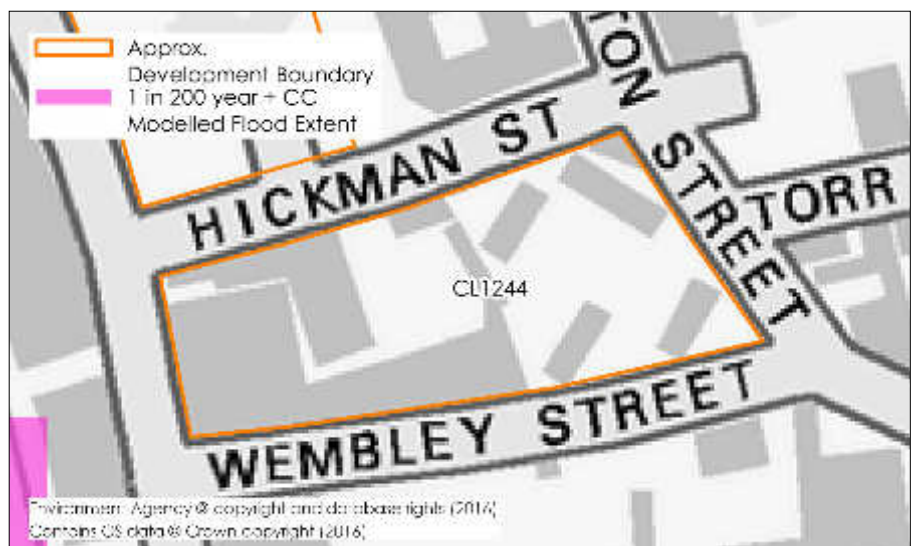
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.

However the EA flood maps for planning do indicate that the entire site is located within Flood Zone 3, land assessed as having a high risk of flooding.



MODELLED TIDAL RISKS

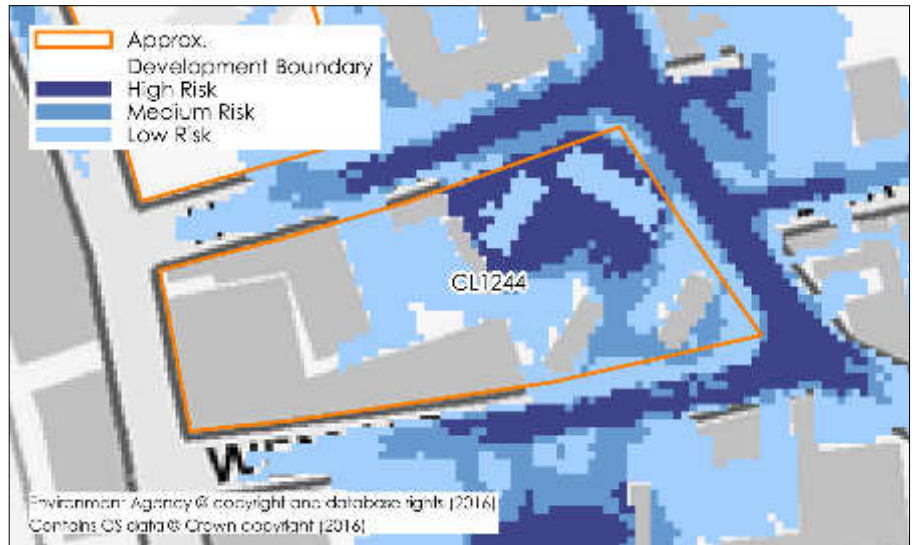
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be up to 60cm with a velocity of 0.25m/s.

In addition, there is evidence of a high risk flow path around and partly through the site from east to west.



OTHER SOURCES OF FLOOD RISK

Breaching of Flood Defences

The River Trent has a number of defences associated with it, which are actively maintained by the Environment Agency. There is generally a low probability that these could fail, however the consequences of such failure could be significant.

The information made available by the Environment Agency for this investigation does not provide sufficient data to report on this risk. However, the Environment Agency's hydraulic flood model would allow for this analysis to be undertaken, and the advice of a flood risk specialist should be sought when preparing a planning application for the site.

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

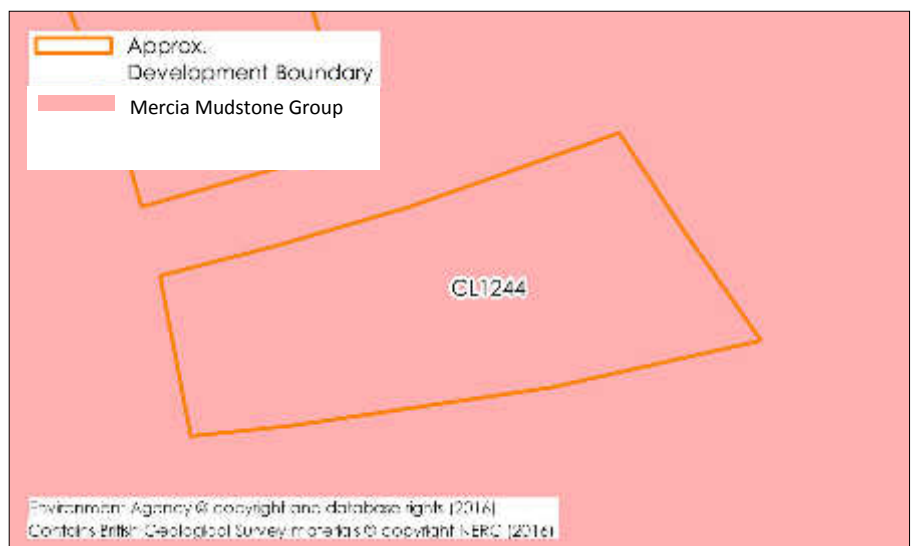
The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.

The site is located on an aquifer categorised as Secondary B, which are predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering.

Groundwater flooding is not expected to be a future issue at the site due to the limiting permeability of the bedrock layers.



SUMMARY OF FLOOD RISK

- 100% of the site is shown to be within Flood Zones 2 and 3.
- The site has previously been subjected to flooding in March 1947.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to 60cm deep flooding with a velocity of 0.25m/s in the high surface water flood risk area.
- Soakaways might not be acceptable for the disposal of surface water.
- Groundwater flooding is not expected to occur at the site due to the indicated properties of the underlying geology.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Raise land levels to provide development platform above residual flood level on site with corresponding loss of floodplain mitigation.
- Raise finished floor levels to residual flood level on site and provide flood resilient construction 300mm above residual flood level.
- Raise finished floor levels 300mm above surface water flood level on site.
- Construct minimum two storey houses with no habitable accommodation on the ground floor.
- Construct flats/apartments above commercial development.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.
- Raise finished floor levels 300mm above existing ground level.

LIMITATIONS

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West of Primrose Street, Gainsborough

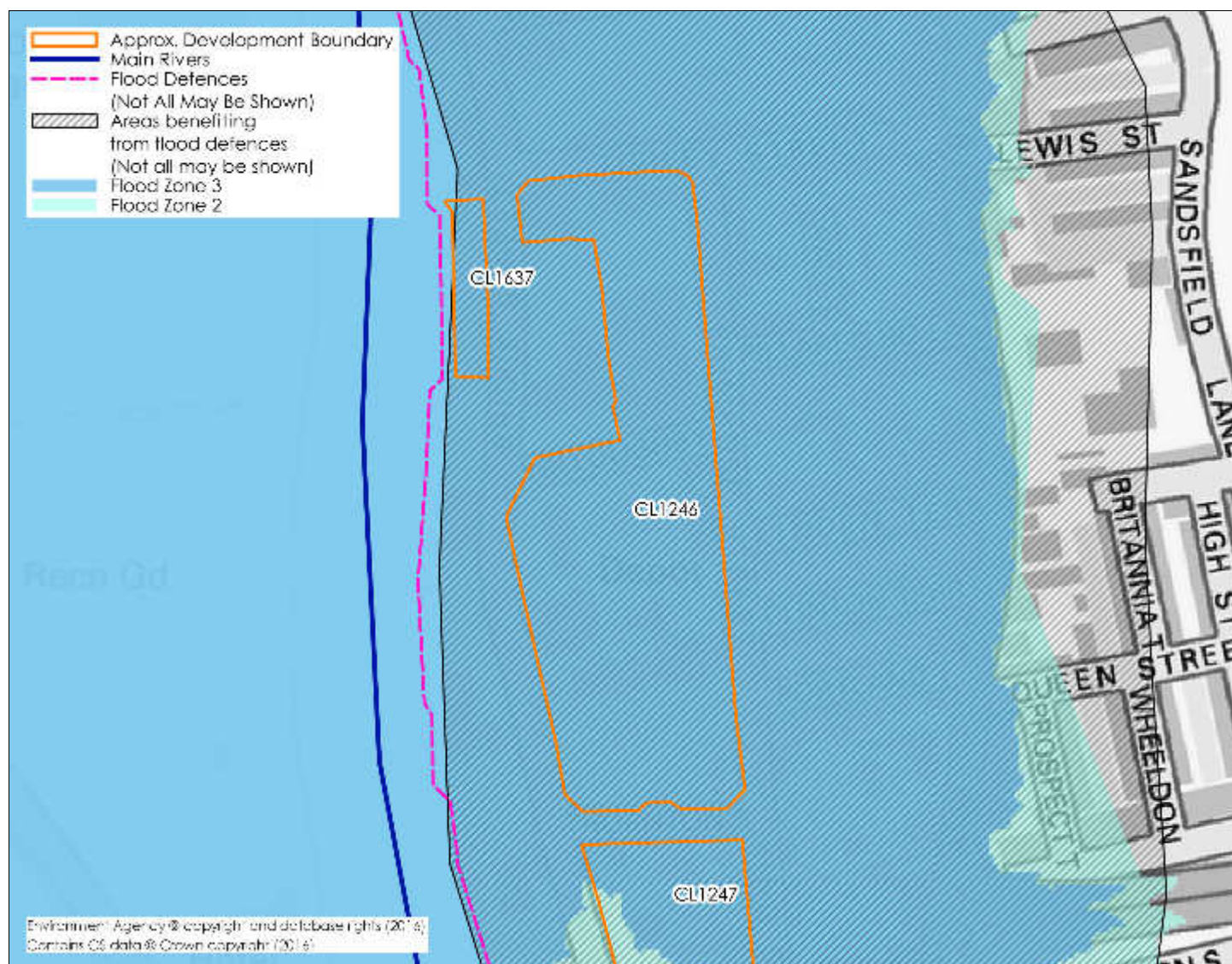
SITE DESCRIPTION

This flat site is predominantly within an area of development with industrial/commercial uses with some residential terraces at northern edge. It also has a large yard/parking area to the south of Willoughby Street.

| | |
|-------------------------|----------------|
| REFERENCE | CL1246 |
| NATIONAL GRID REFERENCE | 481547, 389329 |
| SITE AREA (ha) | 2.22 ha |
| INTERNAL DRAINAGE BOARD | NA |

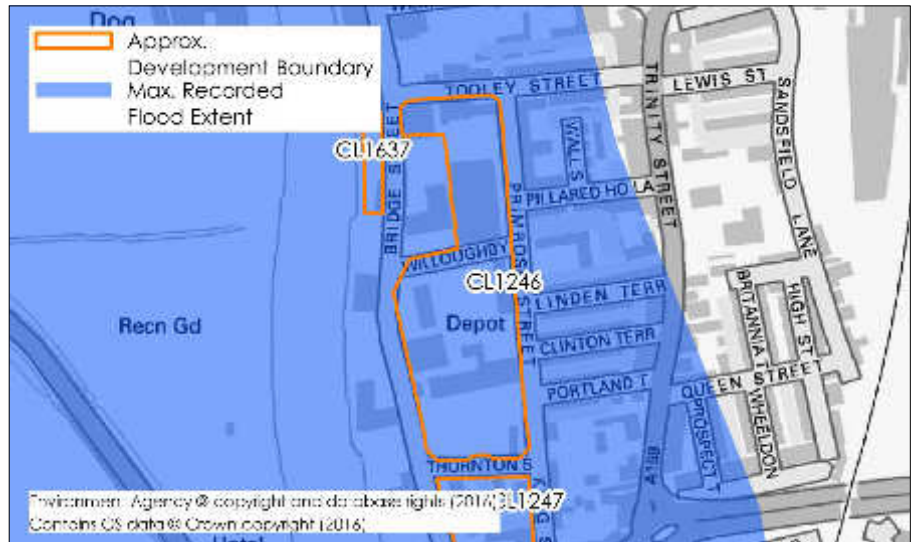
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Gainsborough |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 83 |

FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

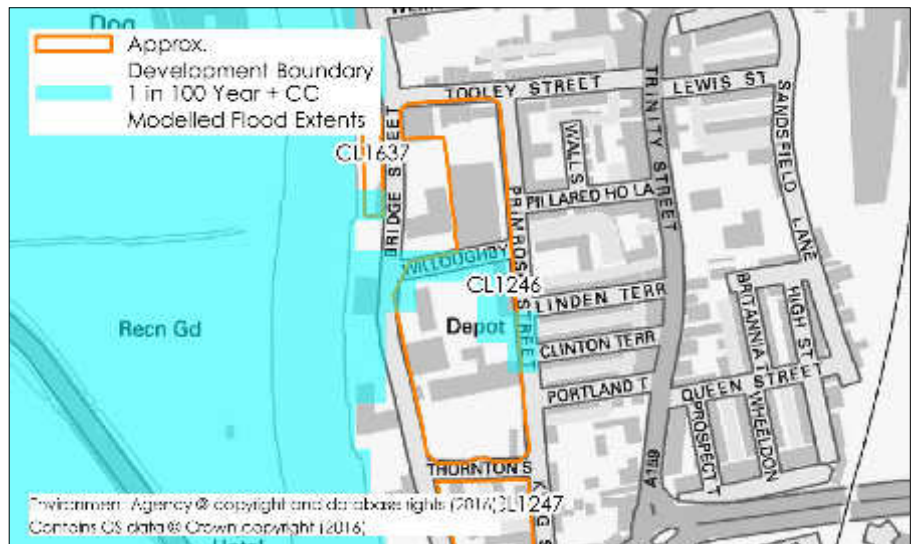
Historical flooding information provided by the Environment Agency indicates that the site has been subjected to flooding in March 1947 before any defences were present along the River Trent past Gainsborough.



MODELLED FLUVIAL RISKS

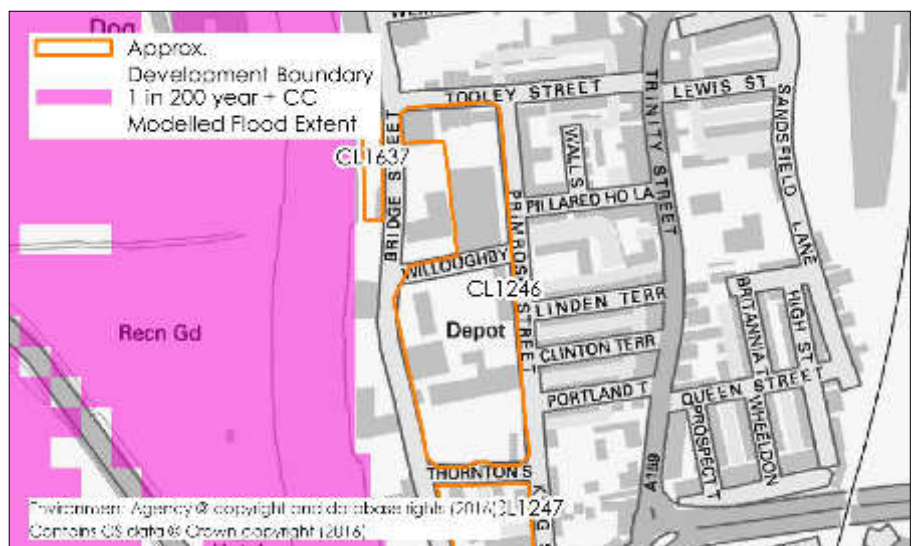
Modelled flood information provided by the Environment Agency indicates that the 1 in 100 year + CC fluvial flood level on the site is approximately 5.53m AOD and the depth of flooding is approximately 0.7m.

The site is designated by EA flood maps for planning to be located entirely within Flood Zone 3, land assessed as having a high risk of flooding.



MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be up to 60cm with a velocity of less than 0.5m/s.

In addition, there is evidence of a high risk flow path along the eastern edge of the site from North to South.



OTHER SOURCES OF FLOOD RISK

Breaching of Flood Defences

The River Trent has a number of defences associated with it, which are actively maintained by the Environment Agency. There is generally a low probability that these could fail, however the consequences of such failure could be significant.

The information made available by the Environment Agency for this investigation does not provide sufficient data to report on this risk. However, the Environment Agency's hydraulic flood model would allow for this analysis to be undertaken, and the advice of a flood risk specialist should be sought when preparing a planning application for the site.

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

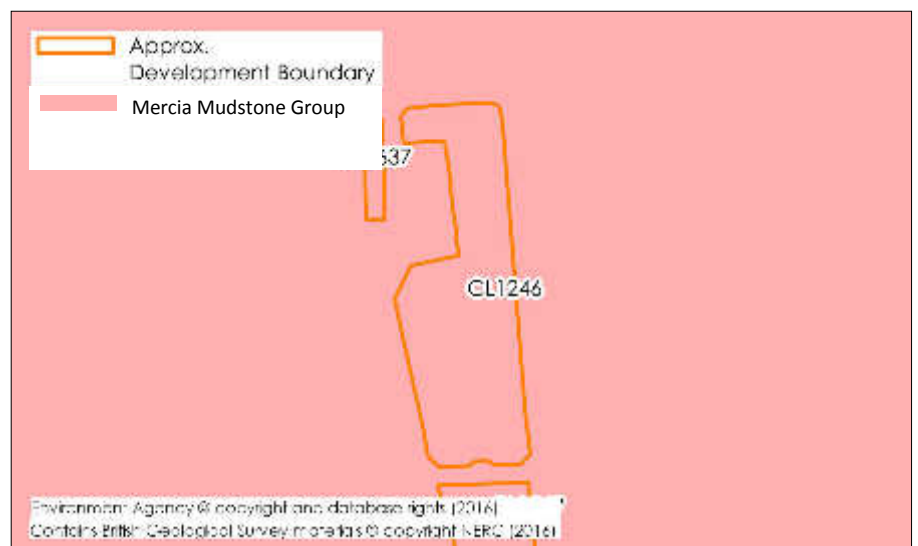
The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.

The site is located on an aquifer categorised as Secondary B, which are predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering.

Groundwater flooding is not expected to be a future issue at the site due to the limiting permeability of the bedrock layers.



SUMMARY OF FLOOD RISK

- 100% of the site is shown to be within Flood Zones 2 and 3.
- The site has previously been subjected to flooding in March 1947.
- The 1 in 100 year + CC fluvial flood level on the site is 5.53m AOD.
- The 1 in 100 year + CC fluvial flood depth on the site is 70cm.
- The site is not subject to tidal flooding.
- The site is subject to 60cm deep flooding with a velocity of less than 0.5m/s in the high surface water flood risk area.
- Soakaways might not be acceptable for the disposal of surface water.
- Groundwater flooding is not expected to occur at the site due to the indicated properties of the underlying geology.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Locate all development out of the 1 in 100 + CC flood risk portion of the site.
- Raise land levels to provide development platform above flood level on site with corresponding loss of floodplain mitigation.
- Raise finished floor levels to fluvial flood level on site and provide flood resilient construction 300mm above fluvial flood level.
- Raise finished floor levels 300mm above fluvial flood level on site.
- Raise finished floor levels 300mm above surface water flood level on site and provide flood resilient construction 300mm above surface water flood level.
- Construct minimum two storey houses with no habitable accommodation on the ground floor.
- Construct flats/apartments above commercial development.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

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Site at Thornton St, land enclosed between Thornton St, Bridge St, King St and Bridge Rd, Gainsborough

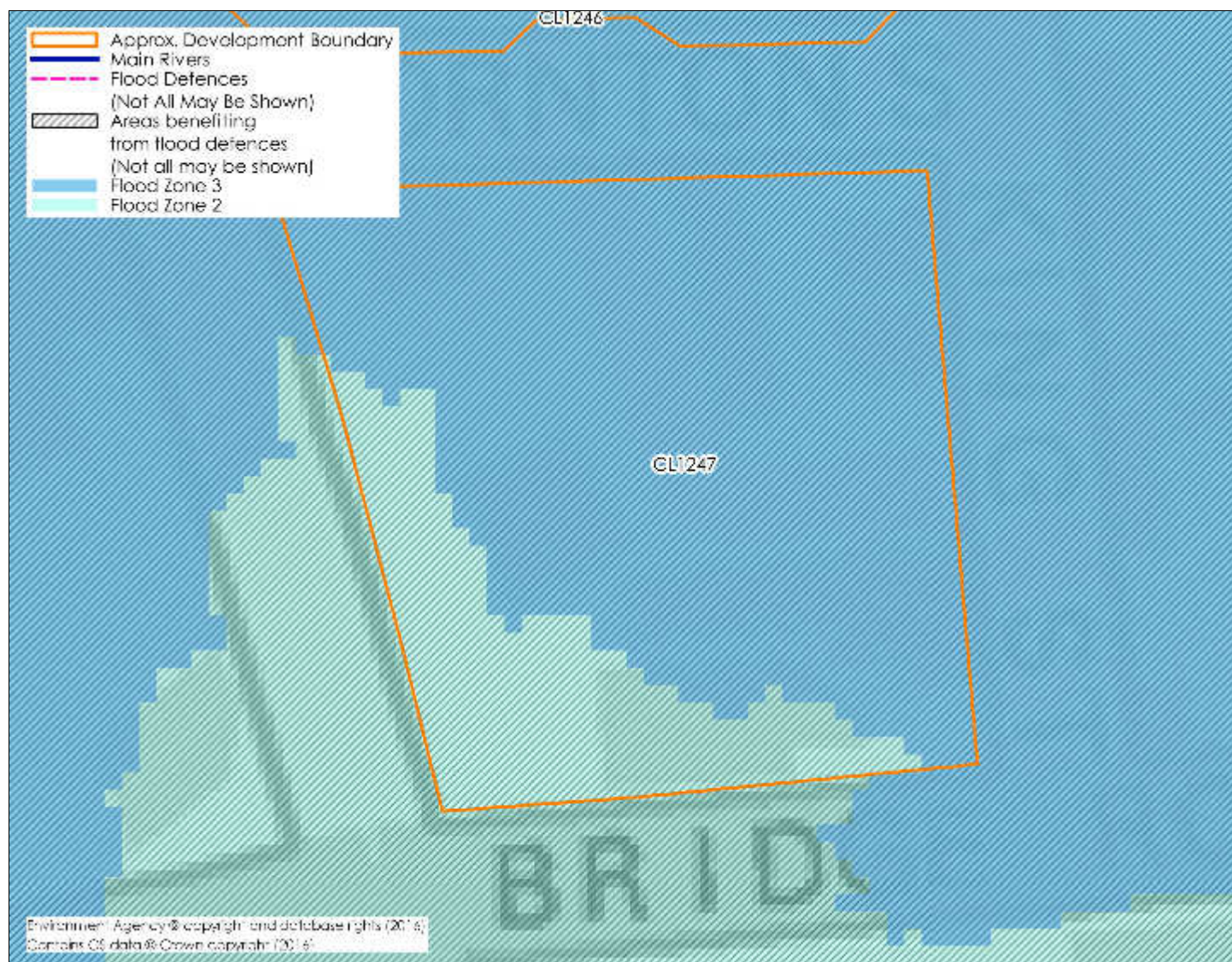
SITE DESCRIPTION

This flat site includes a small industrial estate, petrol station, car sales site, housing and sewage pumping station. The site is predominately surrounded by residential uses, with a social club to the west and industrial warehousing to the north. The site is bound by Bridge Street to the east and by The Flood Road to the south (A631).

| | |
|-------------------------|----------------|
| REFERENCE | CL1247 |
| NATIONAL GRID REFERENCE | 481566, 389146 |
| SITE AREA (ha) | 0.58 ha |
| INTERNAL DRAINAGE BOARD | NA |

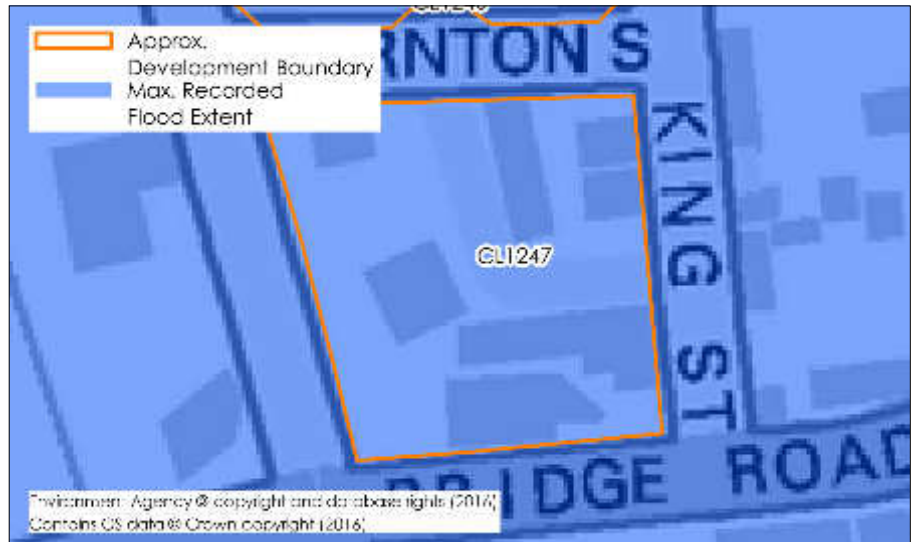
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Gainsborough |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 25 |

FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

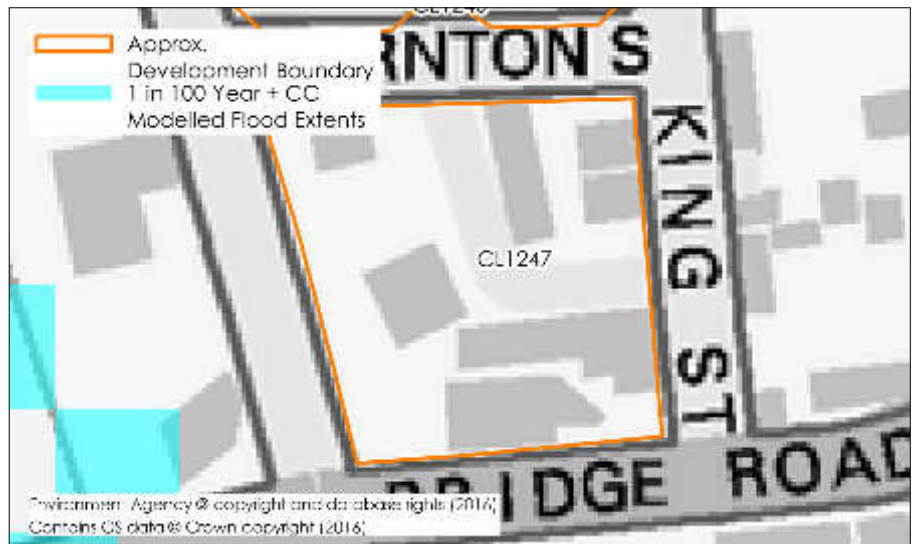
Historical flooding information provided by the Environment Agency indicates that the site has been subjected to flooding in March 1947.



MODELLED FLUVIAL RISKS

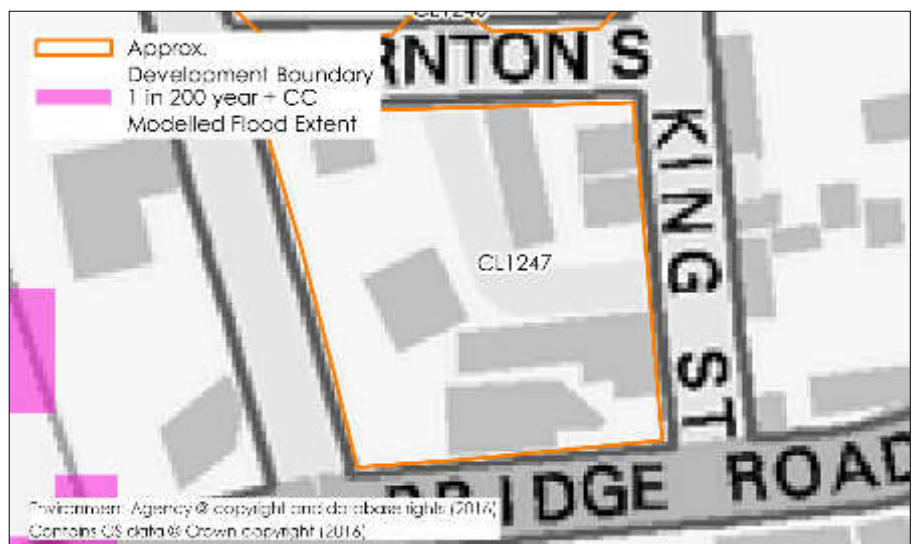
The majority of the site is shown to be located in Flood Zone 3, with a small portion of the site identified as being in Flood Zone 2. These flood zones are defined as posing a high and medium risk of flooding, respectively.

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



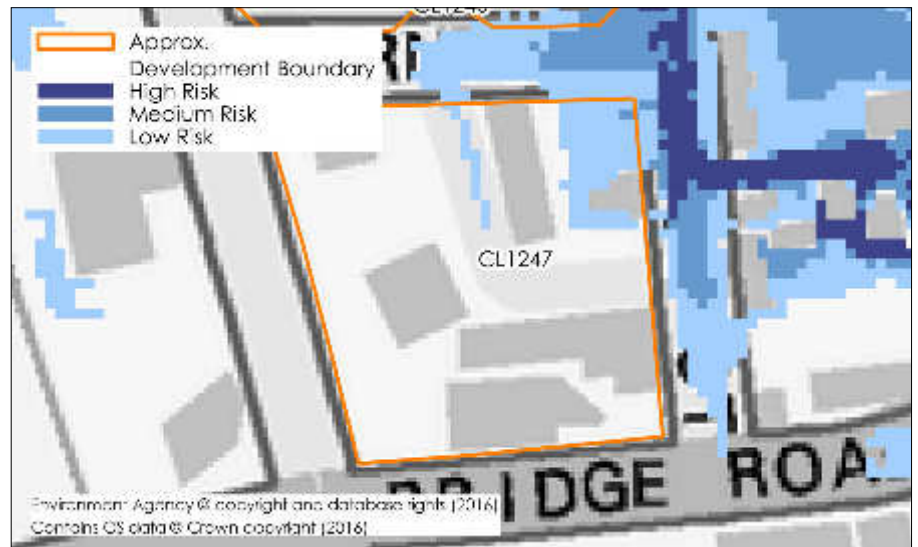
MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to high or medium risk of surface water flooding.



OTHER SOURCES OF FLOOD RISK

Breaching of Flood Defences

To the west, the River Trent has defences in the vicinity of the site, which are expected to be actively maintained by the Environment Agency. These are shown to have a design standard of 100 years and there is generally a low probability that these could fail, however the consequences of such failure could be significant.

The information made available by the Environment Agency for this investigation does not provide sufficient data to report on this risk. However, the Environment Agency's hydraulic flood model would allow for this analysis to be undertaken, and the advice of a flood risk specialist should be sought when preparing a planning application for the site.

Reservoir Flooding

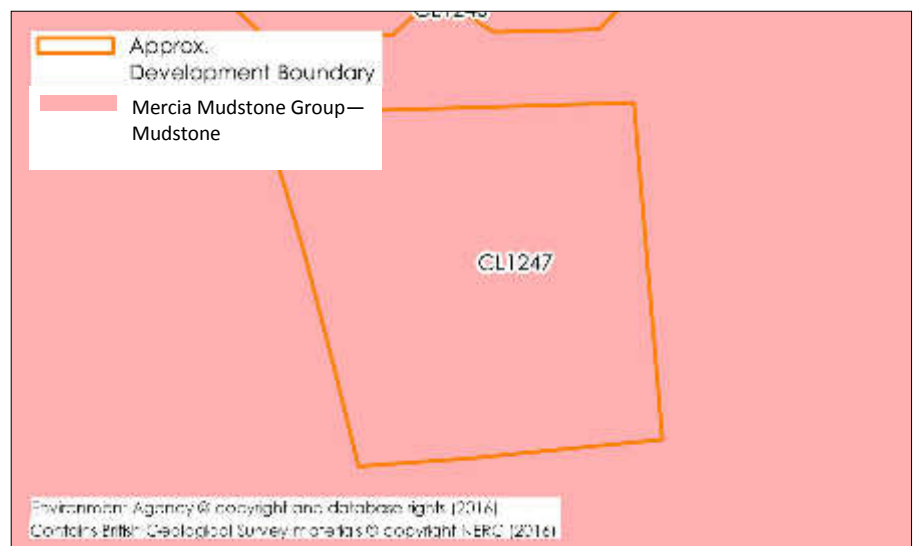
The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The entirety of the site is shown to be within Flood Zones 2 and 3.
- The site has previously been subjected to flooding in 1947.
- The site is not subject to fluvial flooding up to the 1 in 100 year + CC event.
- The site is not subject to tidal flooding up to the 1 in 200 year + CC event.
- The site is not subjected to high or medium risk of surface water flooding.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Providing suitable mitigation of the site will depend on the type of development proposed.
- Future development should ideally maintain the existing development footprint at the site.
- Finished floor levels should be adequately raised above modelled flood levels.
- Where buildings are constructed in Flood Zone 3, it may be necessary to provide appropriate loss of floodplain mitigation.
- Provide sustainable drainage solutions to surface water disposal.

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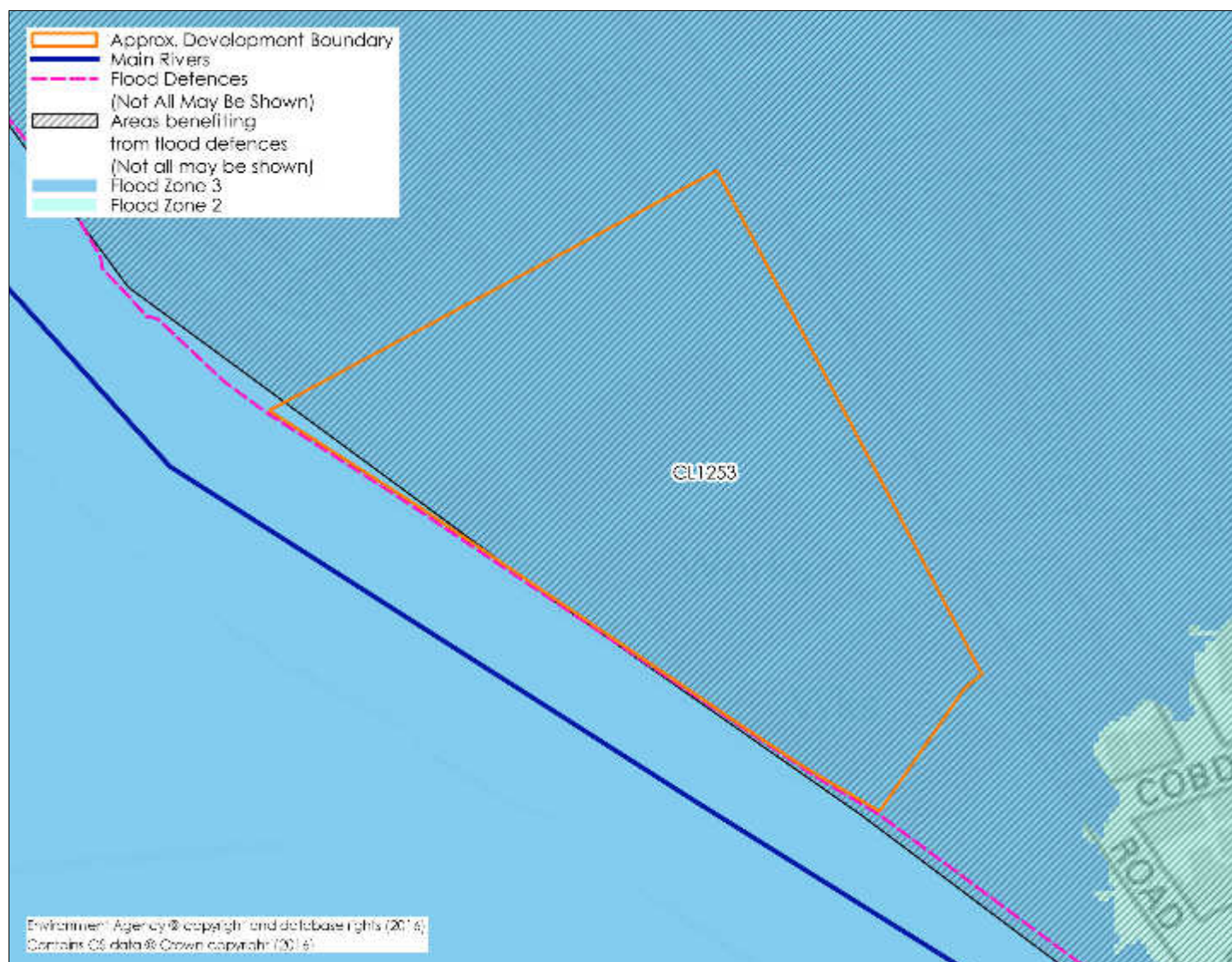
SITE DESCRIPTION

This flat industrial site includes large warehouses with open storage and parking and an office building at the east of the site. To the north and east of the site there are residential areas. To the south is a supermarket and to the west is the River Trent, flowing in a northerly direction.

| | |
|-------------------------|----------------|
| REFERENCE | CL1253 |
| NATIONAL GRID REFERENCE | 481102, 390065 |
| SITE AREA (ha) | 3.03 ha |
| INTERNAL DRAINAGE BOARD | NA |

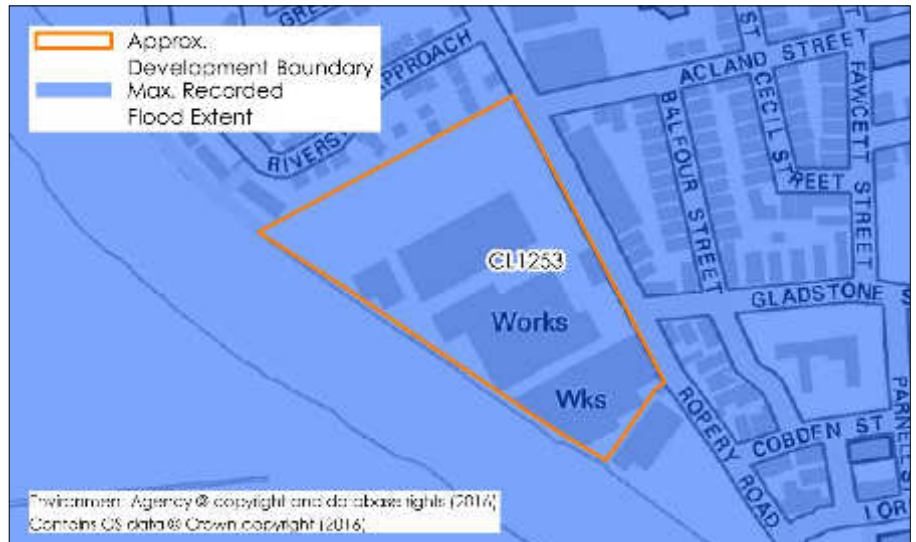
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Gainsborough |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 114 |

FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

Historical flooding information provided by the Environment Agency indicates that the site has been subjected to flooding in 1947, with flood waters emanating from the River Trent.



MODELLED FLUVIAL RISKS

Environment Agency Flood Zone mapping, included on the previous page, shows the site to be wholly located in Flood Zone 3, land identified to be at high risk of fluvial flooding. However, the site is shown to be in an Area Benefitting from Defences.

Modelled flood information provided by the Environment Agency indicates that the 1 in 100 year + CC fluvial flood extent encroaches on the western site boundary, which runs parallel with the River Trent.



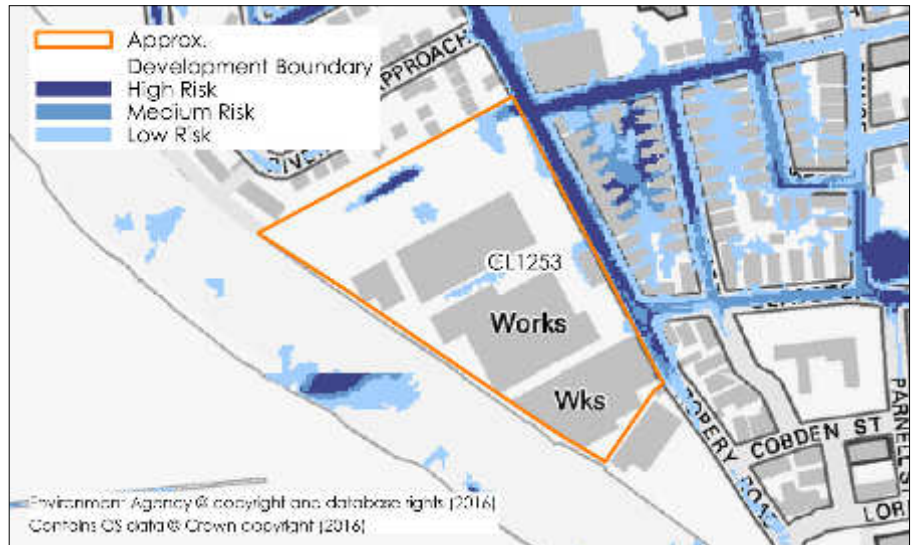
MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the 1 in 200 year + CC tidal flood extent could also encroach on the western site boundary.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that there is a small portion of high pluvial flood risk in the northern portion of the site. It is expected that this correlates with a local topographical depression, and the re-profiling of ground levels would help overcome this. The majority of the site is not identified to be at medium to high pluvial flood risk.



OTHER SOURCES OF FLOOD RISK

Breaching of Flood Defences

The River Trent to the west of the site has defences along its length in the vicinity of the site, and it is expected that these are actively maintained by the Environment Agency. There is generally a low probability that these could fail, however the consequences of such failure could be significant.

The information made available by the Environment Agency for this investigation does not provide sufficient data to report on this risk. However, the Environment Agency's hydraulic flood model would allow for this analysis to be undertaken, and the advice of a flood risk specialist should be sought when preparing a planning application for the site.

Reservoir Flooding

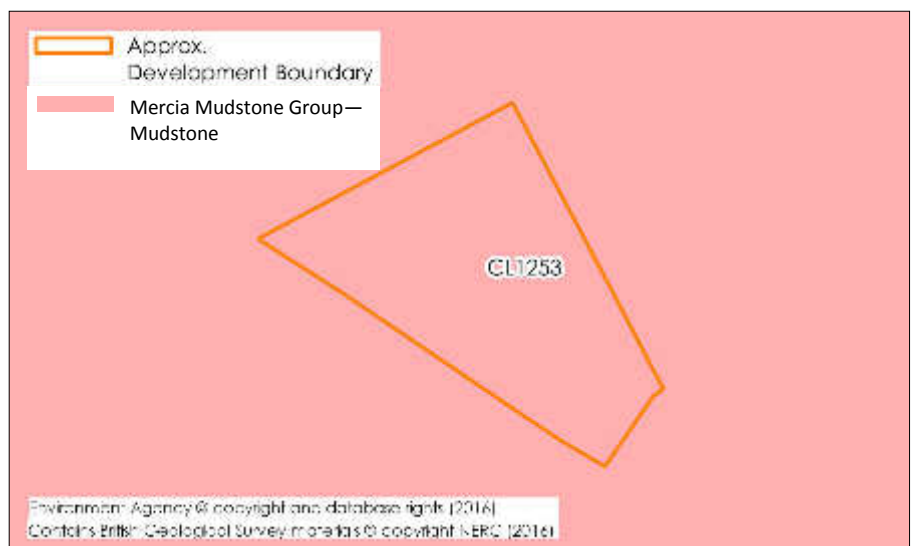
The site is shown to be within the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly located in Flood Zone 3, however it is identified to fall within an Area Benefitting from Defences.
- The site has previously been subjected to flooding in 1947.
- The western site boundary is identified to be at risk of fluvial flooding during the in 100 year + CC event.
- The western site boundary is identified to be at risk of tidal flooding during the in 200 year + CC event.
- An isolated portion of the site is identified to be at high pluvial flood risk, however the majority is not identified to be at risk of pluvial flooding.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Providing suitable mitigation of the site will depend on the type of development proposed but, irrespective of this, is likely to be difficult given the Flood Zone 3 classification of the land.
- Future development should ideally maintain the existing development footprint at the site.
- Finished floor levels should be adequately raised above modelled flood levels.
- Where buildings are constructed in Flood Zone 3, it may be necessary to provide appropriate loss of floodplain mitigation.
- Provide sustainable drainage solutions to surface water disposal.

LIMITATIONS

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Land at Church Lane, Keelby, Lincs

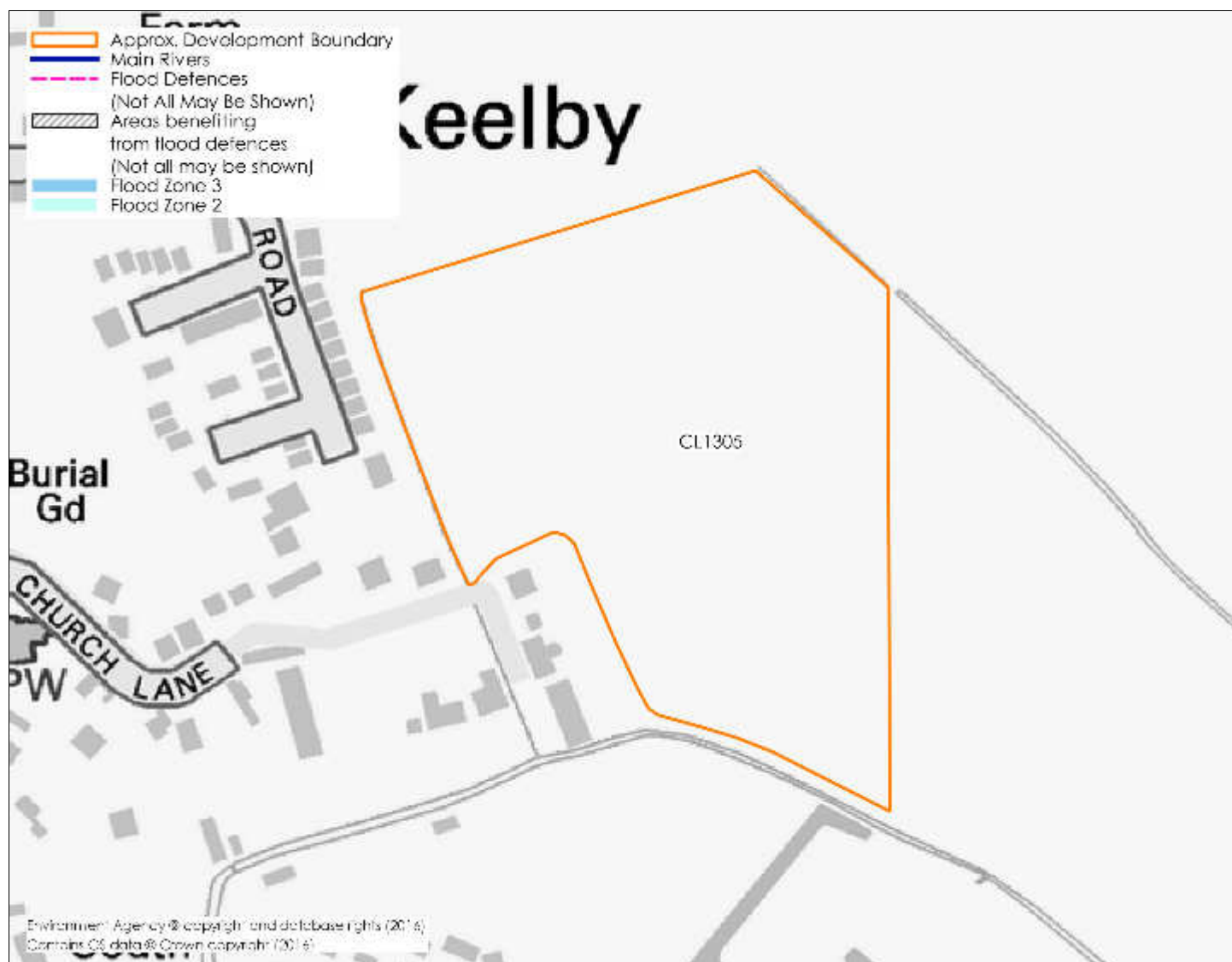
SITE DESCRIPTION

This site is part of larger arable field, it is fairly flat and a footpath crosses it. The Caddle Beck forms the southern boundary, a drain forms the north east boundary and a hedge the north boundary. The eastern boundary runs through a field but no indication of a natural barrier is present. There are arable fields to the east, fields and a sewage treatment works to the south, fields to the north and a housing estate to the west.

| | |
|-------------------------|----------------|
| REFERENCE | CL1305 |
| NATIONAL GRID REFERENCE | 516805, 410035 |
| SITE AREA (ha) | 4.45 ha |
| INTERNAL DRAINAGE BOARD | NE Lindsey |

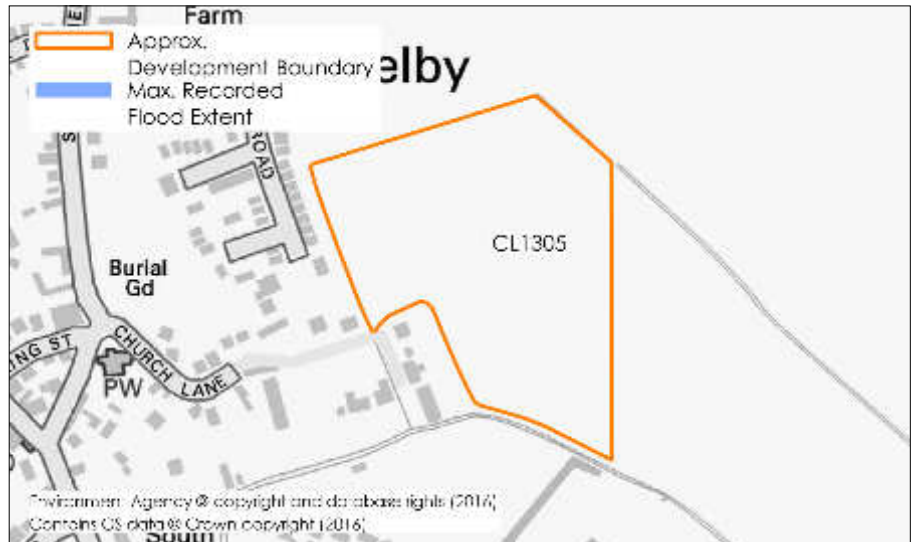
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Keelby |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 100 |

FLOOD MAP FOR PLANNING



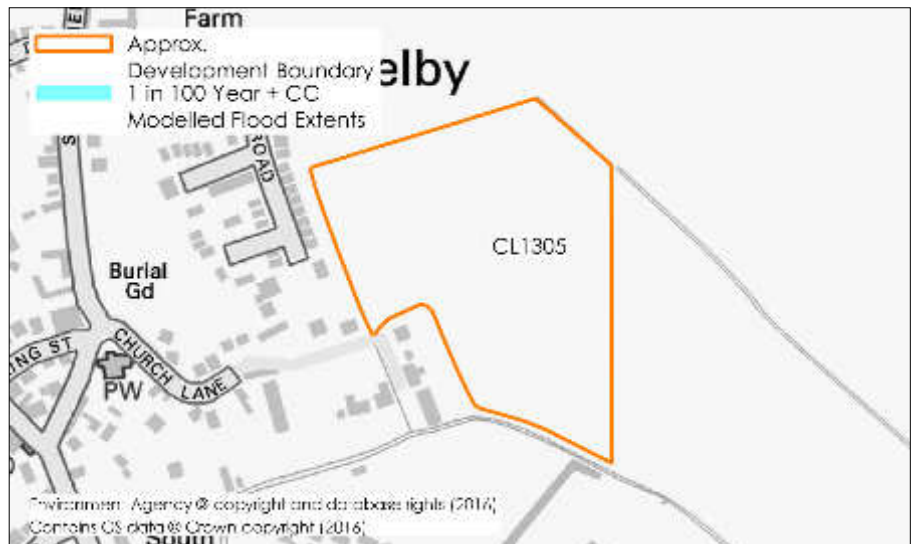
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



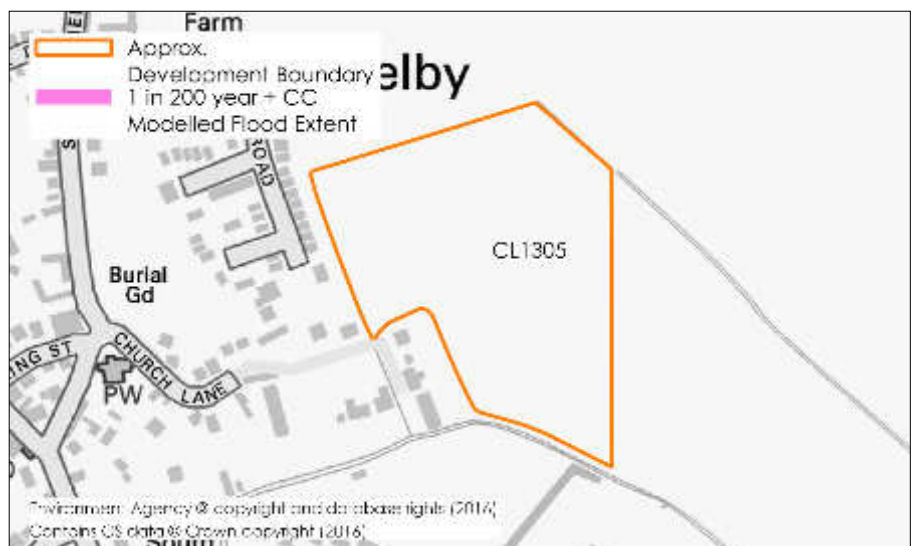
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

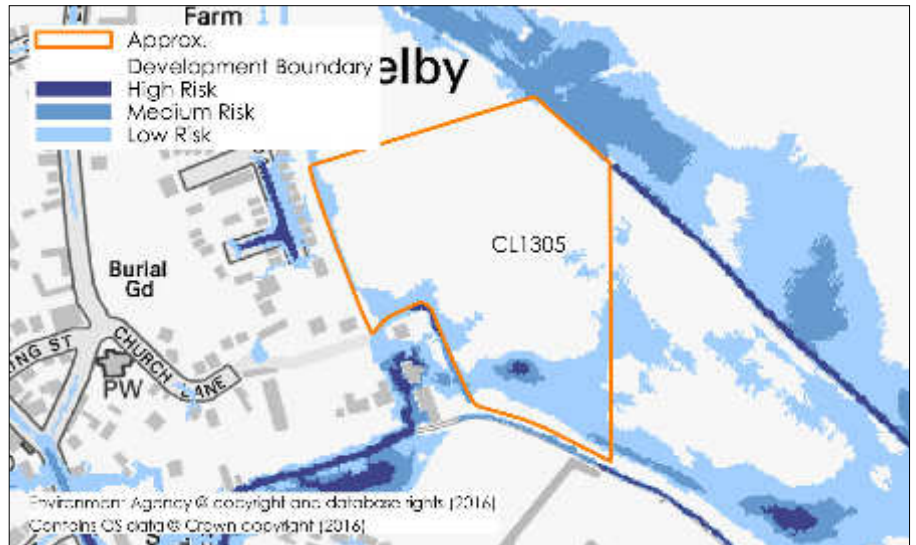
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be 30cm deep with a velocity of less than 0.25 meters per second.

In addition, there is evidence of a low risk flow path through the site from the west to east.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

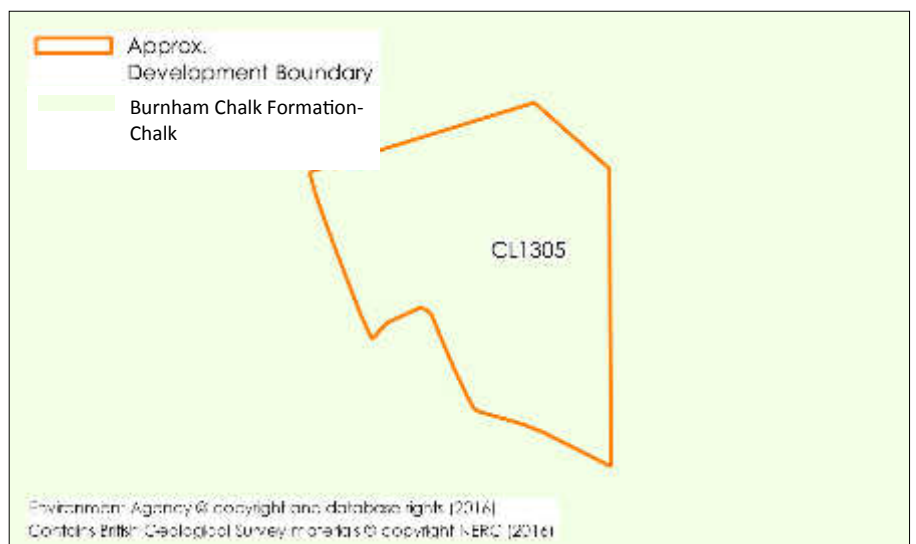
The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water.

The site is situated on a principal aquifer. These are layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage.

Due to the volume of water potential stored in the bedrock under this site it can be expected that groundwater flooding could be a future source of flooding.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to 30cm deep flooding with a velocity of less than 0.25m/s in the high surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the nearest defences.
- Soakaways might be acceptable for the disposal of surface water.
- Ground water flooding may be a potential source of flood risk to development on the site due to the principal aquifer status of the bedrock under the site.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Locate the development out of the surface water affected portion of the site where possible.
- Raise finished floor levels 300mm above the surface water flood level on site and provide flood resilient construction 300mm above the flood level.
- Provide routes through development to maintain and improve flow paths for overland surface water runoff.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

LIMITATIONS

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Land off Trent Port Road, Marton

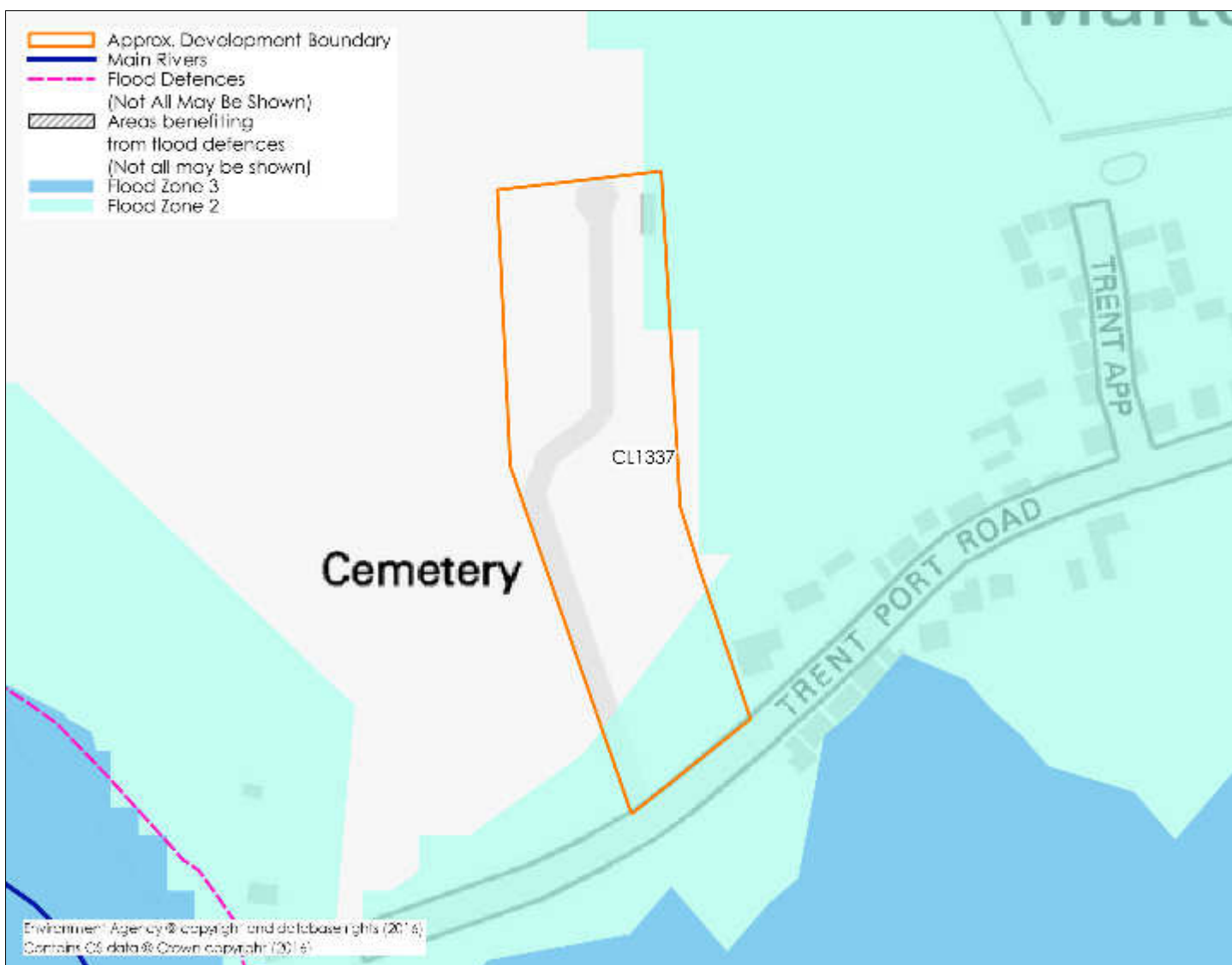
SITE DESCRIPTION

The site is on the south-western edge of Marton. It comprises a greenfield parcel of land. To the north and west, the site is bound by greenfield land. Much of the eastern site boundary is also greenfield, with the exception of a small existing development. To the south, the site is bound by Trent Port Road, beyond which there is undeveloped land.

| | |
|-------------------------|----------------|
| REFERENCE | CL1337 |
| NATIONAL GRID REFERENCE | 483591, 381756 |
| SITE AREA (ha) | 1.87 ha |
| INTERNAL DRAINAGE BOARD | NA |

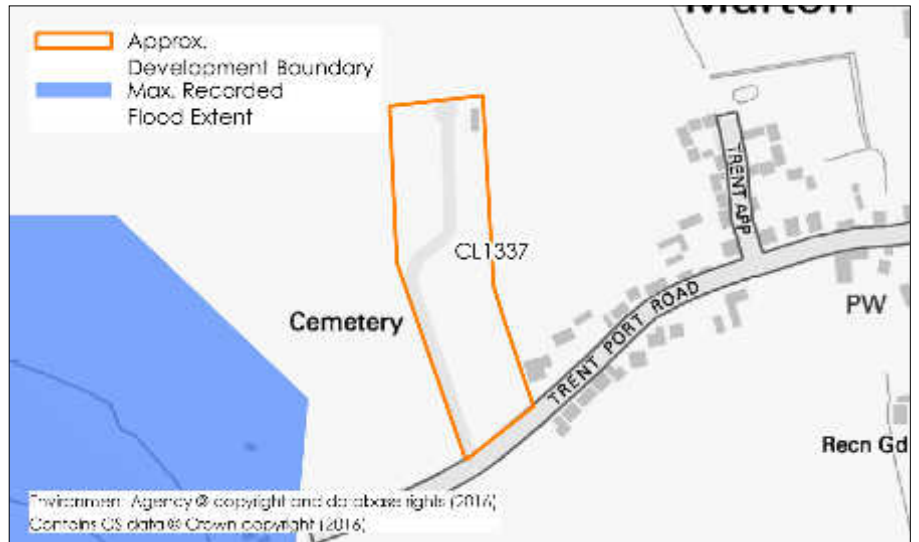
| | |
|---------------------|---------------------|
| LOCAL PLAN STATUS | Gypsy and Traveller |
| LOCATION | Marton |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | |

FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

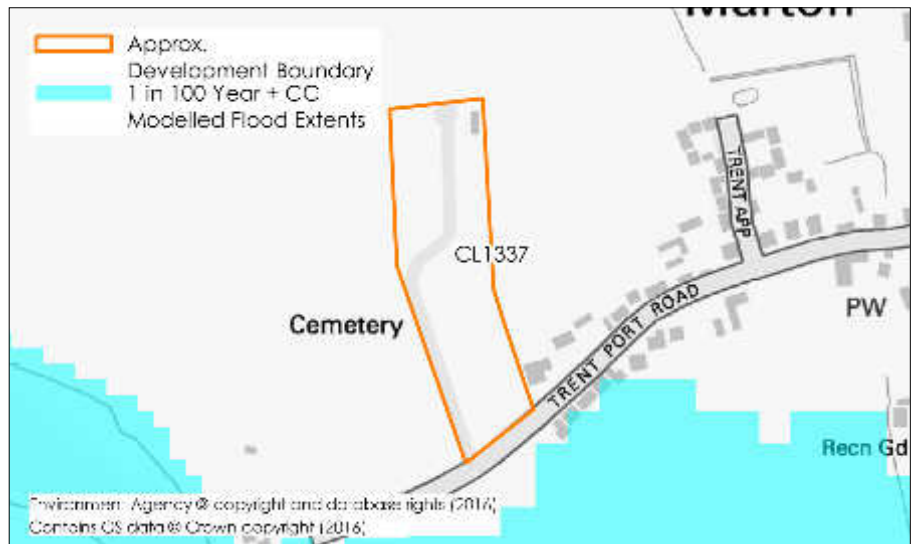
The Environment Agency do not have any records of the site previously being subjected to flooding. However, land to the west is shown to have been inundated by the March 1947, February 1977 and November 2000 events, with waters emanating from the River Trent.



MODELLED FLUVIAL RISKS

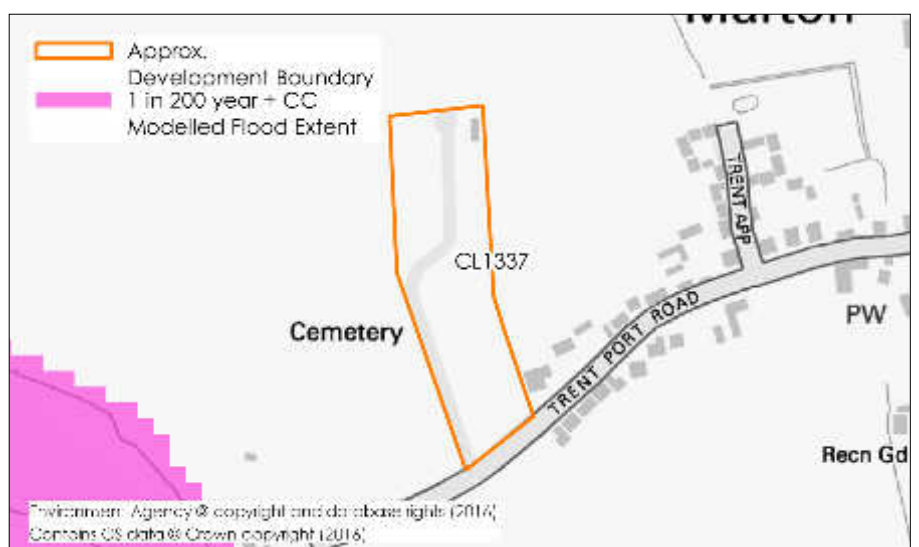
Environment Agency Flood Zone mapping, shown on the previous page, shows part of the site to protrude into Flood Zone 2, land considered to be at medium risk of flooding.

Modelled flood information provided by the Environment Agency indicates that the site removed from fluvial flooding for the 1 in 100 year + CC event.



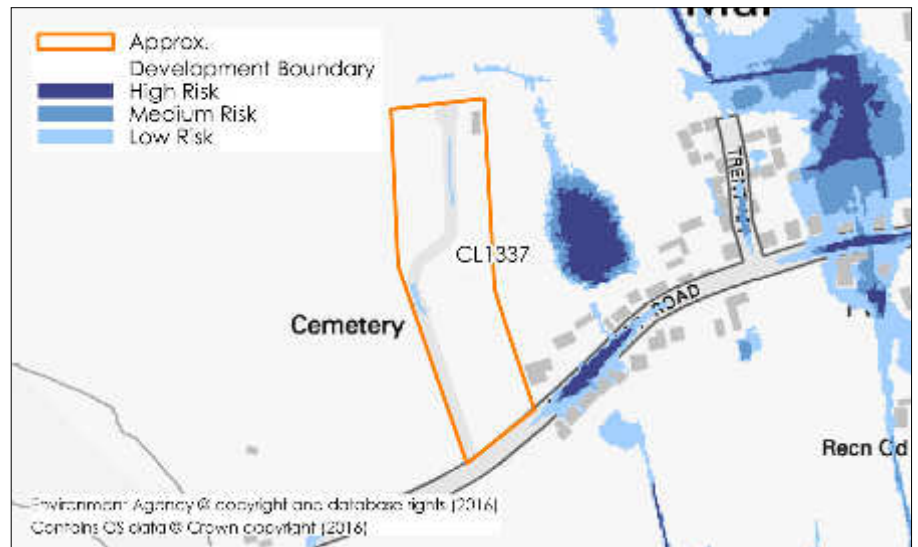
MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to high or medium risk of surface water flooding.



OTHER SOURCES OF FLOOD RISK

Breaching of Flood Defences

The River Trent has a number of defences associated with it, which are actively maintained by the Environment Agency. The Environment Agency suggest these defences have a design standard of 100 years, but further information is not available to report on this risk. There is generally a low probability that these could fail, however the consequences of such failure could be significant. The Environment Agency's hydraulic flood model would allow for this analysis to be undertaken, and the advice of a flood risk specialist should be sought when preparing a planning application for the site.

Reservoir Flooding

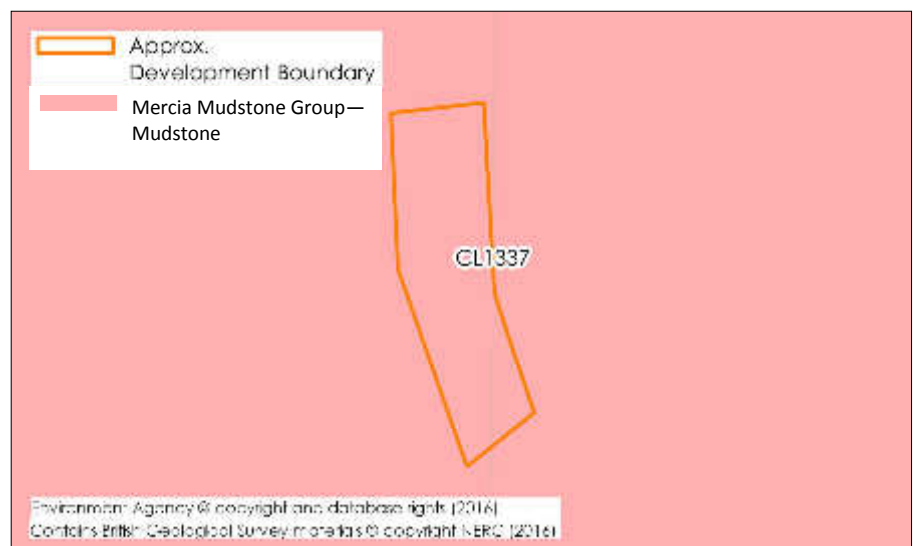
The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- Approximately 20% of the site is shown to be within Flood Zones 2 and 3.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding up to the 1 in 100 year + CC event.
- The site is not subject to tidal flooding up to the 1 in 200 year + CC event.
- The site is not subjected to high or medium risk of surface water flooding.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Locate all development in Flood Zone 1 portion of the site.
- Raise finished floor levels by 300mm above modelled flood levels.
- Provide sustainable drainage solutions to surface water disposal.

LIMITATIONS

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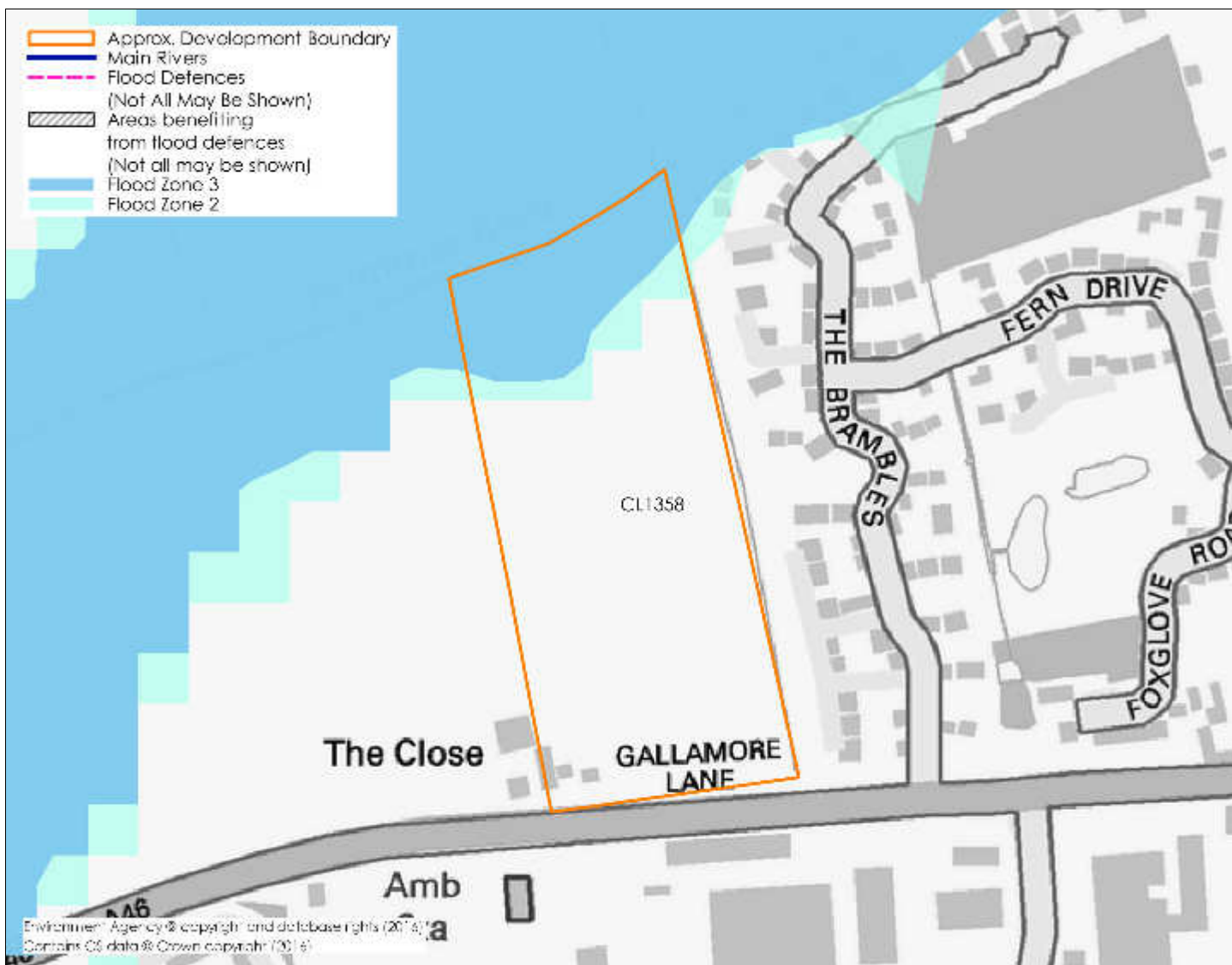
SITE DESCRIPTION

This site is a fairly flat field laid to grass with hedgerows and mature trees surround the site. A ditch runs alongside a hedge to the east, outside of the site. Pylons and cables cross the site from west to east. There are arable fields to the north and west, an industrial estate to the south and a modern housing estate to the east. The Brimmer Beck runs along the northern boundary of the site.

| | |
|-------------------------|----------------|
| REFERENCE | CL1358 |
| NATIONAL GRID REFERENCE | 510262, 389804 |
| SITE AREA (ha) | 3.41 ha |
| INTERNAL DRAINAGE BOARD | ANCHOLME |

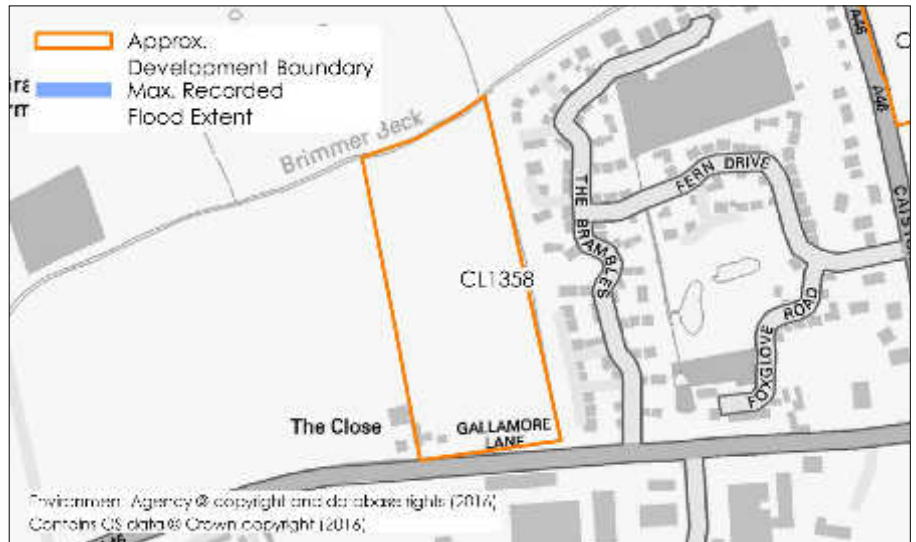
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Market Rasen |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 77 |

FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

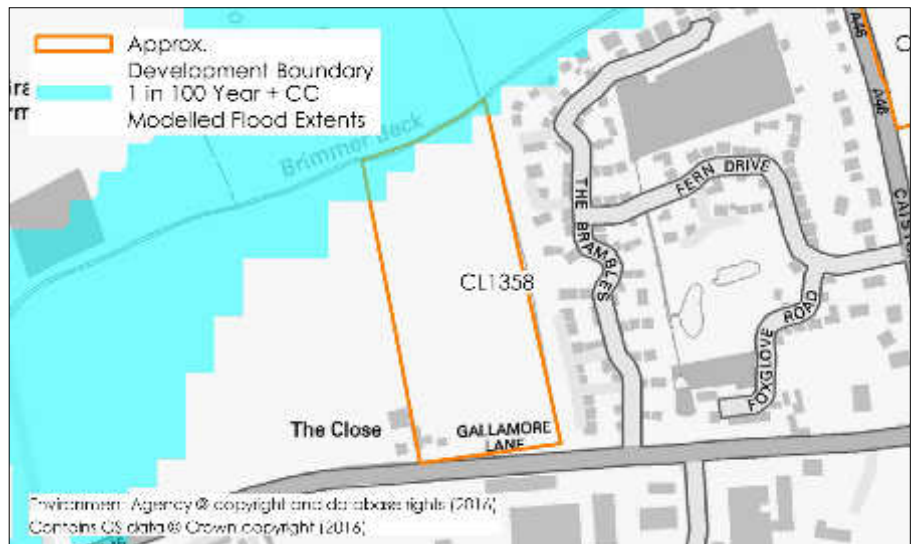
The Environment Agency do not have any records of the site previously being subjected to flooding.



MODELLED FLUVIAL RISKS

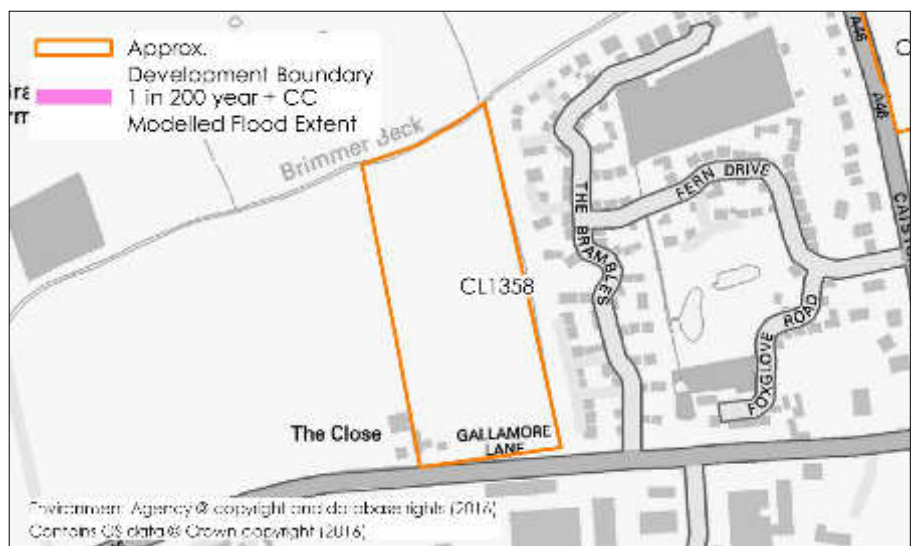
Modelled flood information provided by the Environment Agency indicates that the 1 in 100 year + CC fluvial flood event encroaches less than 10m on the northern boundary of the site. No flood depth was available for the event.

EA Flood Zones 2 and 3 can be found on the site and have a greater extent on the site than the 1 in 100 year + CC event. The EA Flood Zones 2 and 3 are areas assessed as having a medium to high risk of flooding respectively.



MODELLED TIDAL RISKS

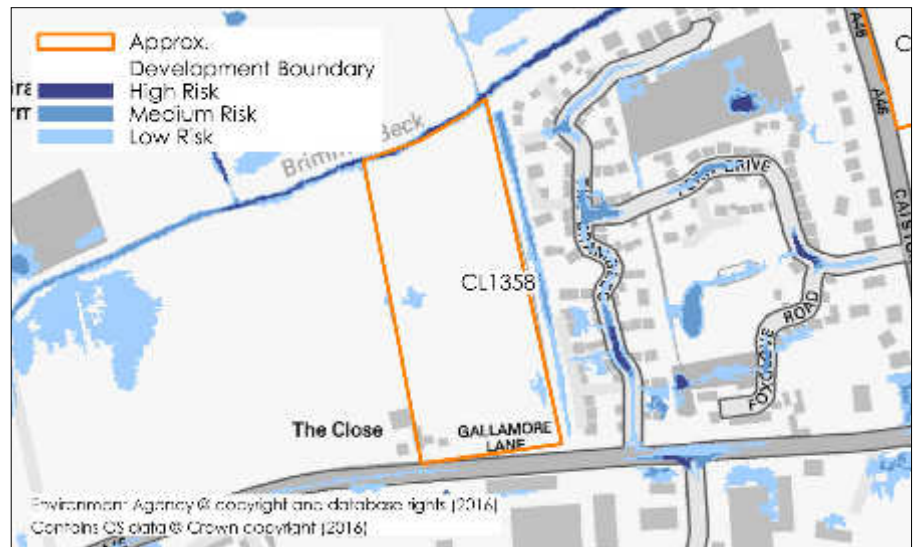
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that there is an area of low surface water flood risk with in the north west of the site.

There is no evidence of a surface water flow path through the site.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

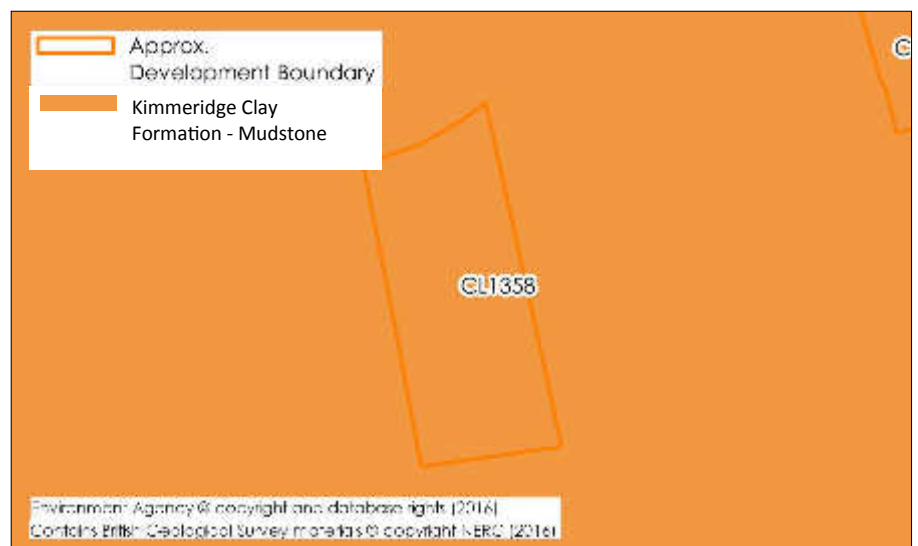
Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.

The low permeability of the mudstone and clay bedrock is unlikely to allow for future incidents of groundwater flooding.



SUMMARY OF FLOOD RISK

- Approximately 25% of the site is shown to be within Flood Zones 2 and 3.
- The site has not previously been subjected to flooding.
- The site is subject to a small extent of fluvial flooding but no depth information is available.
- The site is not subject to tidal flooding.
- Soakaways might not be acceptable for the disposal of surface water.
- Groundwater flooding is unlikely to be a problem to the site in the future due to the low permeability of the clay bedrock.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Locate all development in Flood Zone 1 portion of the site.
- Raise finished floor levels to 1 in 100 year + CC flood level on site and provide flood resilient construction 300mm above 1 in 100 year + CC flood level.
- Construct minimum two storey houses with no habitable accommodation on the ground floor if near the north end of the site.
- Utilise sequential arrangements to locate less vulnerable land uses (such as car parking) in the flood plain area.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.
- Raise finished floor levels 300mm above existing ground level.

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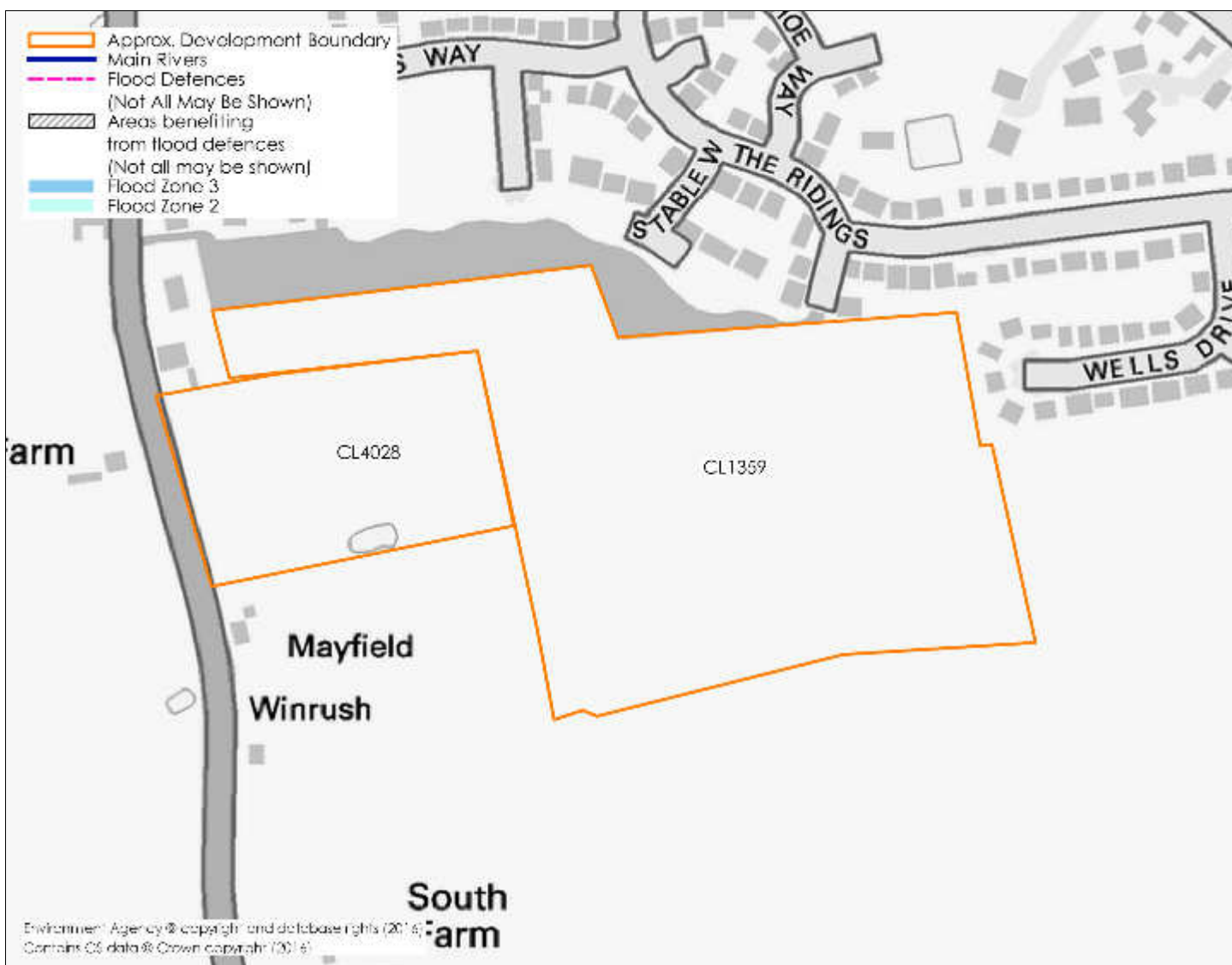
SITE DESCRIPTION

This is a fairly flat arable field, it is open to the north but hedges and trees form other boundaries. To the south are arable fields, to the west there are open fields, possibly used for pasture, to the north is a modern housing estate, and to the east are some houses and an arable field.

| | |
|-------------------------|----------------|
| REFERENCE | CL1359 |
| NATIONAL GRID REFERENCE | 511152, 388285 |
| SITE AREA (ha) | 5.91 ha |
| INTERNAL DRAINAGE BOARD | NA |

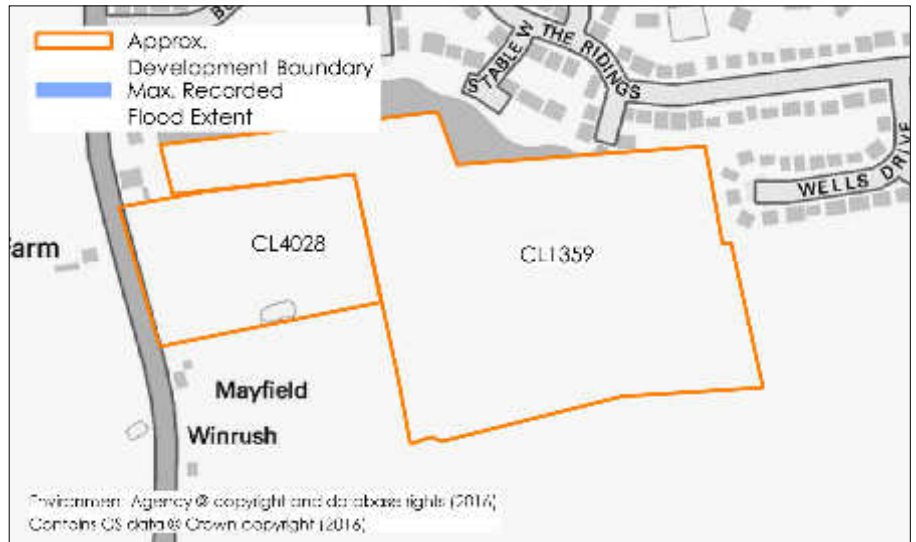
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Market Rasen |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 133 |

FLOOD MAP FOR PLANNING



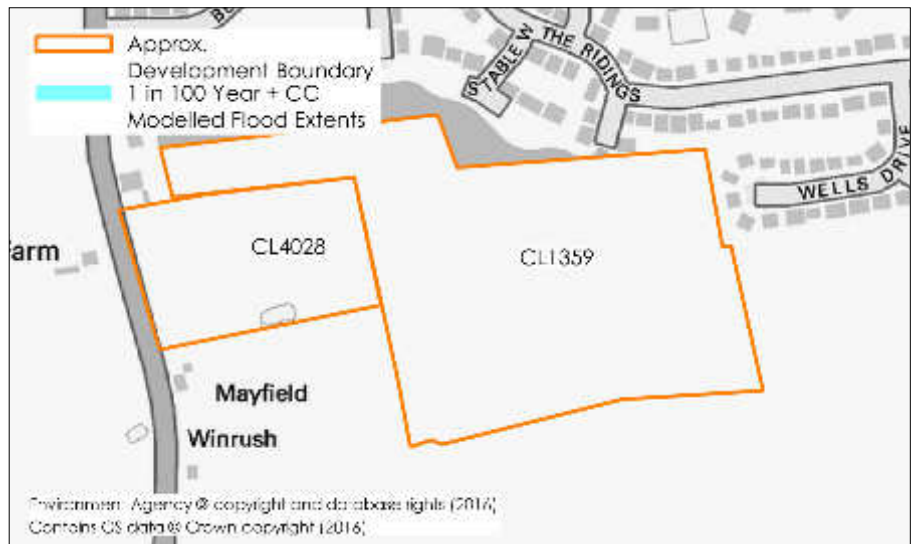
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



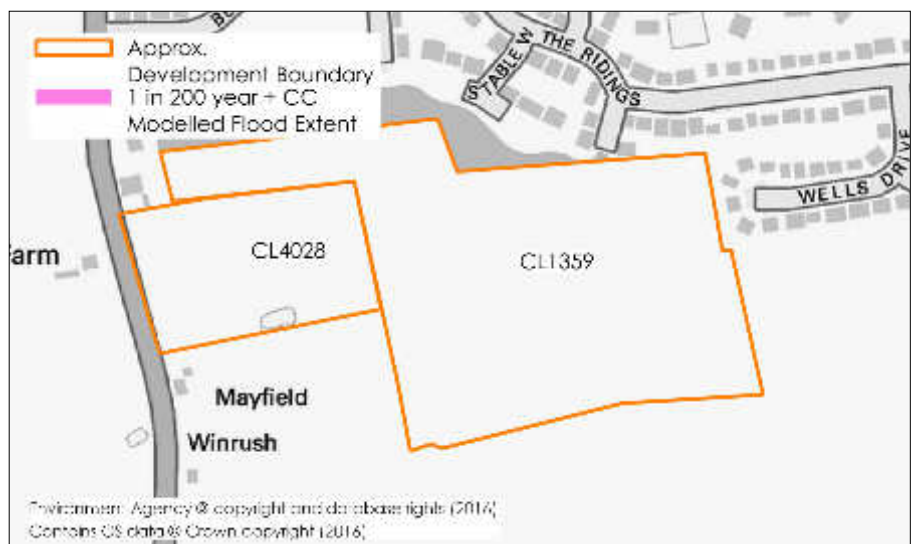
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.

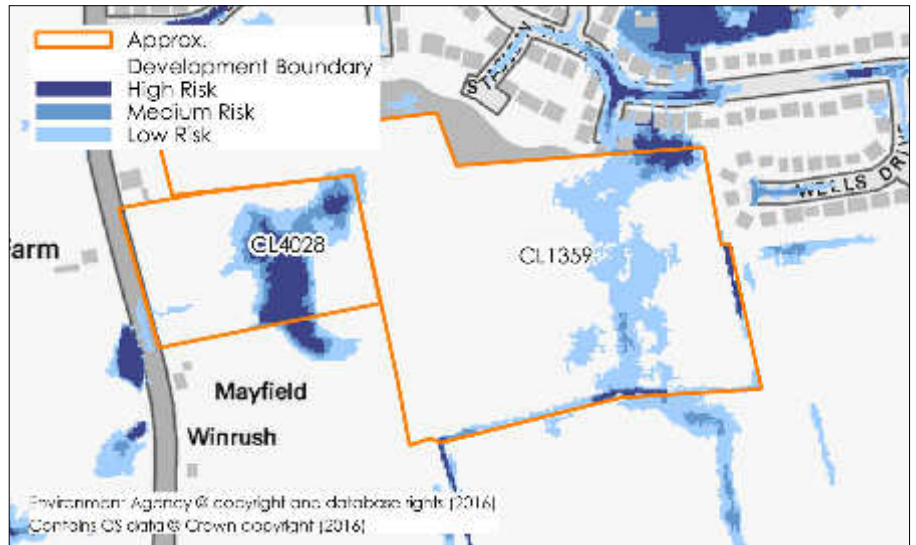


MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the medium surface water flood risk area the depth of flooding is estimated to be less than 30cm with a velocity of less than 0.5 meters per second.

In addition, there is evidence of a low risk flow path through the site from south to north.

The large area of surface water to the left in the figure is described in a separate report as it is designated as a separate site.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

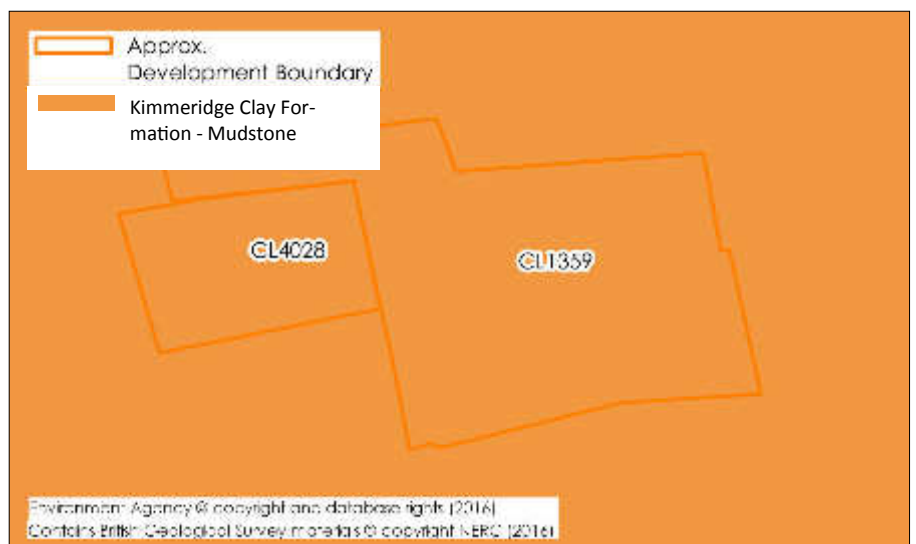
The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.

The superficial deposits have been designated as secondary (undifferentiated) aquifers. This description is used when it has not been possible to identify the permeability of layers present.

Due to the possible low permeability layers present it is not expected that serious groundwater flooding will take place.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to 30cm deep flooding with a velocity of less than 0.5m/s in the medium surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.
- Groundwater flooding is unlikely to be a future flood risk to the site due to the expected low permeability of the superficial deposits and bedrock below the site.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Locate all development out of the portion of the site impacted by surface water flooding where possible.
- Raise finished floor levels 300mm above surface water flood level on site and provide flood resilient construction 300mm above surface water flood level.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

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Caistor Road, Market Rasen

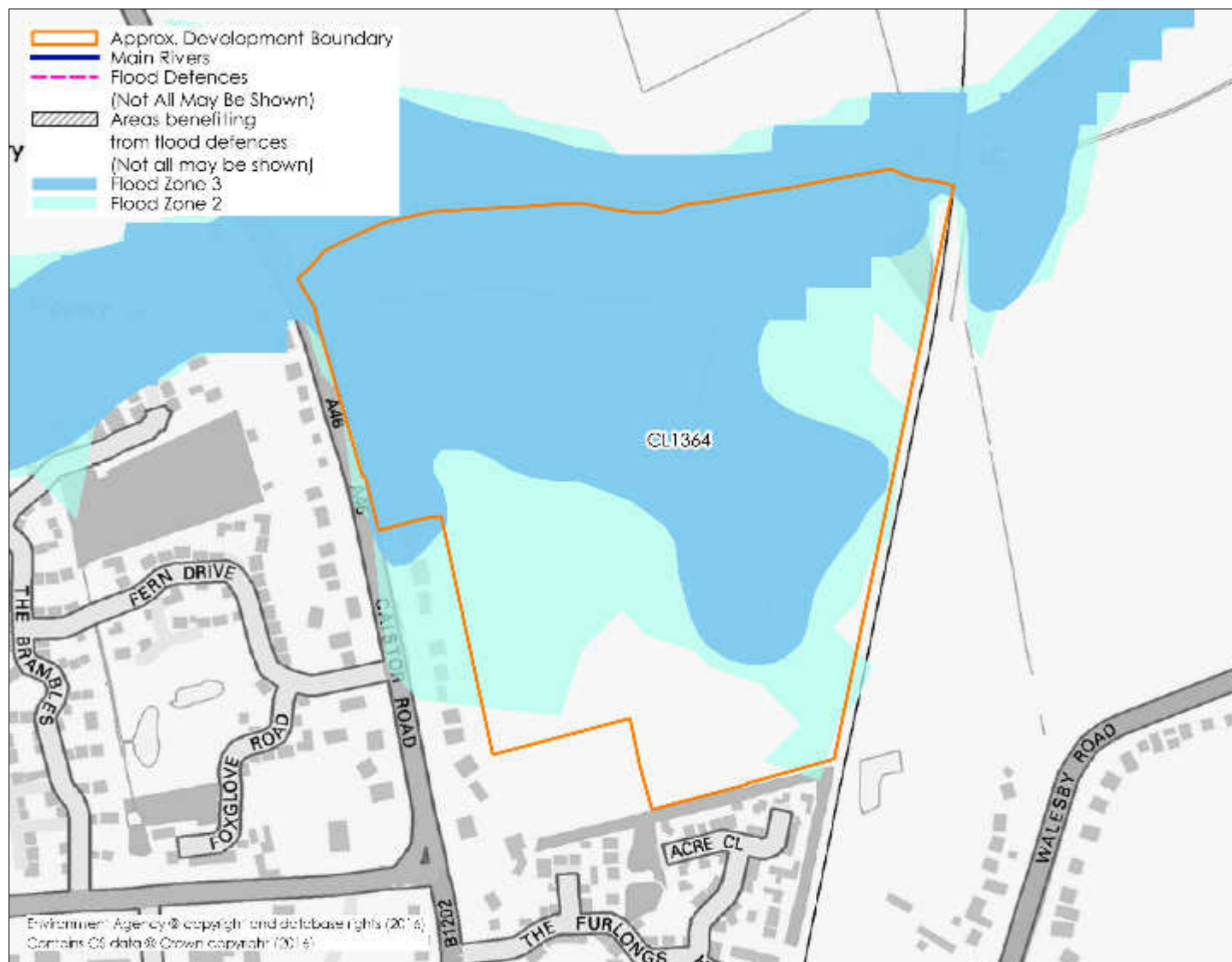
SITE DESCRIPTION

This site is made up of three arable fields and is fairly flat. A stream runs along the northern edge and a ditch passes through the site along field boundaries which are also marked by buses and trees in places and there is a copse at the north east corner. The railway runs along the eastern edge and beyond this is arable fields, to the south and west are houses, and to the north are arable fields. The A46 forms part of the western boundary.

| | |
|-------------------------|----------------|
| REFERENCE | CL1364 |
| NATIONAL GRID REFERENCE | 510860, 390010 |
| SITE AREA (ha) | 16.67 ha |
| INTERNAL DRAINAGE BOARD | NA |

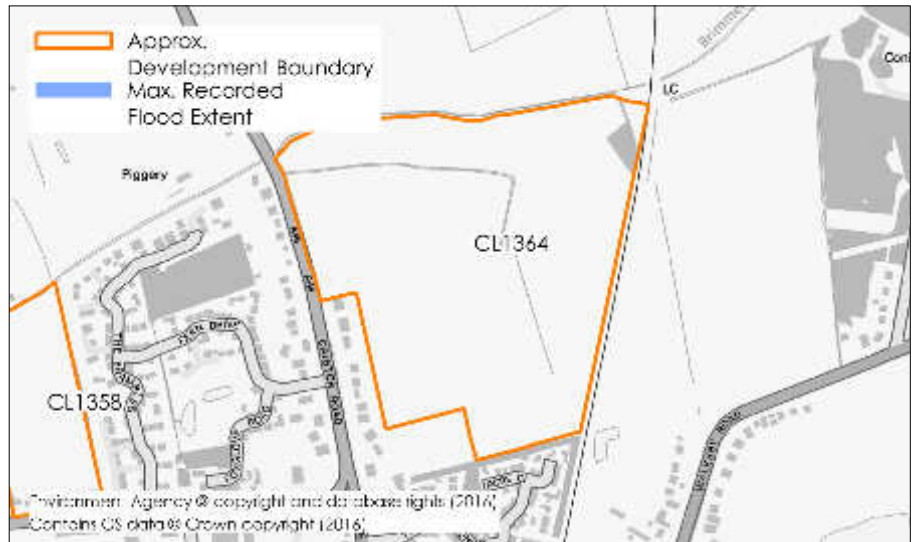
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Market Rasen |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 300 |

FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

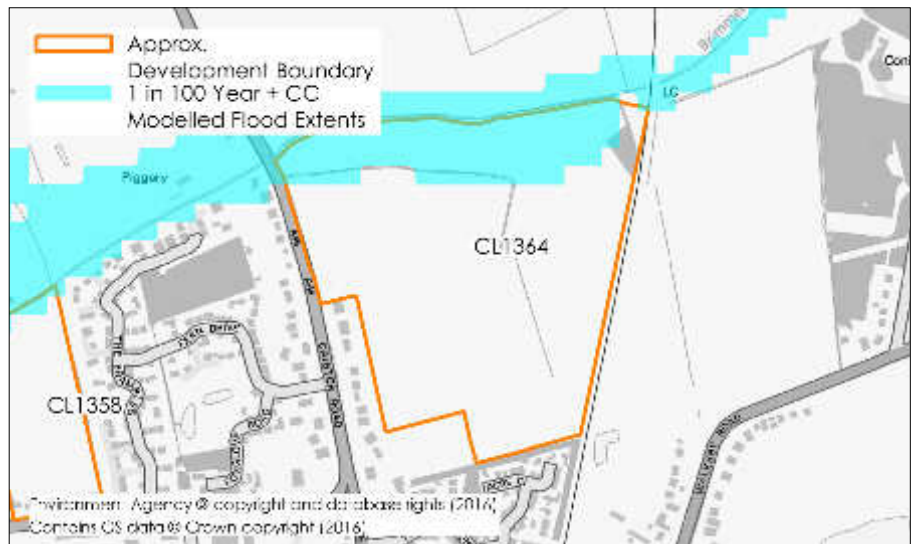
The Environment Agency do not have any records of the site previously being subjected to flooding.



MODELLED FLUVIAL RISKS

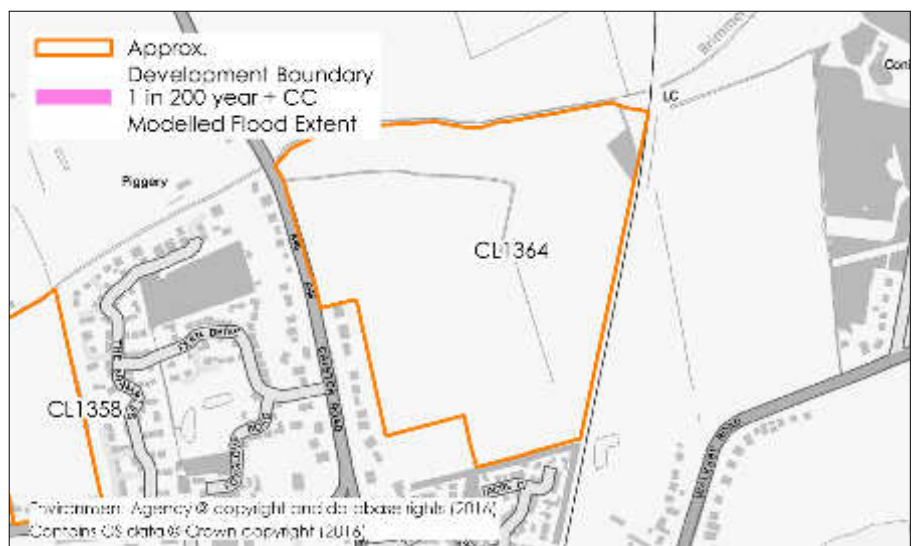
The Environment Agency Flood Maps show much of the site to be located in Flood Zones 2 and 3, land considered to be at medium to high risk of flooding.

Modelled flood information provided by the Environment Agency indicates that the northern part of the site is at risk of fluvial flooding for the 1 in 100 year + CC event.



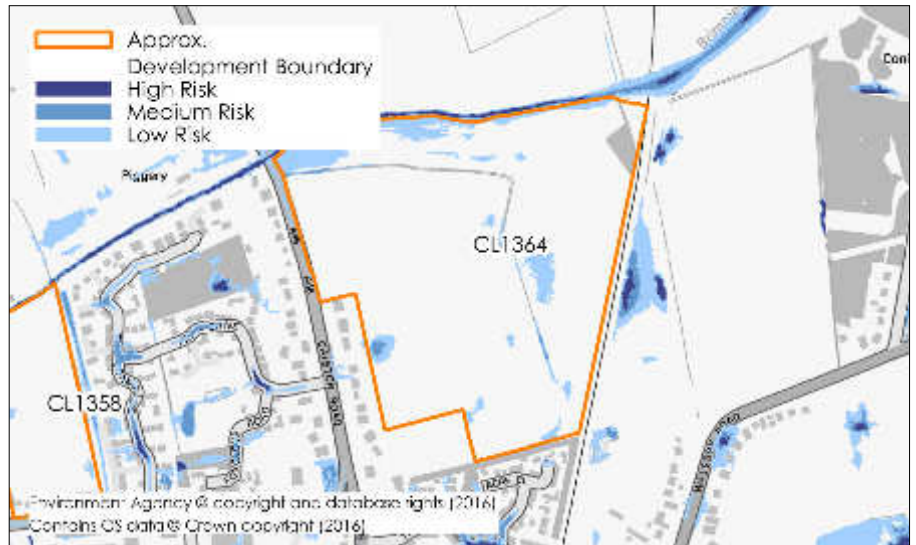
MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that the majority of the site is not subjected to high or medium risk of surface water flooding.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

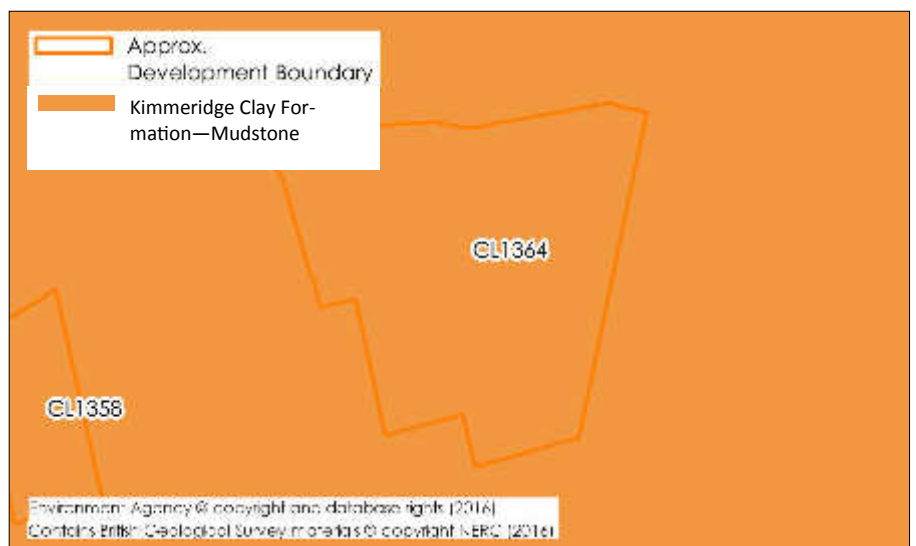
The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- Approximately 90% of the site is shown to be within Flood Zones 2 and 3.
- The site has not previously been subjected to flooding.
- The 1 in 100 + CC fluvial flood event is shown to pose a risk to the site.
- The site is not shown to have been subject to tidal flooding.
- The site is not subjected to high or medium risk of surface water flooding.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Locate all development out of the 1 in 100 year + CC flood risk portion of the site.
- Raise land levels to provide development platform above flood level on site with corresponding loss of floodplain mitigation.
- Raise finished floor levels 300mm above fluvial flood level on site.
- Raise finished floor levels 300mm above surface water flood level on site and provide flood resilient construction 300mm above surface water flood level.
- Construct minimum two storey houses with no habitable accommodation on the ground floor.
- Construct flats/apartments above commercial development.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

LIMITATIONS

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Land off Church lane, Saxilby

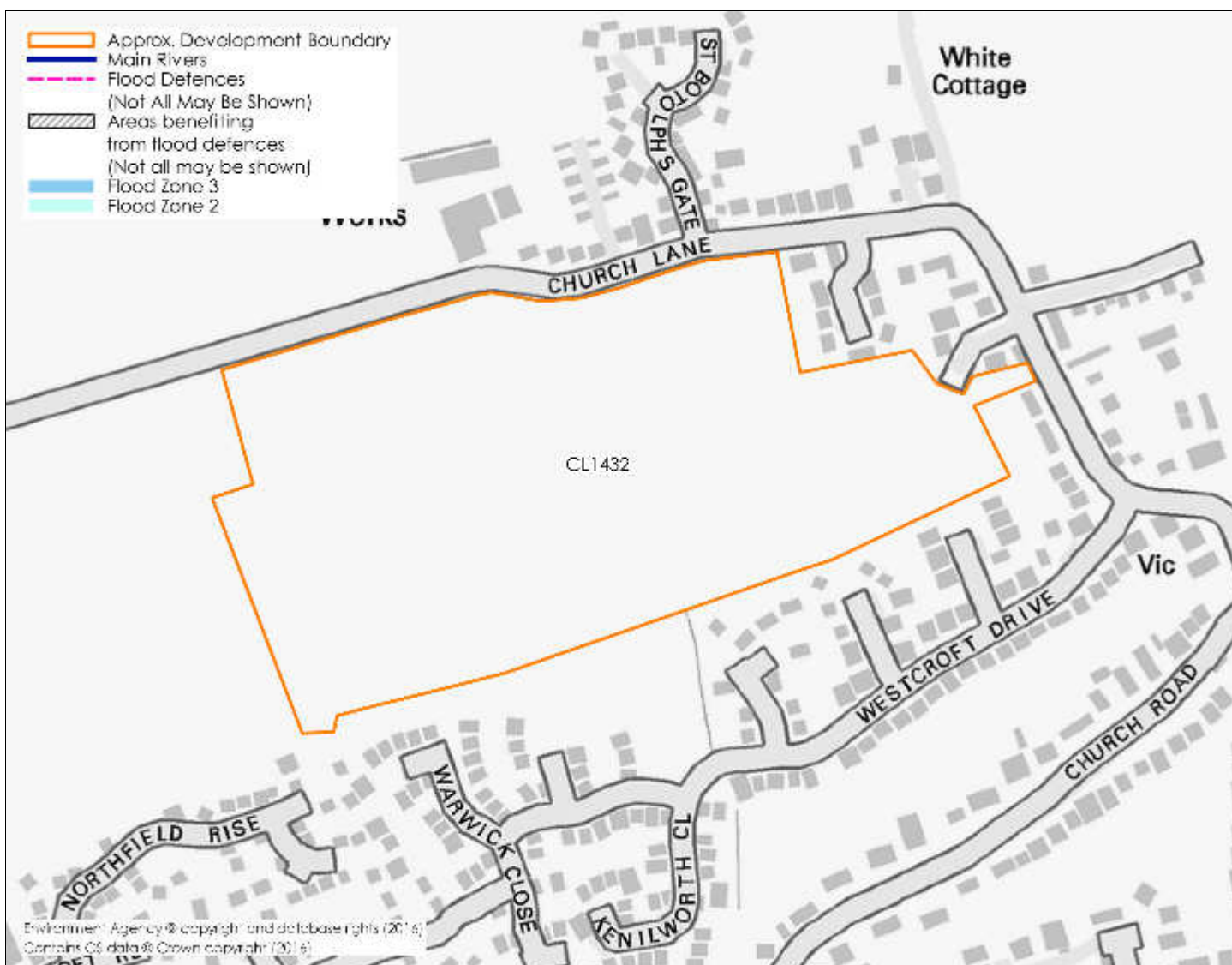
SITE DESCRIPTION

This site is a fairly flat arable field with a horse paddock in the south eastern corner. There are hedges with hedgerow trees at the western boundary and along parts of the north and south boundaries. There are housing estates to the north-east, east and south, arable fields to the north west, industrial units to the north, and pasture to the west.

| | |
|-------------------------|----------------|
| REFERENCE | CL1432 |
| NATIONAL GRID REFERENCE | 489047, 376134 |
| SITE AREA (ha) | 9.8 ha |
| INTERNAL DRAINAGE BOARD | NA |

| | |
|---------------------|----------------|
| LOCAL PLAN STATUS | Status Pending |
| LOCATION | Saxilby |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 221 |

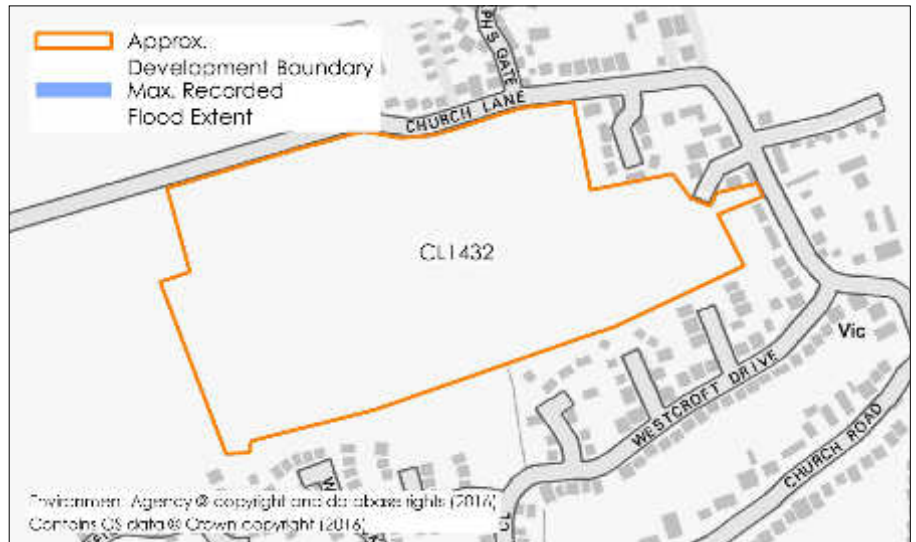
FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

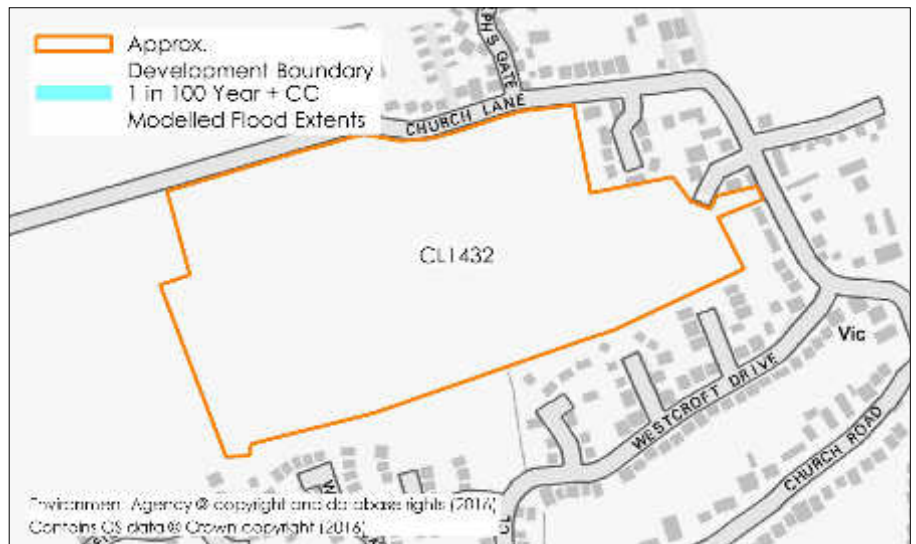
The Environment Agency do not have any records of the site previously being subjected to flooding.

There is a record of two historical floods occurring within 500m of the site in February 1795 and November 2000. Neither had an impact on the site.



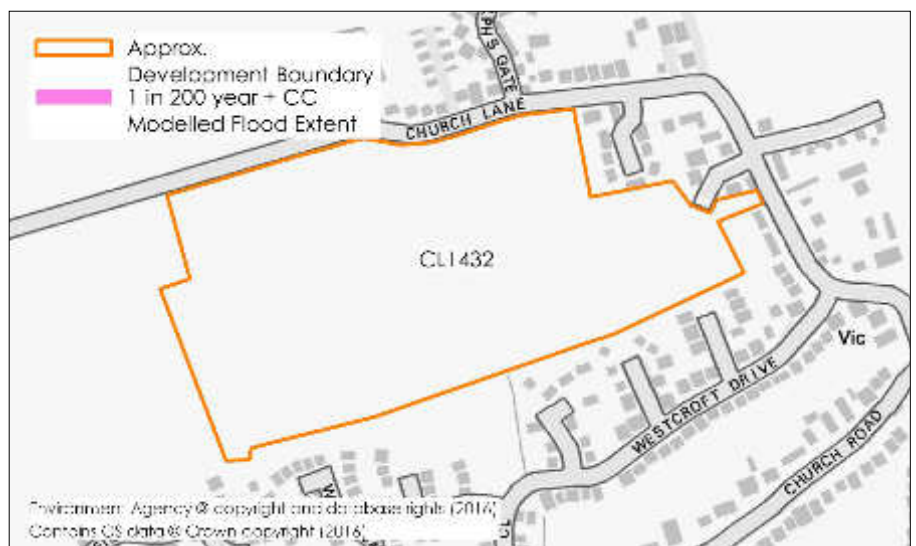
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

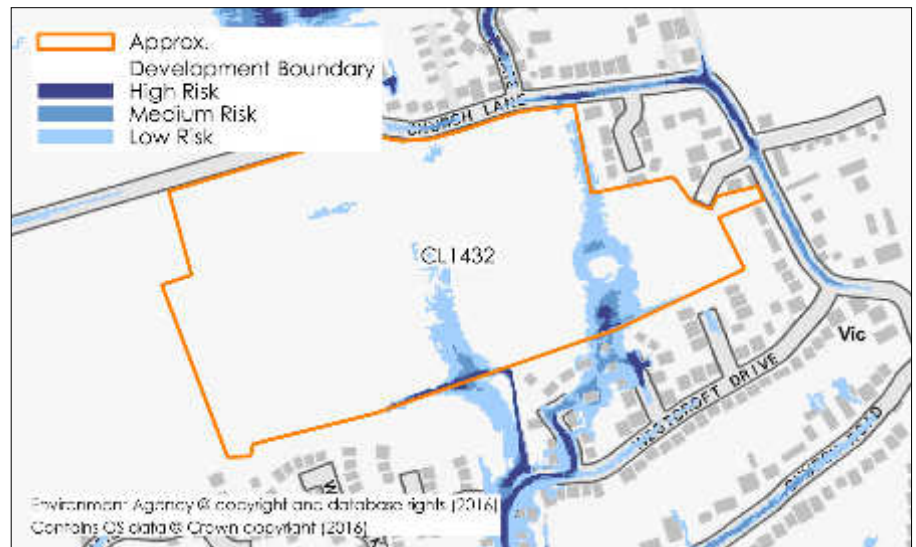
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be 60cm along the south border with a velocity of less than 0.5 meters per second.

In addition, there is evidence of two low risk flow pathways through the site from north to south.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

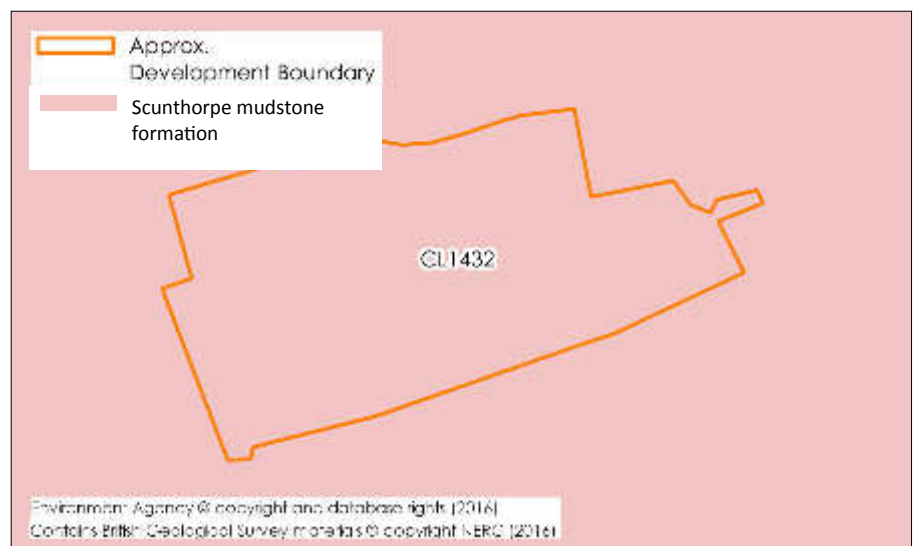
The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.

Online BGS maps indicate the site is situated on Secondary B bedrock aquifer. This is predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering.

There is a low risk that groundwater flooding will impact the site in the future.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to 60cm deep flooding with a velocity of less than 0.5m/s in the high surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.
- Groundwater flooding is a low risk source of flooding to the site due to the underlying bedrock properties.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Locate development where possible in the areas away from surface water flooding.
- Raise finished floor levels to surface water flood level on site and provide flood resilient construction 300mm above surface water flood level.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

LIMITATIONS

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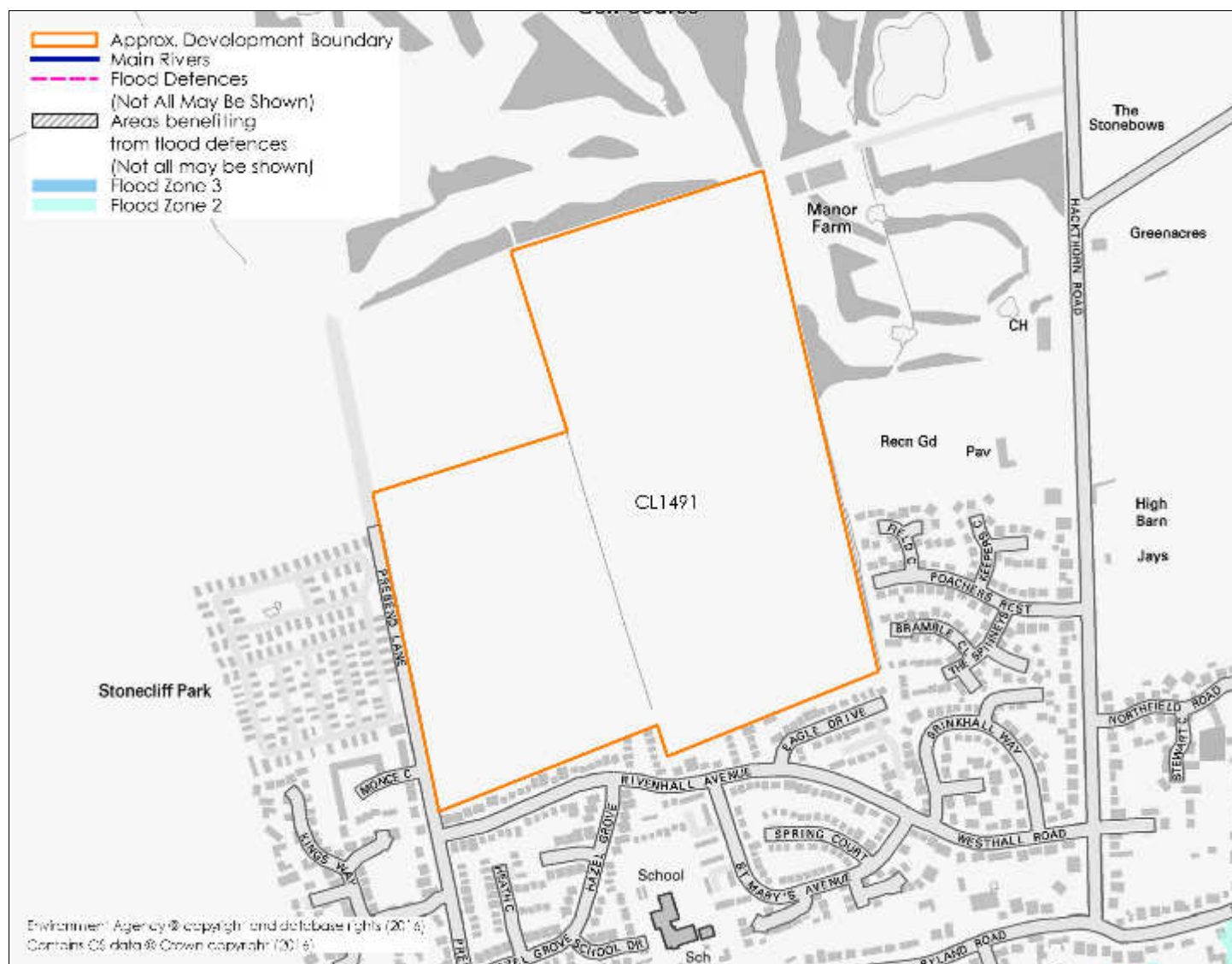
SITE DESCRIPTION

This site is made up of two flat arable fields with hedgerows and some trees at most boundaries. There are park homes and arable fields to the west, a golf course to the north, housing to the south and south-east, and housing and sport facilities to the east.

| | |
|-------------------------|----------------|
| REFERENCE | CL1491 |
| NATIONAL GRID REFERENCE | 501013, 380481 |
| SITE AREA (ha) | 8.1 ha |
| INTERNAL DRAINAGE BOARD | NA |

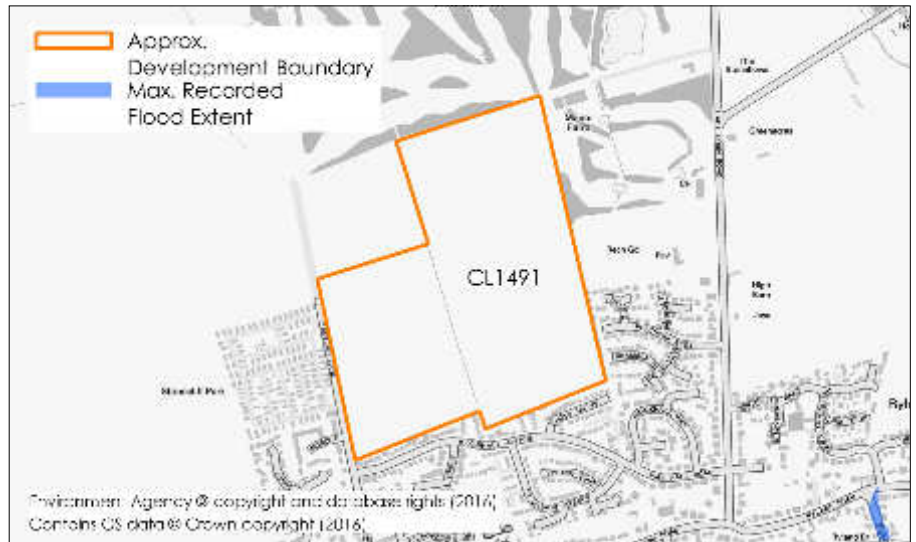
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Welton |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 350 |

FLOOD MAP FOR PLANNING



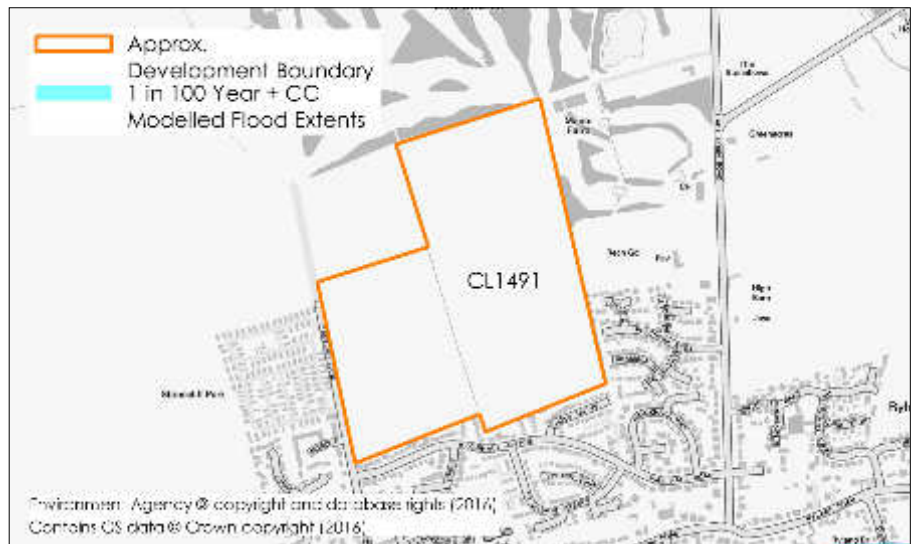
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



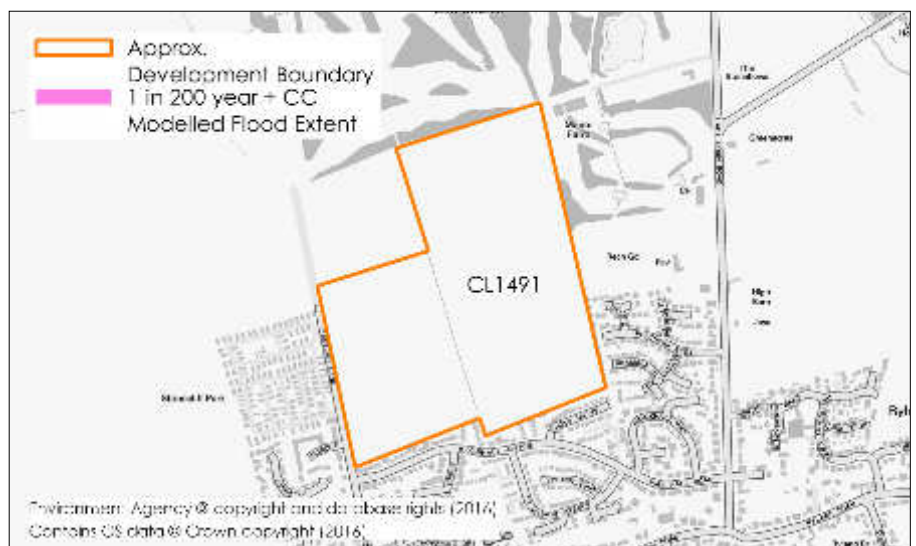
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

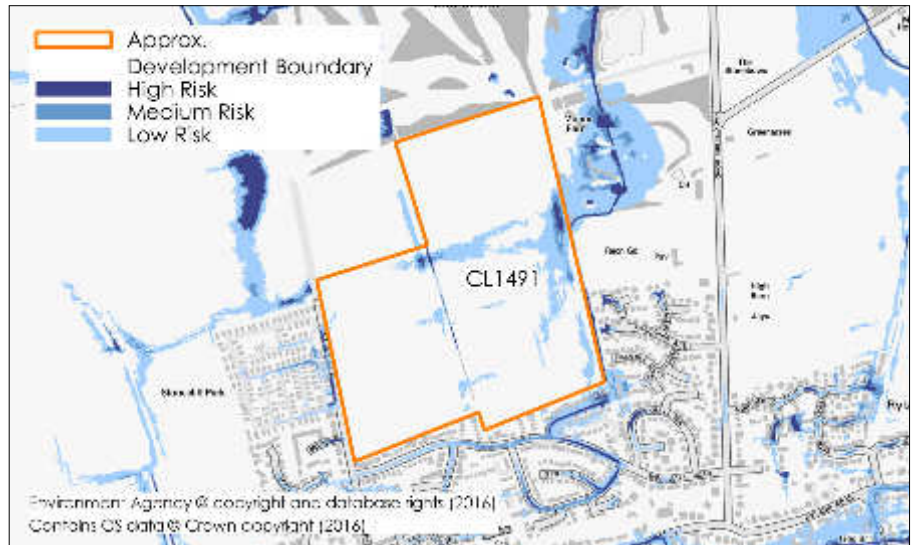
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding on the east boundary of the site is estimated to be 60cm with a velocity of less than 0.5 meters per second.

In addition, there is evidence of a small high risk flow path through the site from south to north along the east boundary.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

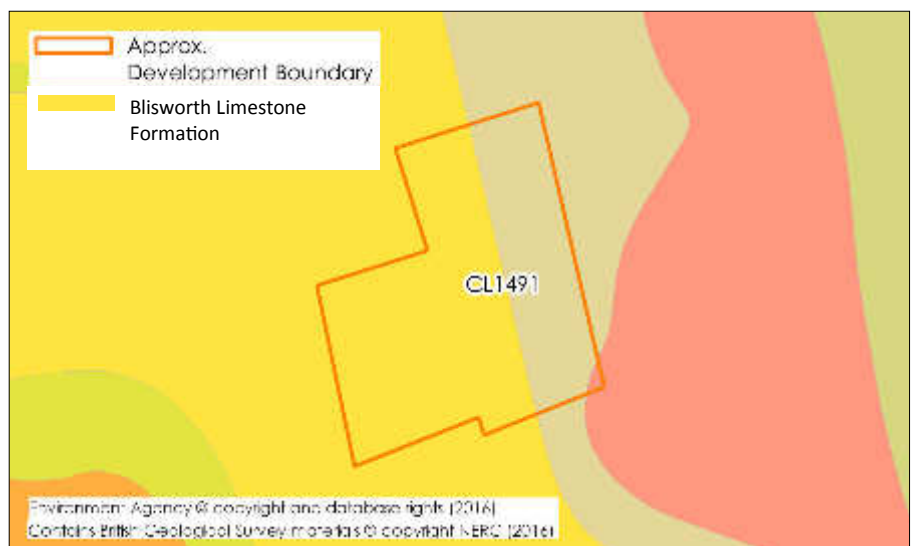
The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water.

Online BGS maps show the bedrock aquifer is classified as principle aquifer. These are layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage.

Groundwater flooding at the site is a potential future source of flooding due to the aquifer storage volumes and permeability.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding.
- The site is not subject to tidal flooding.
- The site is subject to 60cm deep flooding with a velocity of 0.5m/s in the high surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might be acceptable for the disposal of surface water.
- Groundwater flooding is a potential future risk at the site due to the principle aquifer status of the bedrock.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- Locate the development out of the surface water flooding portion of the site where possible.
- Raise finished floor levels 300mm above surface water flood level on site and provide flood resilient construction 300mm above surface water flood level.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

LIMITATIONS

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South of Winchelsea Road, Ruskington

SITE DESCRIPTION

This site is flat and is used for arable farming. There are electricity pylons across the site. There are ditches along the southern, northern and eastern boundaries. There is a public right of way across the northern side of the site.

| | |
|-------------------------|----------------|
| REFERENCE | CL1892 |
| NATIONAL GRID REFERENCE | 507846, 350462 |
| SITE AREA (ha) | 3.36 ha |
| INTERNAL DRAINAGE BOARD | NA |

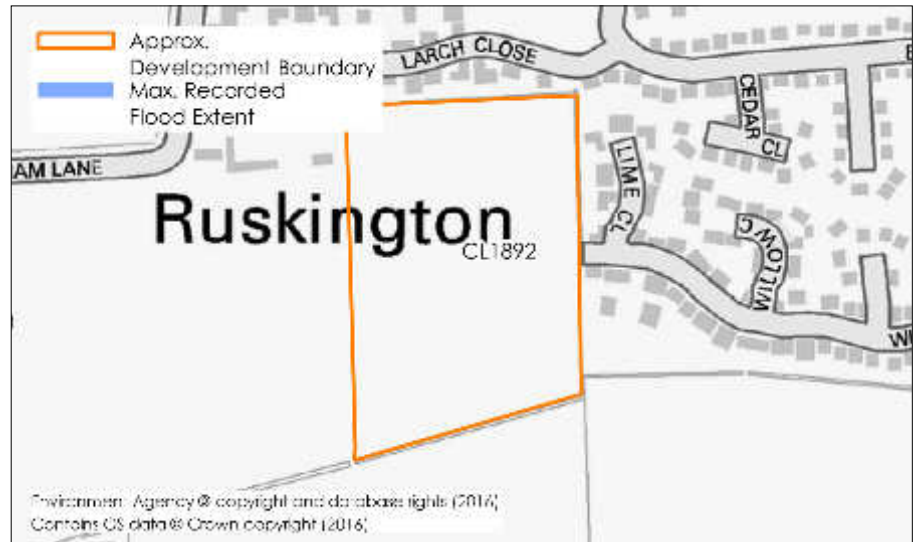
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Ruskington |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 76 |

FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subject to flooding.



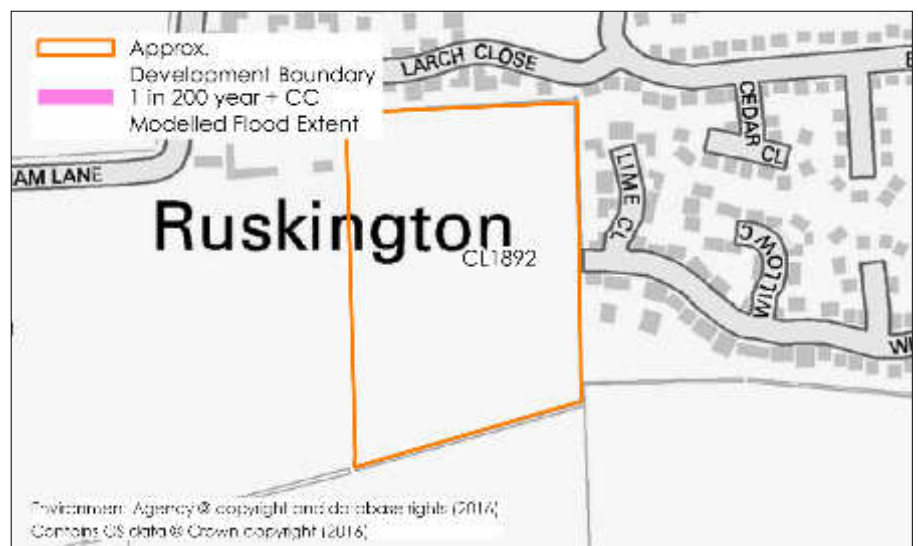
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subject to fluvial flooding for the 1 in 100 year + climate change (CC) event.



MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subject to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to high or medium risk of surface water flooding. There is a small area of low risk pluvial flooding in the centre of the site. This is likely to be associated with a topographical depression and, if so, the re-development of the site and re-profiling of ground would help reduce the risk posed by this source.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

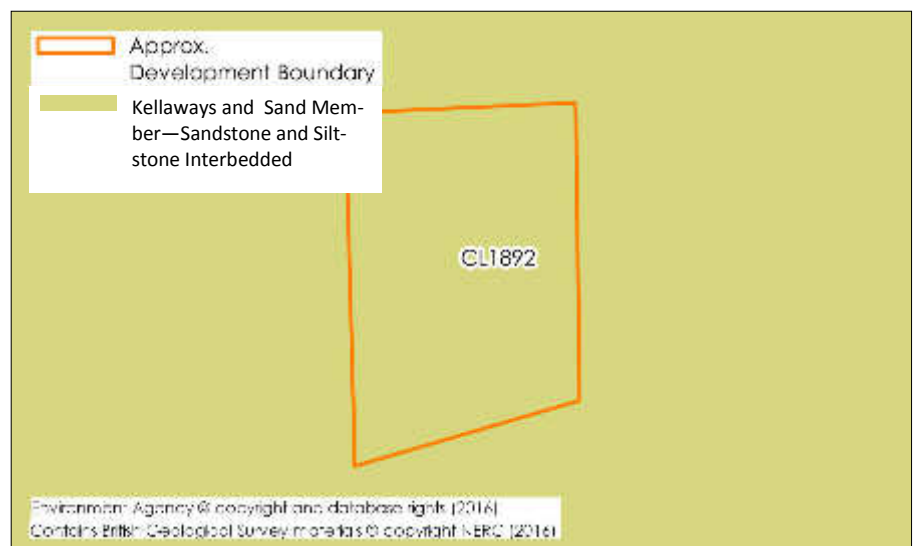
The site is shown to be outside the area at risk of flooding from a breach of a reservoir.

Sewer Flooding/Canal Flooding/Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not shown to be subject to fluvial flooding.
- The site is not shown to be subject to tidal flooding.
- The site is not shown to be subjected to high or medium risk of surface water flooding.
- The site is not shown to be subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood Risk Assessments are indicated below.

- It is recommended that finished floor levels at the site are raised by a nominal amount above the immediate surrounding ground levels to protect against the residual risk of flooding.
- Provide sustainable drainage solutions to surface water disposal.

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Land off West Street, Billingham

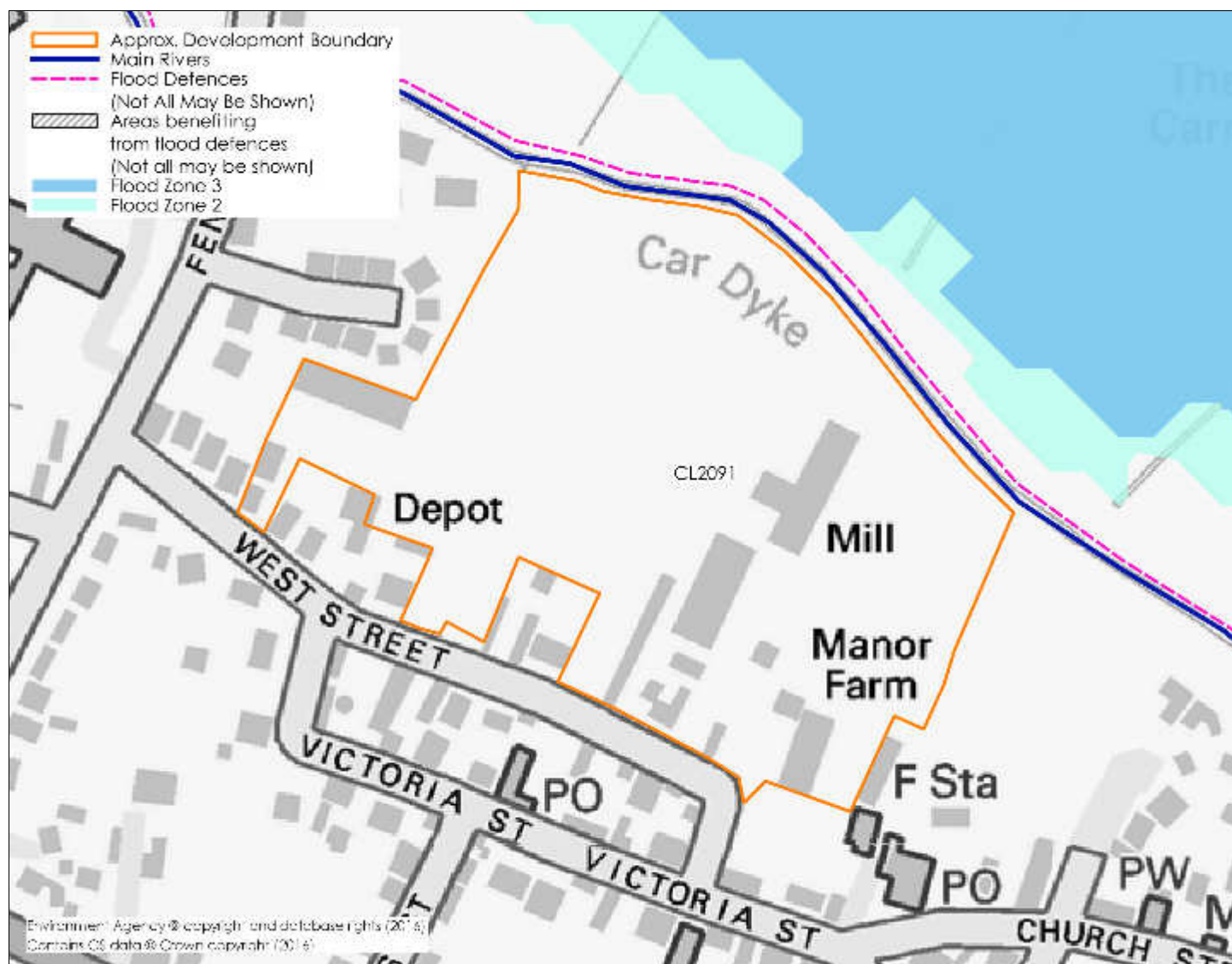
SITE DESCRIPTION

Site includes an old mill and other industrial buildings and areas of hardstanding. It also includes some undeveloped areas. A ditch and hedgerow run along the north boundary. To the south and west there are houses and some business properties, to the north is arable farm land, to the east is open space and houses.

| | |
|-------------------------|-----------------------|
| REFERENCE | CL2091 |
| NATIONAL GRID REFERENCE | 515485, 355156 |
| SITE AREA (ha) | 5.1 ha |
| INTERNAL DRAINAGE BOARD | WITHAM FIRST DISTRICT |

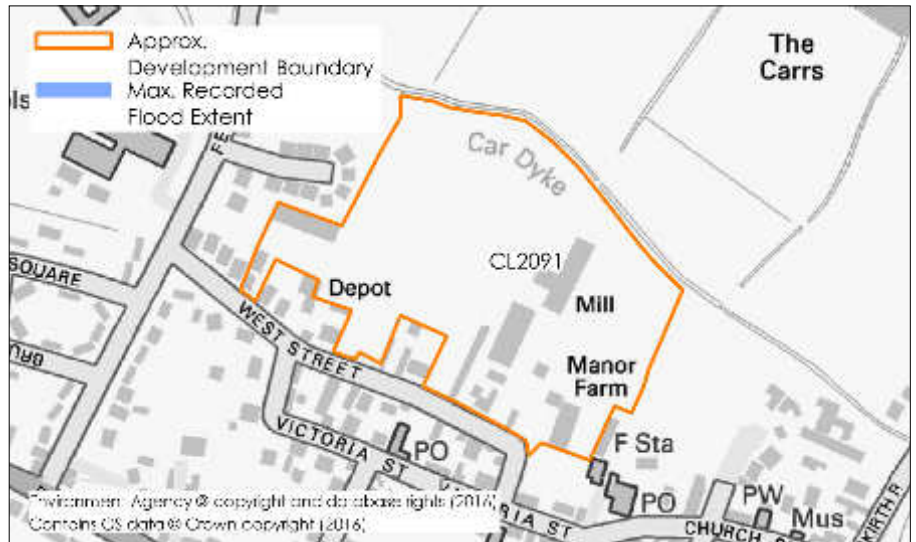
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Billingham |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 132 |

FLOOD MAP FOR PLANNING



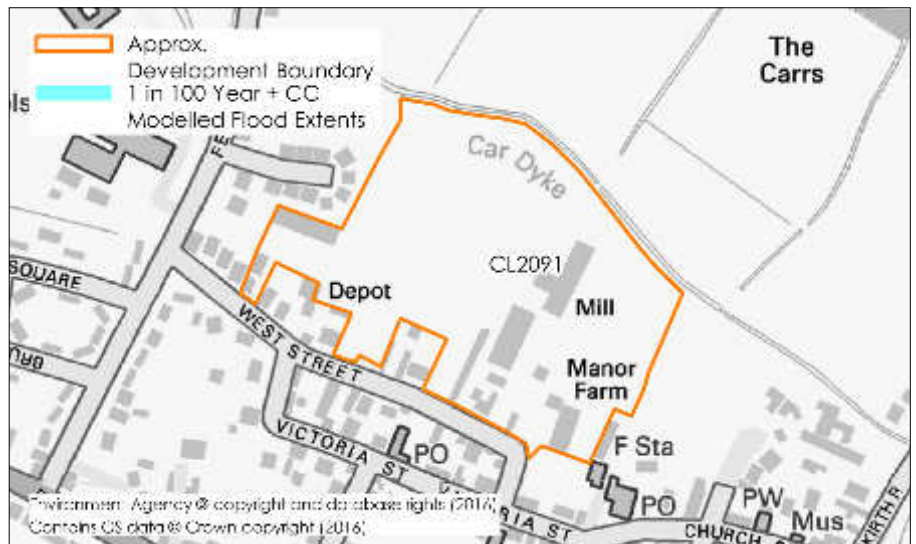
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



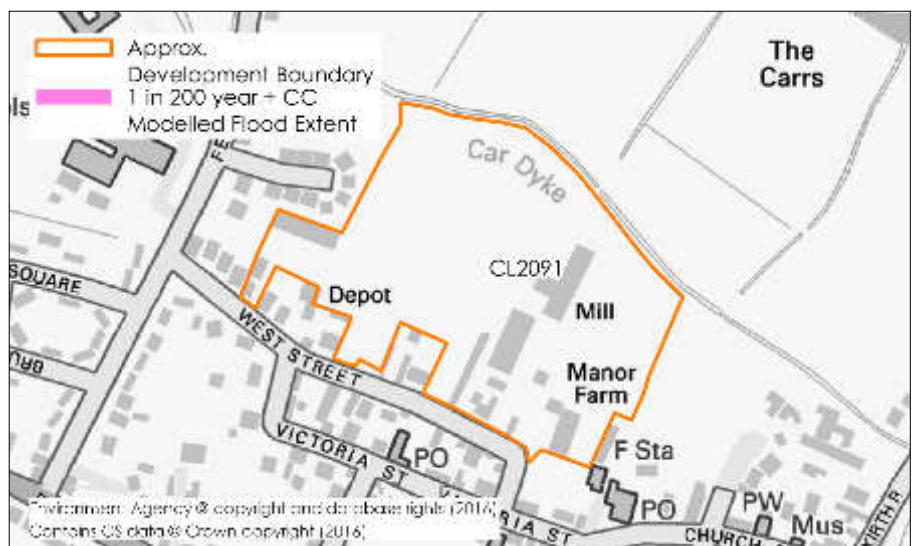
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + climate change (CC) event.



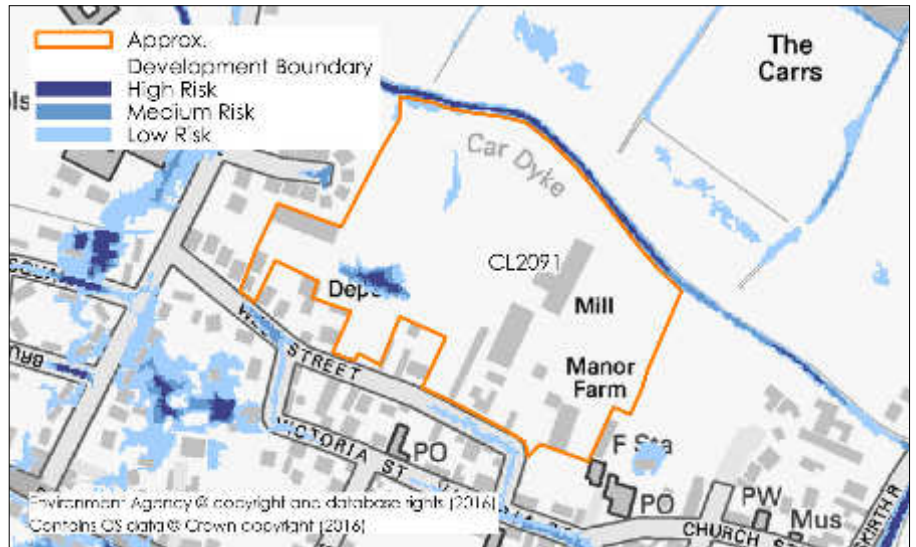
MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that the majority of the site is considered to be at very low risk of surface water flooding. A small area in the south-western corner of the site is identified to be at medium to high risk. However, this is isolated in extent and is likely to be associated with a minor topographic depression. The re-profiling of ground levels would likely reduce the risk posed by this source.



OTHER SOURCES OF FLOOD RISKS

Reservoir Flooding

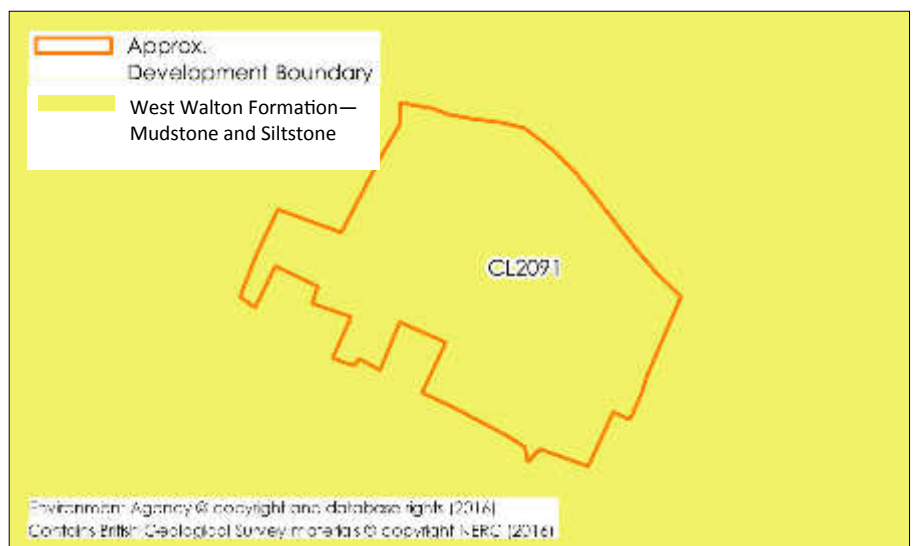
The site is shown to be outside the area at risk of flooding from a breach of a reservoir.

Sewer Flooding/Canal Flooding/Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not shown to be subject to fluvial flooding.
- The site is not shown to be subject to tidal flooding.
- There is an isolated patch of medium to high pluvial flood risk on the site.
- The site is not shown to be subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- It is recommended that finished floor levels at the site are raised by a nominal amount above the immediate surrounding ground levels to protect against the residual risk of flooding.
- Provide sustainable drainage solutions to surface water disposal.

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Land to the south of the Whyche, Billingham

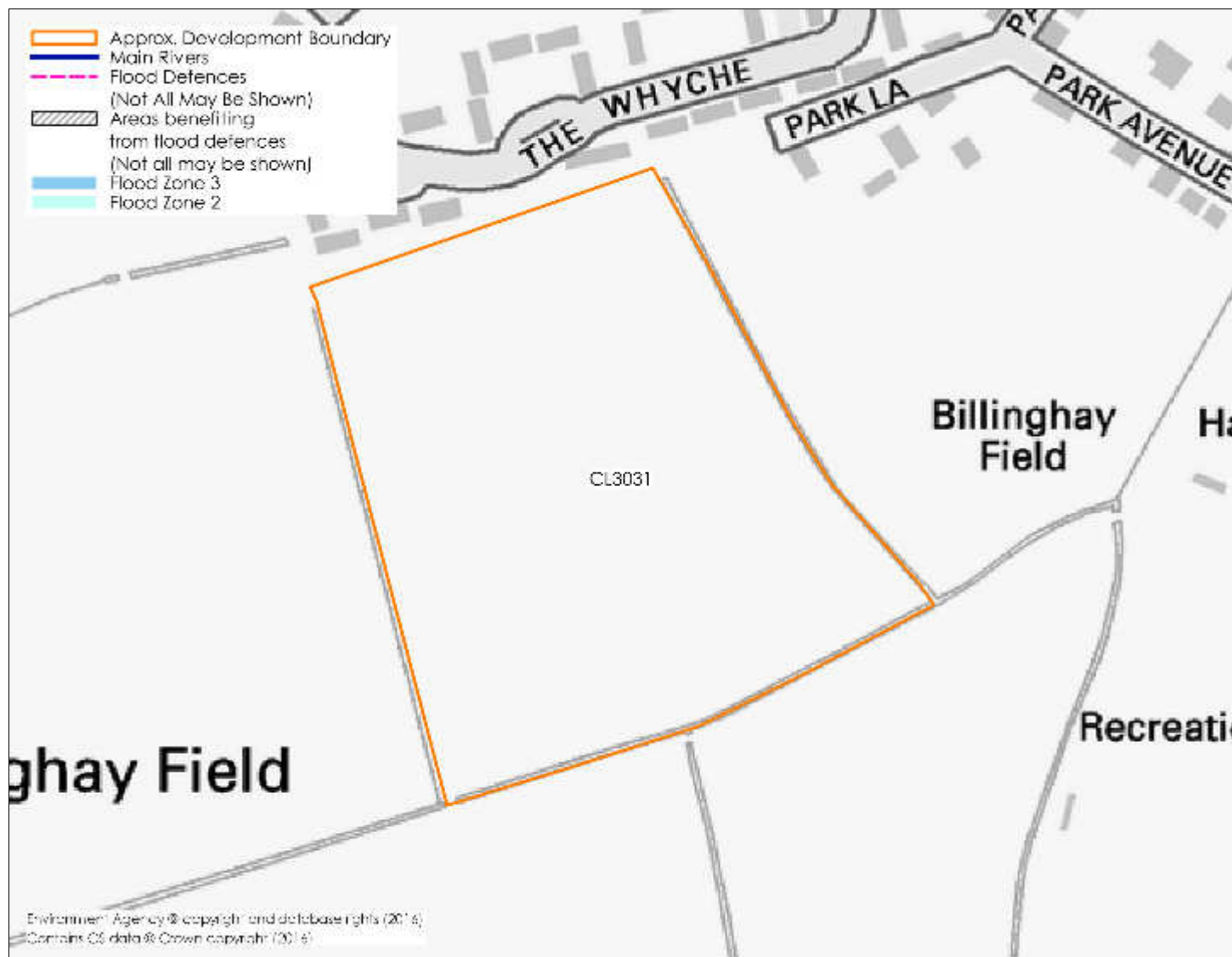
SITE DESCRIPTION

The site is in arable farming use and is fairly flat. Electricity pylons run across the site and ditches runs along the north, south and east boundaries and a hedgerow marks the south boundary. Rights of way run along the north and south boundaries. To the south and west is arable farm land, to the north is a residential estate, and to the east is a grassy area.

| | |
|-------------------------|----------------|
| REFERENCE | CL3031 |
| NATIONAL GRID REFERENCE | 514854, 354713 |
| SITE AREA (ha) | 4.36 ha |
| INTERNAL DRAINAGE BOARD | NA |

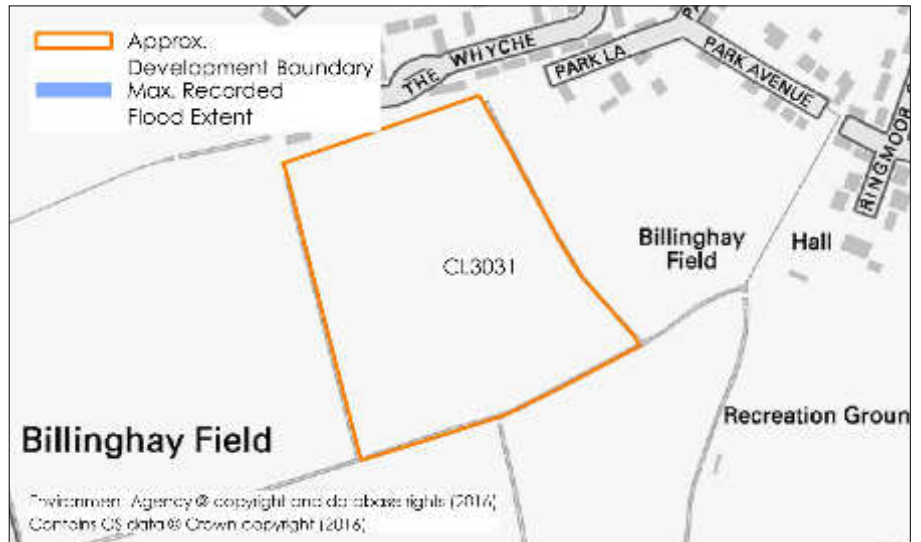
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Billingham |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 98 |

FLOOD MAP FOR PLANNING



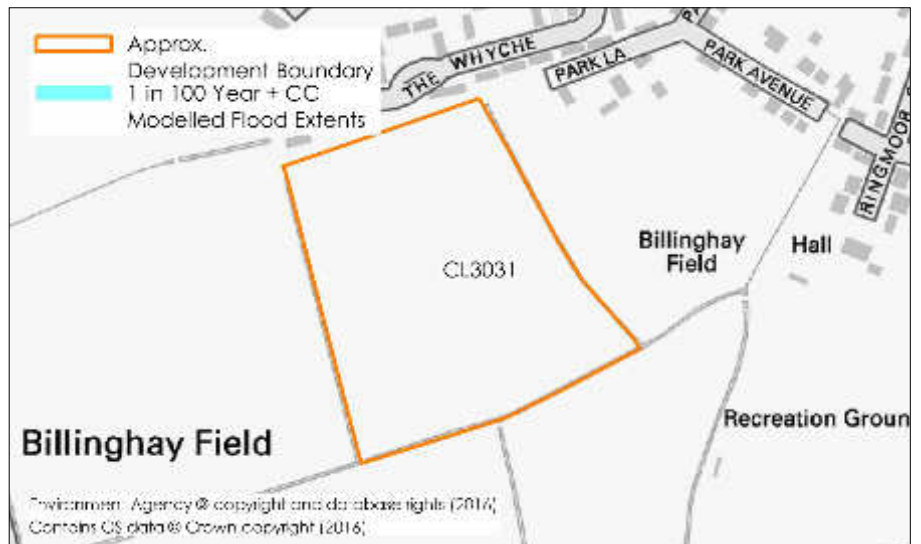
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



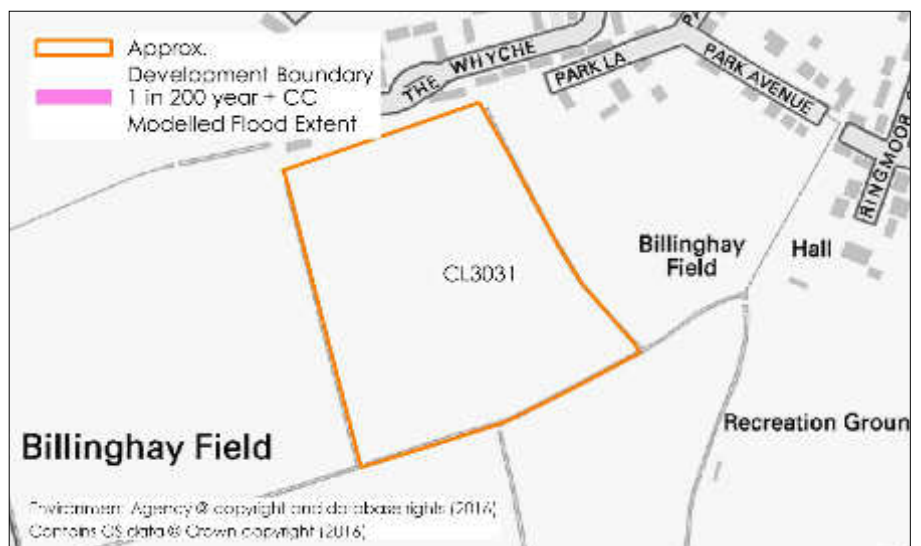
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + climate change (CC) event.



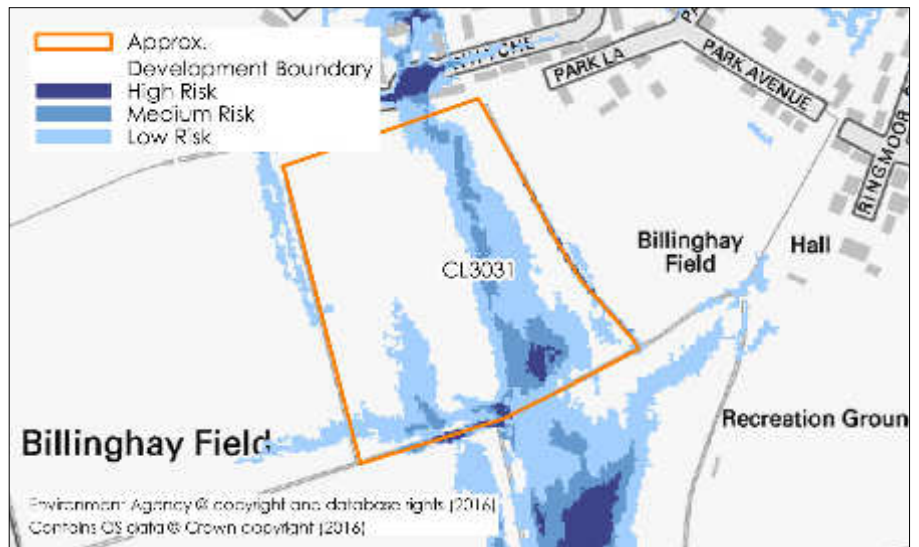
MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates a distinct surface water flood flow route through the site. Surface water depths are shown to be up to 0.3m, with velocities of up to 1m/s.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

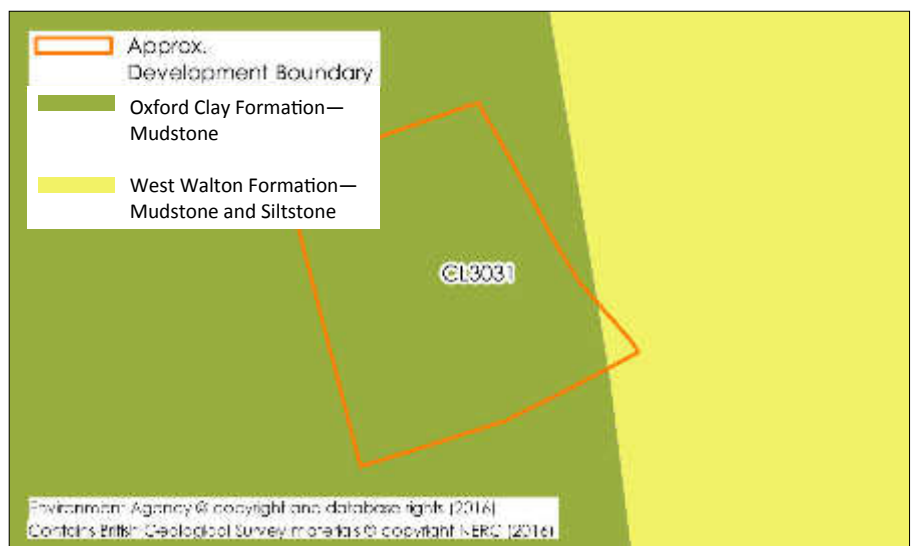
The site is shown to be outside the area at risk of flooding from a breach of a reservoir.

Sewer Flooding/Canal Flooding/Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not shown to be subject to fluvial flooding.
- The site is not shown to be subject to tidal flooding.
- A surface water flow route through the site suggests that flood depths could reach 0.3m with velocities of 1m/s.
- The site is not shown to be subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- It is recommended that finished floor levels at the site are raised by a nominal level above the immediate surrounding ground levels to protect against the residual risk of flooding.
- It is recommended that adequate routes are provided through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal.

LIMITATIONS

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The Drove, Sleaford West Quadrant

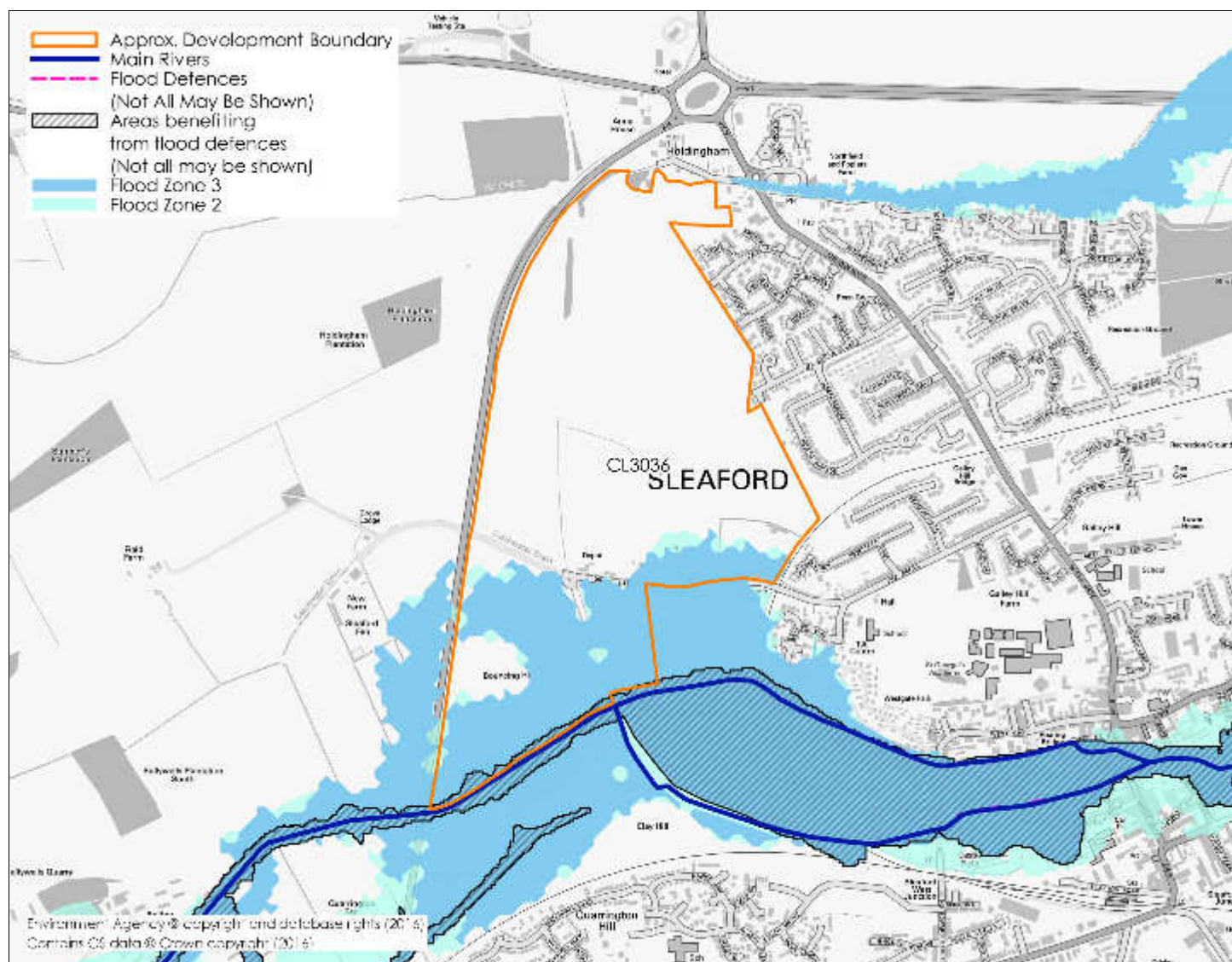
SITE DESCRIPTION

This site is an extensive area, mainly in arable farming use, but also including a chicken farm, a paddock or scrub area, and some houses. It includes a number of separate fields, separated by hedgerows, streams/ditches and Drove Lane running through the site from east to west. The River Slea forms the boundary to the south of the site with fields beyond this. The A15 forms the boundary to the west with fields found beyond this. Residential properties can be found to the east.

| | |
|-------------------------|-----------------------|
| REFERENCE | CL3036 |
| NATIONAL GRID REFERENCE | 505545, 346446 |
| SITE AREA (ha) | 72.9 ha |
| INTERNAL DRAINAGE BOARD | WITHAM FIRST DISTRICT |

| | |
|---------------------|---------------------------------------|
| LOCAL PLAN STATUS | Preferred Sustainable Urban Extension |
| LOCATION | Sleaford |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 1600 |

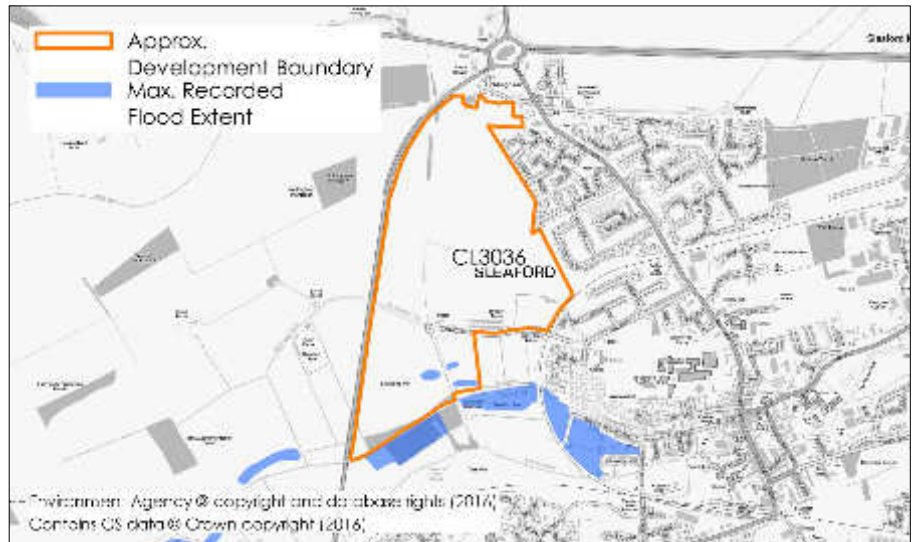
FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

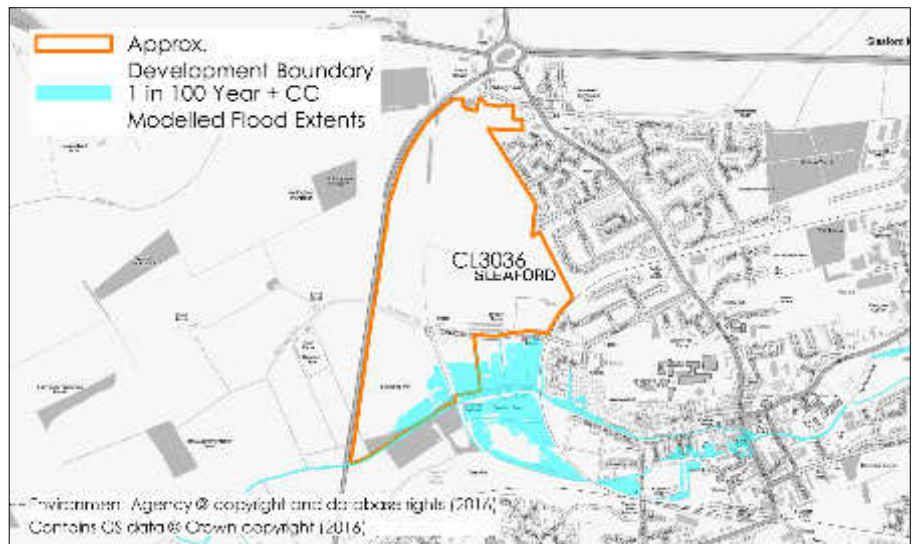
Historical flooding information provided by the Environment Agency indicates that a very small portion to the south of the site has been subjected to flooding in 1977 from the Old River Slea.

Many of these areas are shown to be isolated parcels of flooding, probably informed by landowner reports of flooding to certain areas.



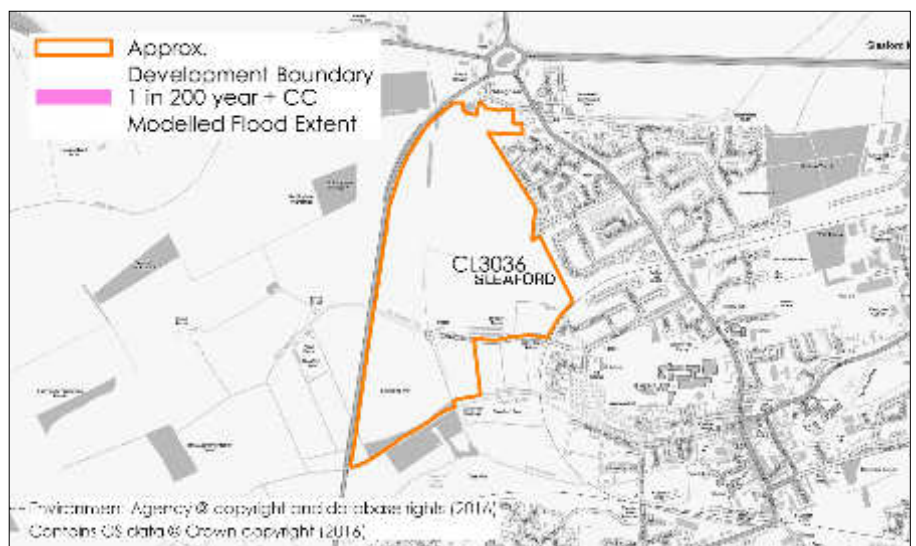
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that a small portion of the site found to the south is influenced in the 1 in 100 year + CC fluvial flood event.



MODELLED TIDAL RISKS

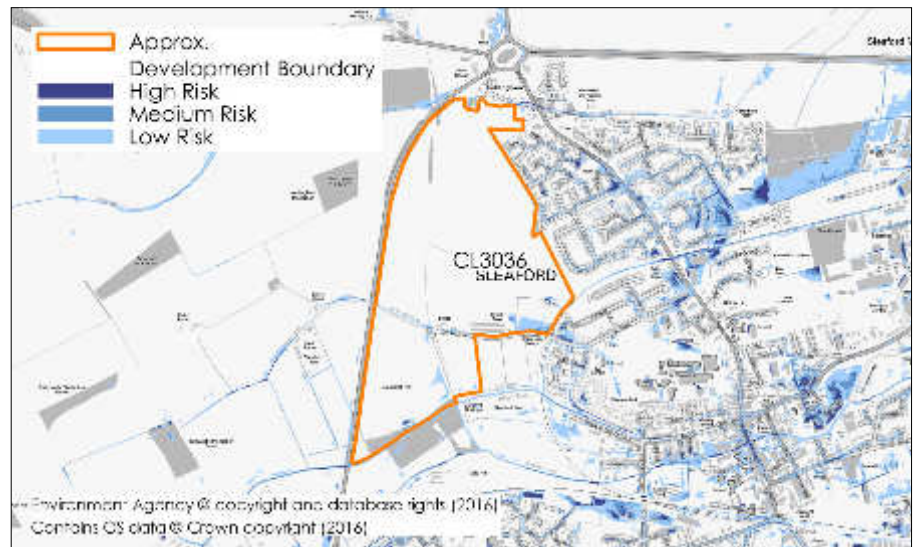
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that the majority of the site is within an area of Very Low Risk. There are some areas of Medium to high surface water flood risk areas where the depth of flooding is estimated to reach up to 0.3m with a velocity of 0.25m/s.

In addition, there is evidence of a low risk flow path through the site from west to east following Drove Lane with velocities up to 0.25m/s and depths up to 0.9m.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

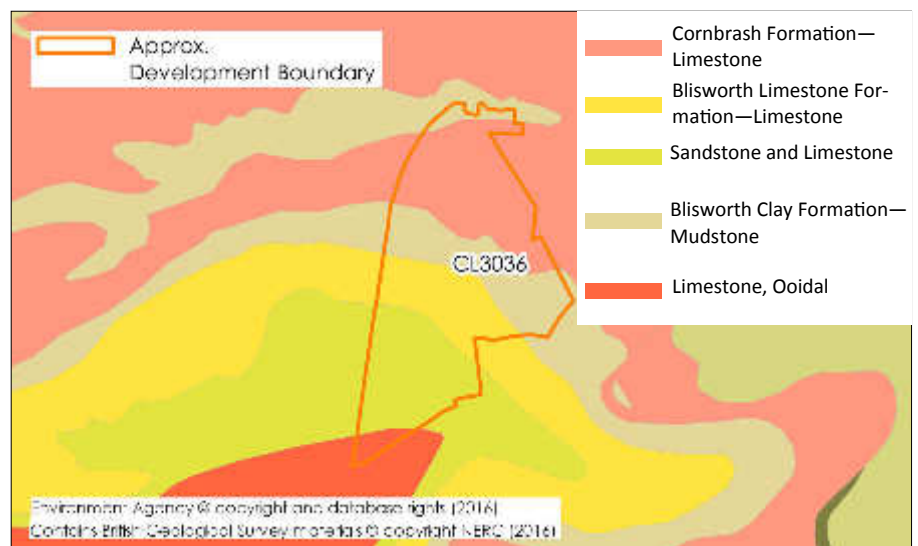
The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might be acceptable for the disposal of surface water in certain areas of the site.



SUMMARY OF FLOOD RISK

- Approximately 30% of the site is shown to be within Flood Zones 2 and 3.
- The site has previously been subjected to flooding in 1977.
- The site is subject to 0.3m flooding with a velocity of 0.25m/s in the or medium surface water flood risk area.
- Soakaways might be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Use a sequential approach to the layout of the site, placing more vulnerable aspects of development where possible in Flood Zone 1.
- Finished floor levels should be adequately raised above modelled flood levels.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment

LIMITATIONS

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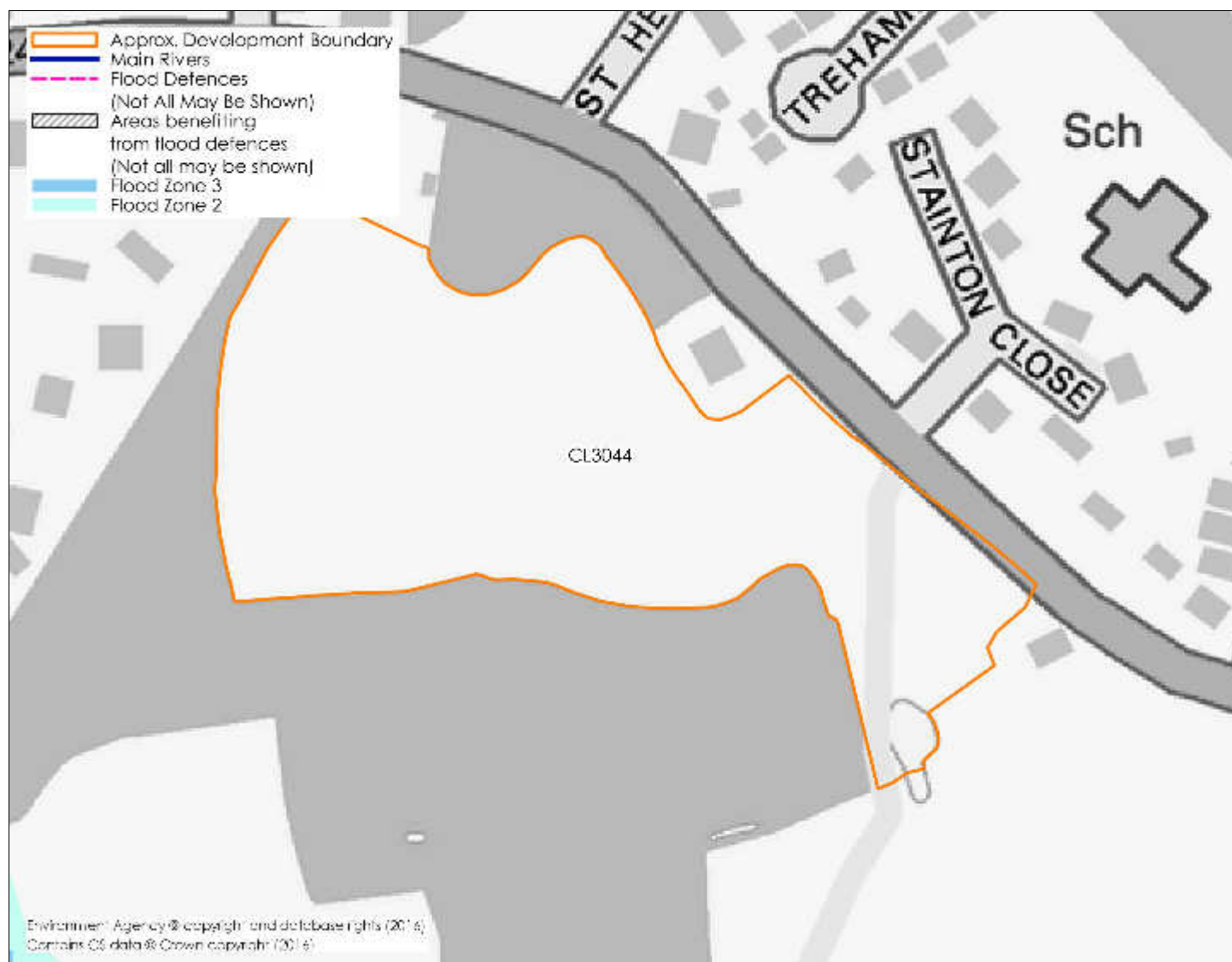
SITE DESCRIPTION

This gently undulating site is used for pasture and includes a pond, some isolated trees and a track running through the site. Thick tree belts border the site to the north, west and south. There are large detached houses to the west, east and north and woodland and fields to the south.

| | |
|-------------------------|----------------|
| REFERENCE | CL3044 |
| NATIONAL GRID REFERENCE | 483111, 386472 |
| SITE AREA (ha) | 3.04 ha |
| INTERNAL DRAINAGE BOARD | NA |

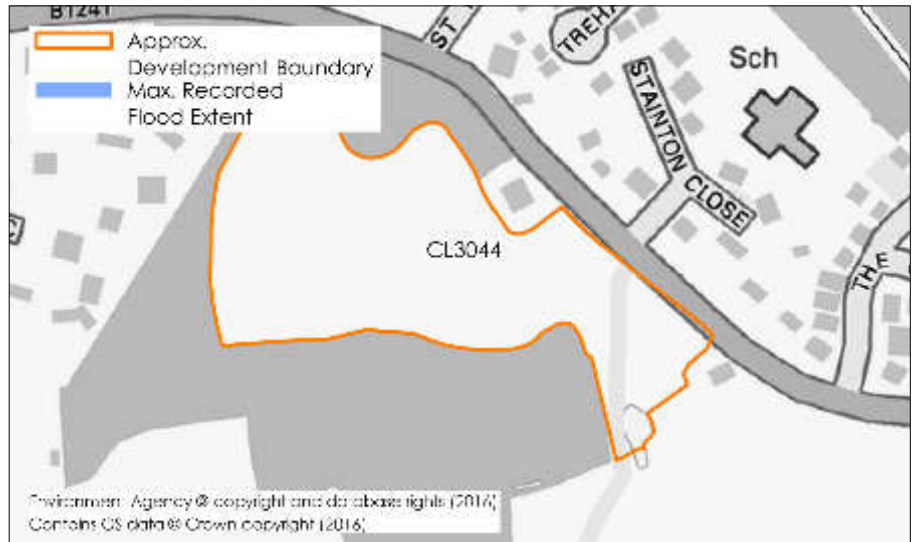
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Lea |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 68 |

FLOOD MAP FOR PLANNING



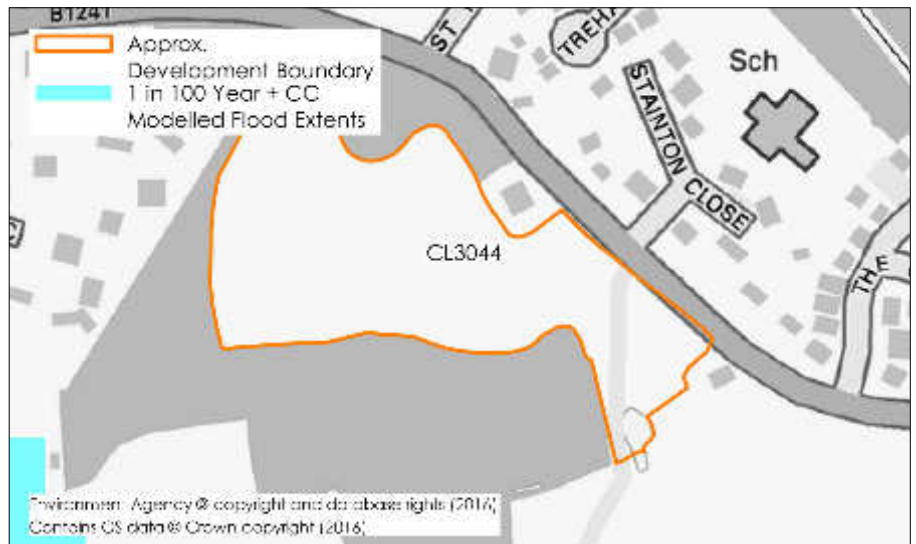
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



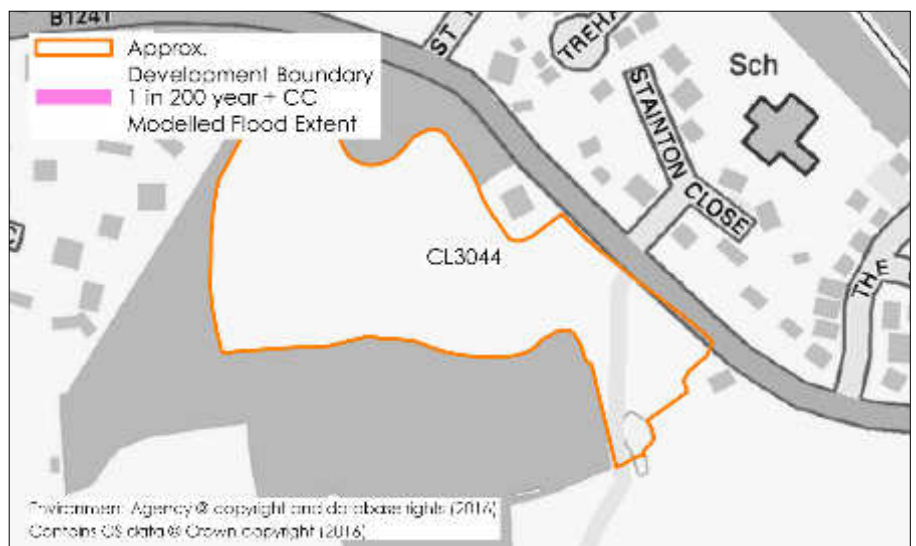
MODELLLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + climate change (CC) event.



MODELLLED TIDAL RISKS

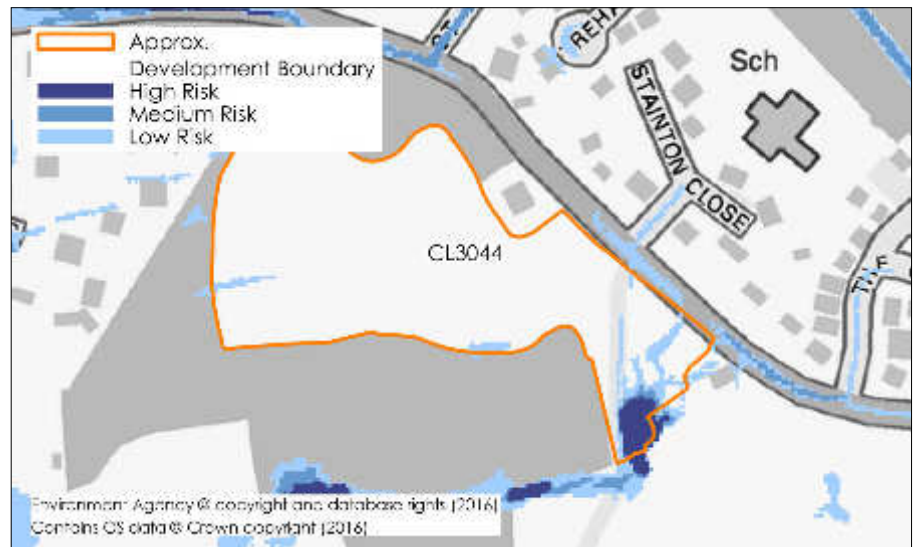
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that the majority of the site is not subjected to high or medium risk of surface water flooding.

There is a small area of high surface water flood risk identified in the southern-most corner of the site. Detailed mapping suggests the water could reach depths of 0.3m, with velocities of up to 1m/s.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

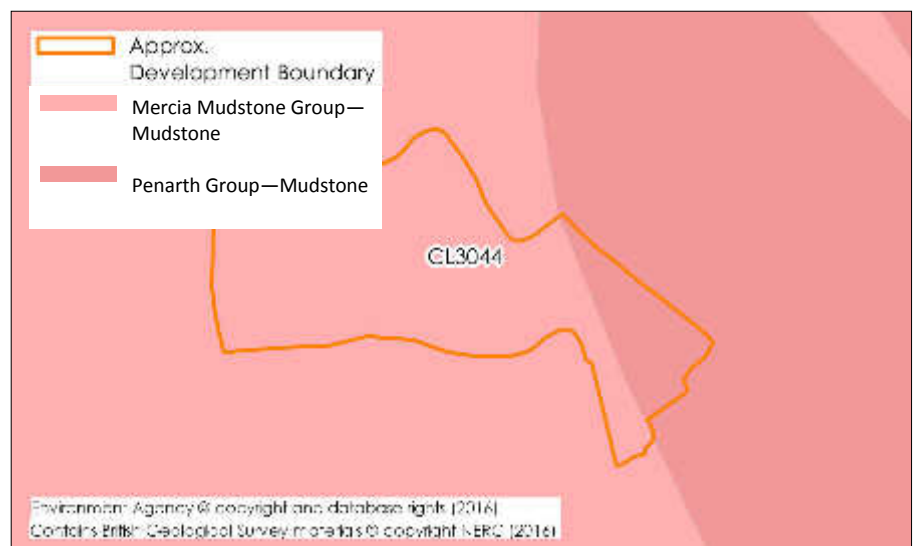
The site is shown to be outside the area at risk of flooding from a breach of a reservoir.

Sewer Flooding/Canal Flooding/Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not shown to be subject to fluvial flooding.
- The site is not shown to be subject to tidal flooding.
- A small portion of the site is subject to 0.3m deep flooding with a velocity of 1m/s. The majority of the site is not subjected to high or medium risk of surface water flooding.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- It is recommended that finished floor levels at the site are raised by a nominal level above the immediate surrounding ground levels to protect against the residual risk of flooding.
- It is recommended that adequate routes are provided through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal.

LIMITATIONS

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Land to the South of North Kelsey Road, Caistor

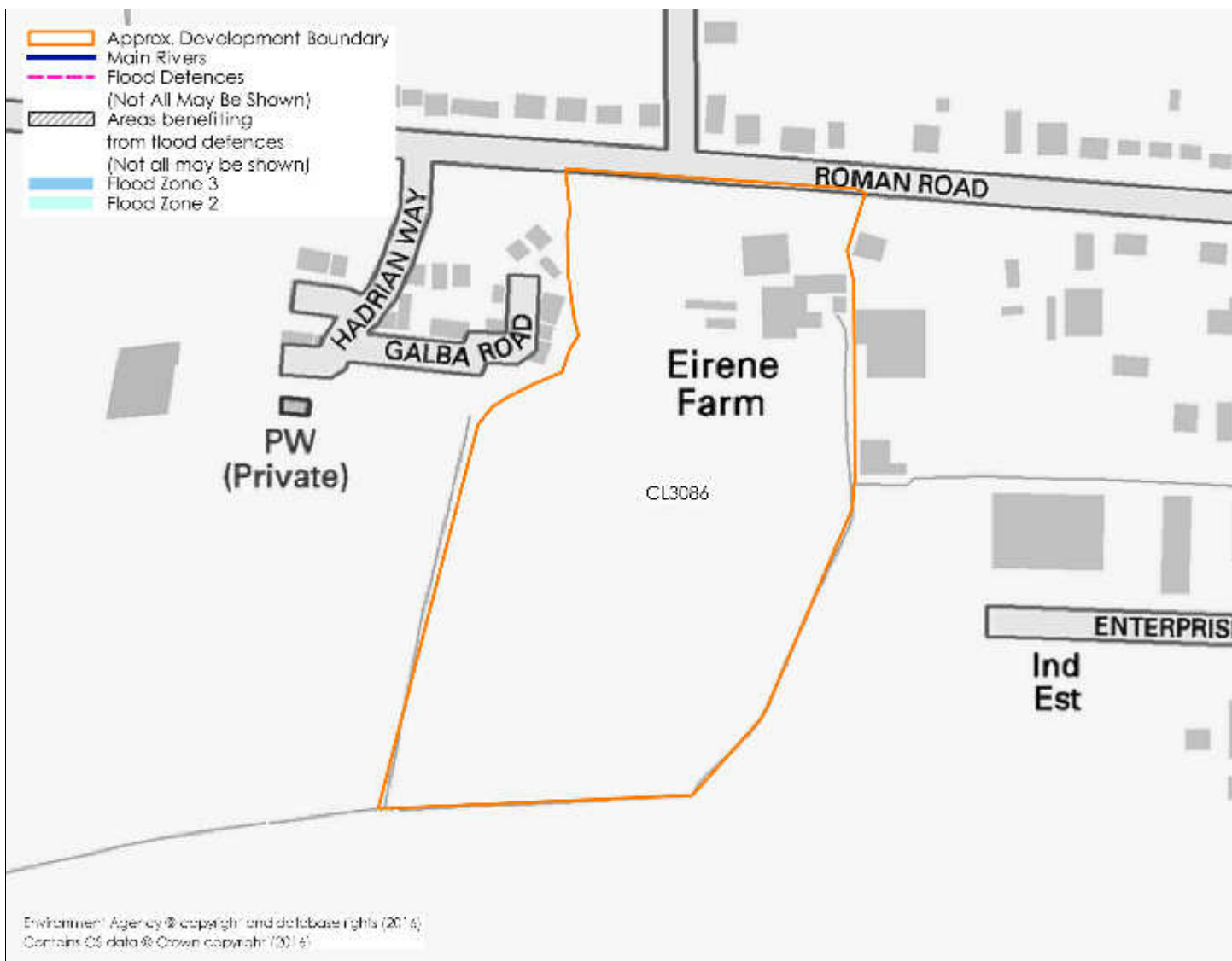
SITE DESCRIPTION

A fairly level site with riding stables in north east and a field to rear. Hedges and trees mark the western boundary with a footpath. Hedge along northern boundary. Industrial areas lie to the east, arable farm land to the south, houses to the north and a modern residential development to the east.

| | |
|-------------------------|----------------|
| REFERENCE | CL3086 |
| NATIONAL GRID REFERENCE | 510361, 401346 |
| SITE AREA (ha) | 6.01 ha |
| INTERNAL DRAINAGE BOARD | NA |

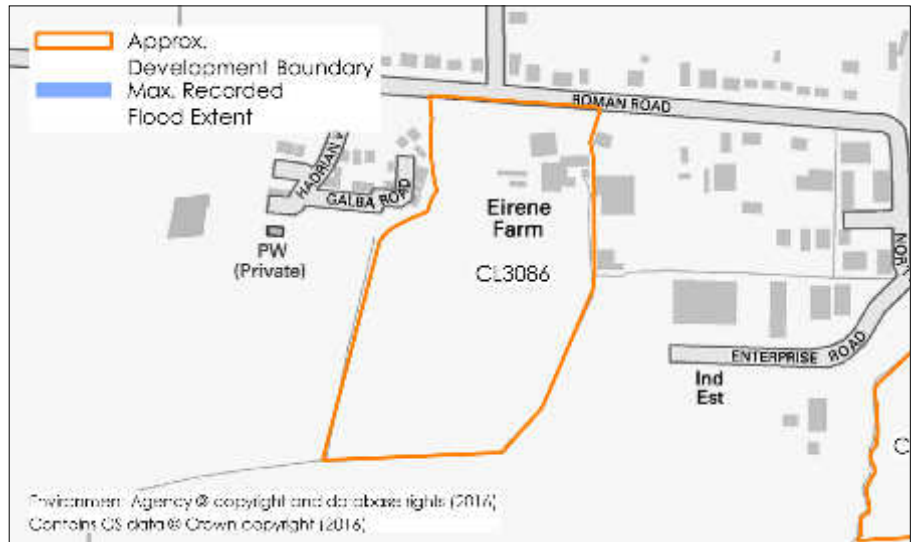
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Caistor |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 135 |

FLOOD MAP FOR PLANNING



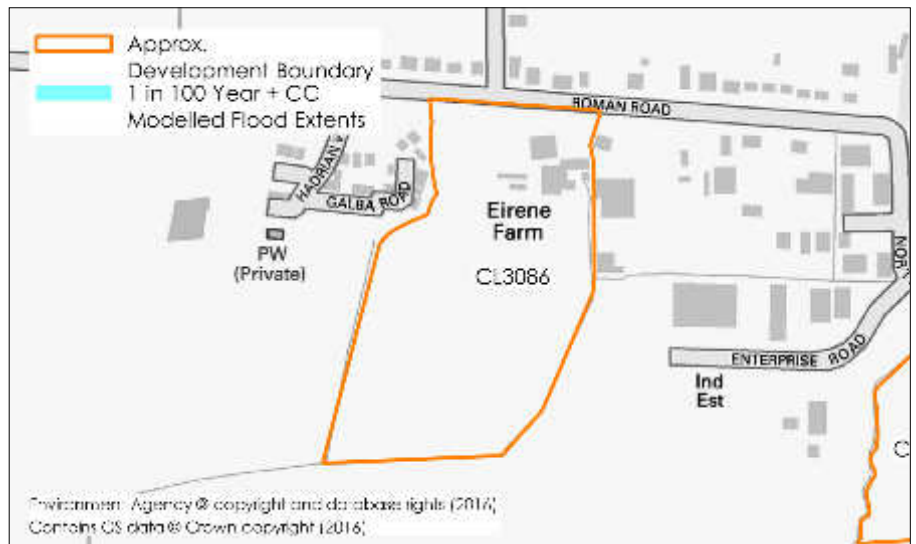
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



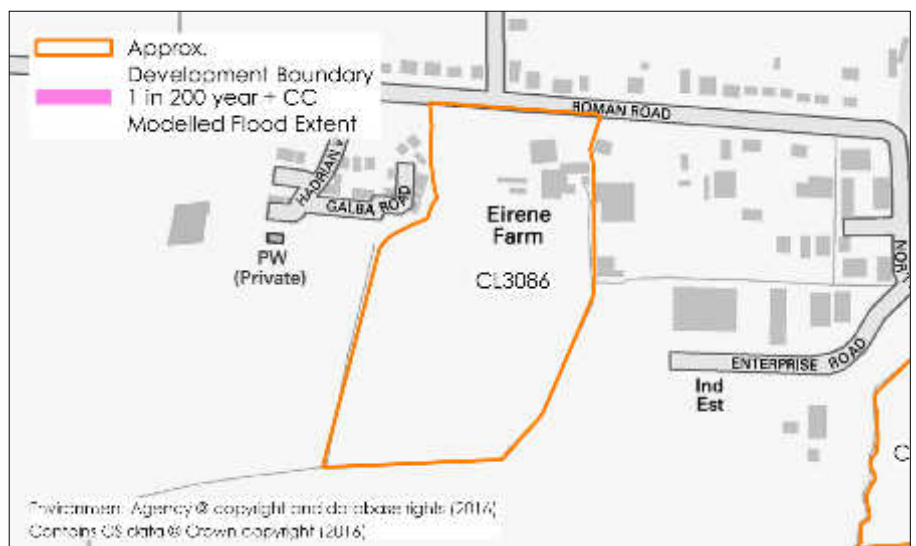
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + climate change (CC) event.



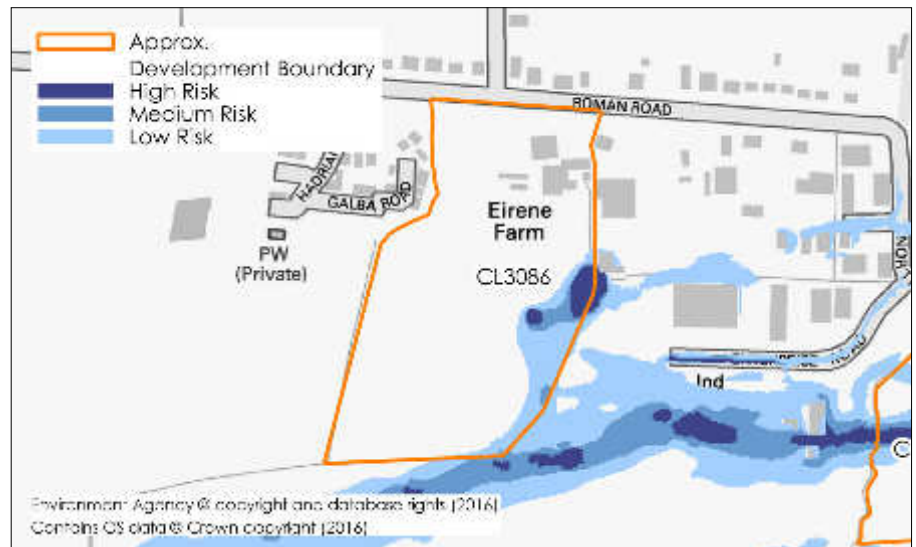
MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates the presence of a pluvial flood flow route along the eastern site boundary. Depths here are estimated to reach up to 0.6m, with velocities of up to 2m/s in the south-eastern corner of the site.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

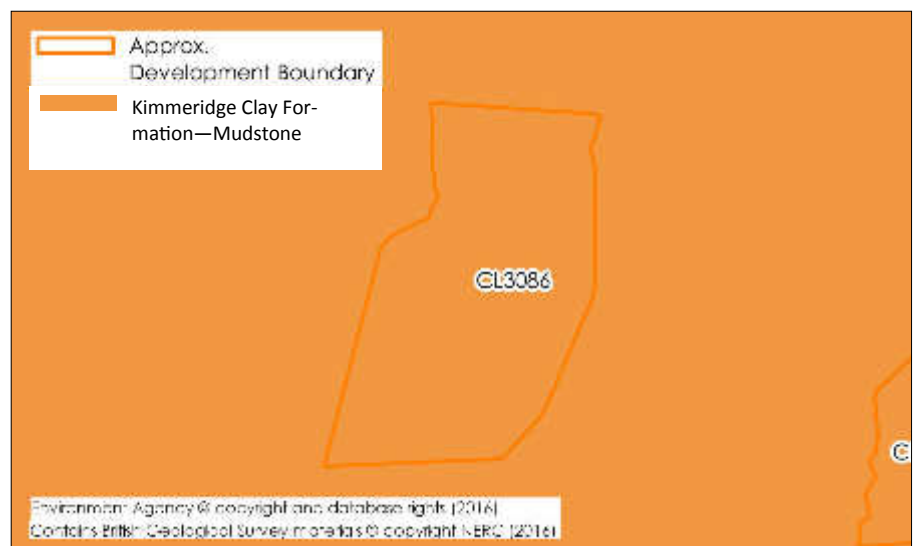
The site is shown to be outside the area at risk of flooding from a breach of a reservoir.

Sewer Flooding/Canal Flooding/Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not shown to be subject to fluvial flooding.
- The site is not shown to be subject to tidal flooding.
- A limited portion of the site is shown to be at risk of pluvial flooding with depths of up to 0.6m and velocities of 2m/s.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigate in site specific Flood risk Assessments are indicated below.

- It is recommended that finished floor levels at the site are raised by a nominal level above the immediate surrounding ground levels to protect against the residual risk of flooding.
- It is recommended that adequate routes are provided through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal.

LIMITATIONS

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Field between properties known as "Mayfield" & "Wodelyn Cottage", Linwood

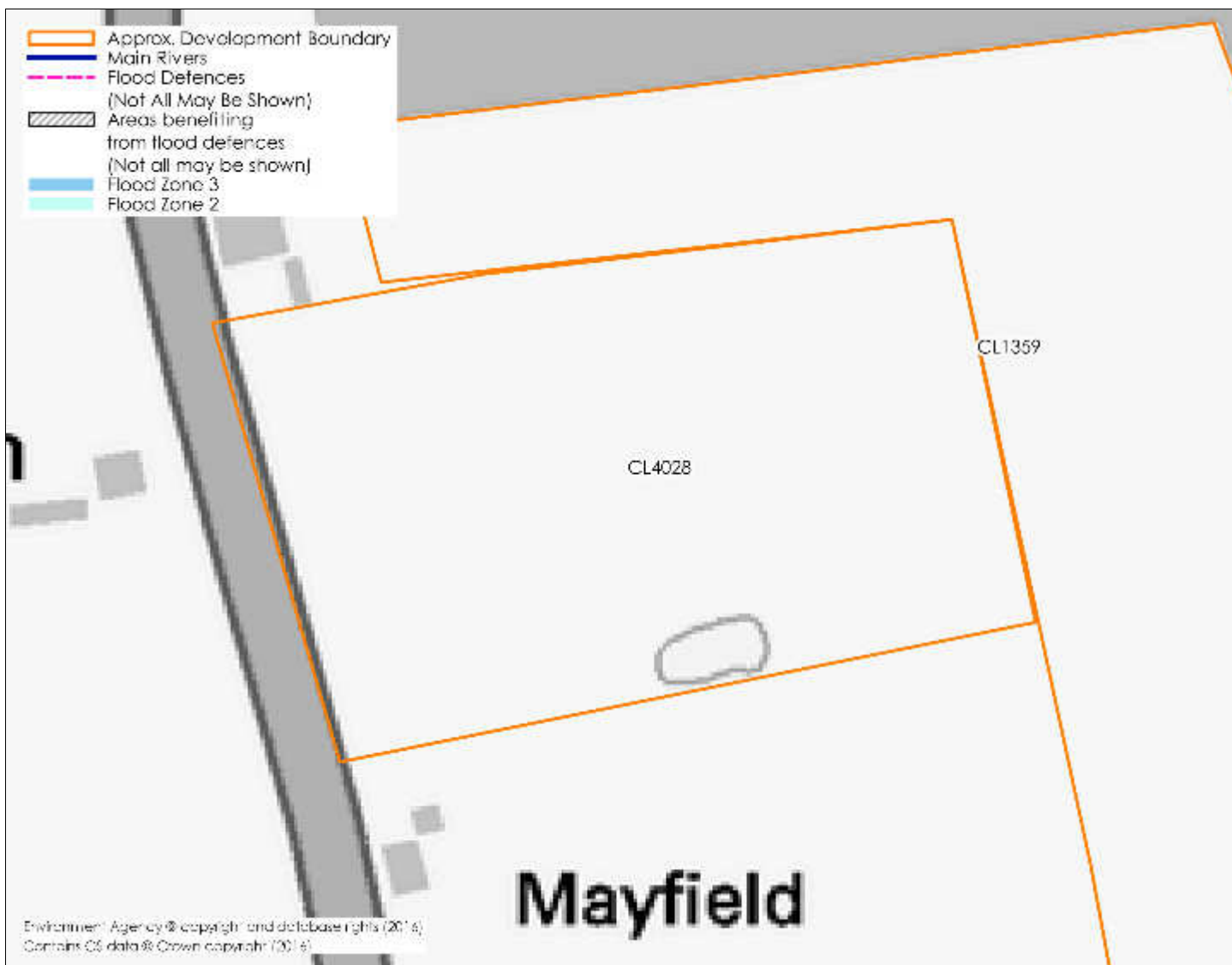
SITE DESCRIPTION

This site is a fairly flat field, possibly used for pasture with a pond at the southern edge. The north, west and east boundaries are marked by hedgerows and the southern boundary is marked with an open fence. The site is mainly surrounded by open fields but there are isolated houses to the south and west and housing to the north.

| | |
|-------------------------|----------------|
| REFERENCE | CL4028 |
| NATIONAL GRID REFERENCE | 510951, 388293 |
| SITE AREA (ha) | 1.86 ha |
| INTERNAL DRAINAGE BOARD | NA |

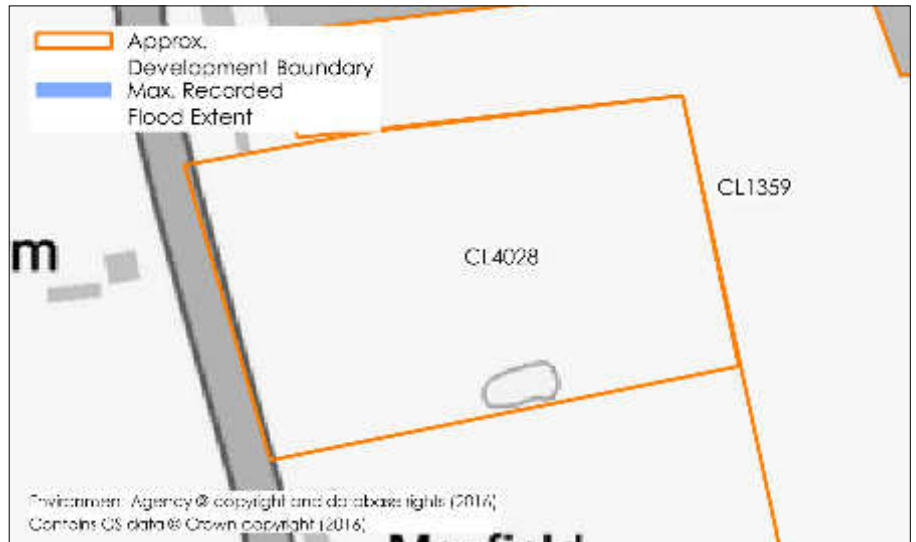
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Market Rasen |
| LOCAL AUTHORITY | West Lindsey |
| INDICATIVE CAPACITY | 47 |

FLOOD MAP FOR PLANNING



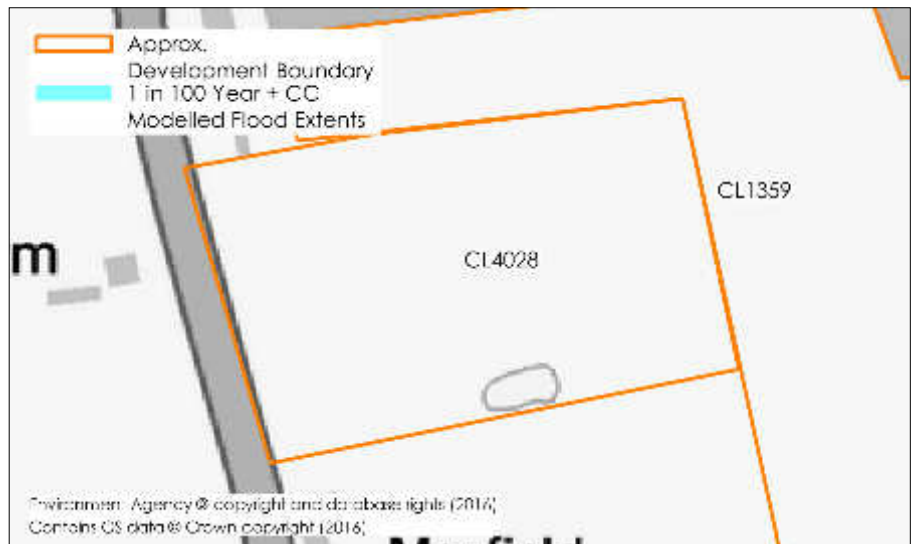
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



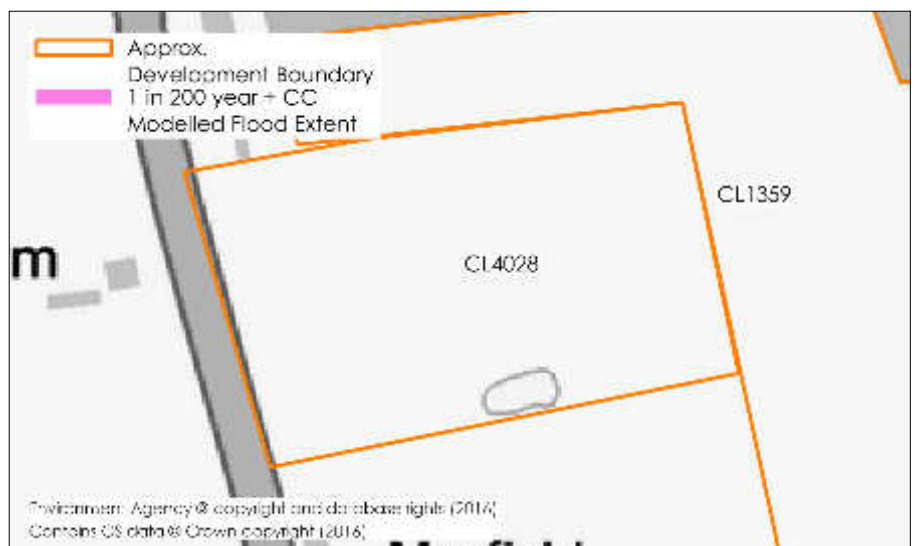
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



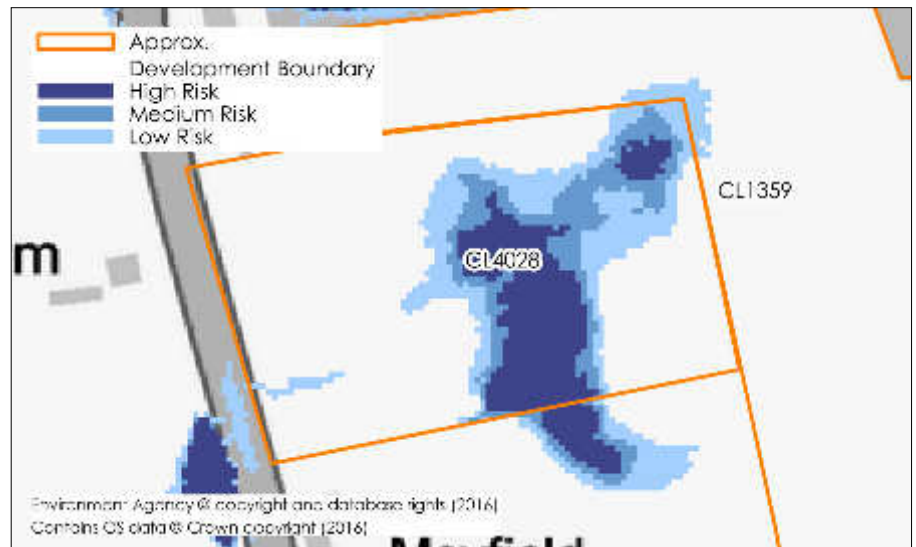
MODELLED TIDAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that part of the site is at high risk of flooding. In the high surface water flood risk area the depth of flooding is estimated to be up to 0.3m with a velocity of 0.25m/s.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

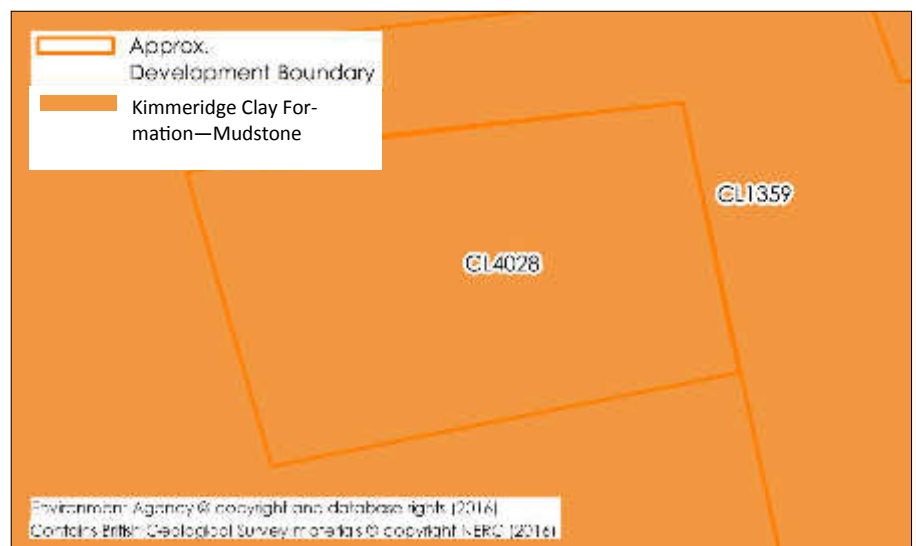
The site is shown to be outside the area at risk of flooding from a breach of a reservoir.

Sewer Flooding/Canal Flooding/Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soaka-ways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not shown to be subject to fluvial flooding.
- The site is not shown to be subject to tidal flooding.
- The site is subject to 0.3m deep flooding with a velocity of 0.25m/s in the high surface water flood risk area.
- The site is not subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- It is recommended that finished floor levels at the site are raised by a nominal level above the immediate surrounding ground levels to protect against the residual risk of flooding.
- It is recommended that adequate routes are provided through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal.

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Land North of Hainton Road, Lincoln

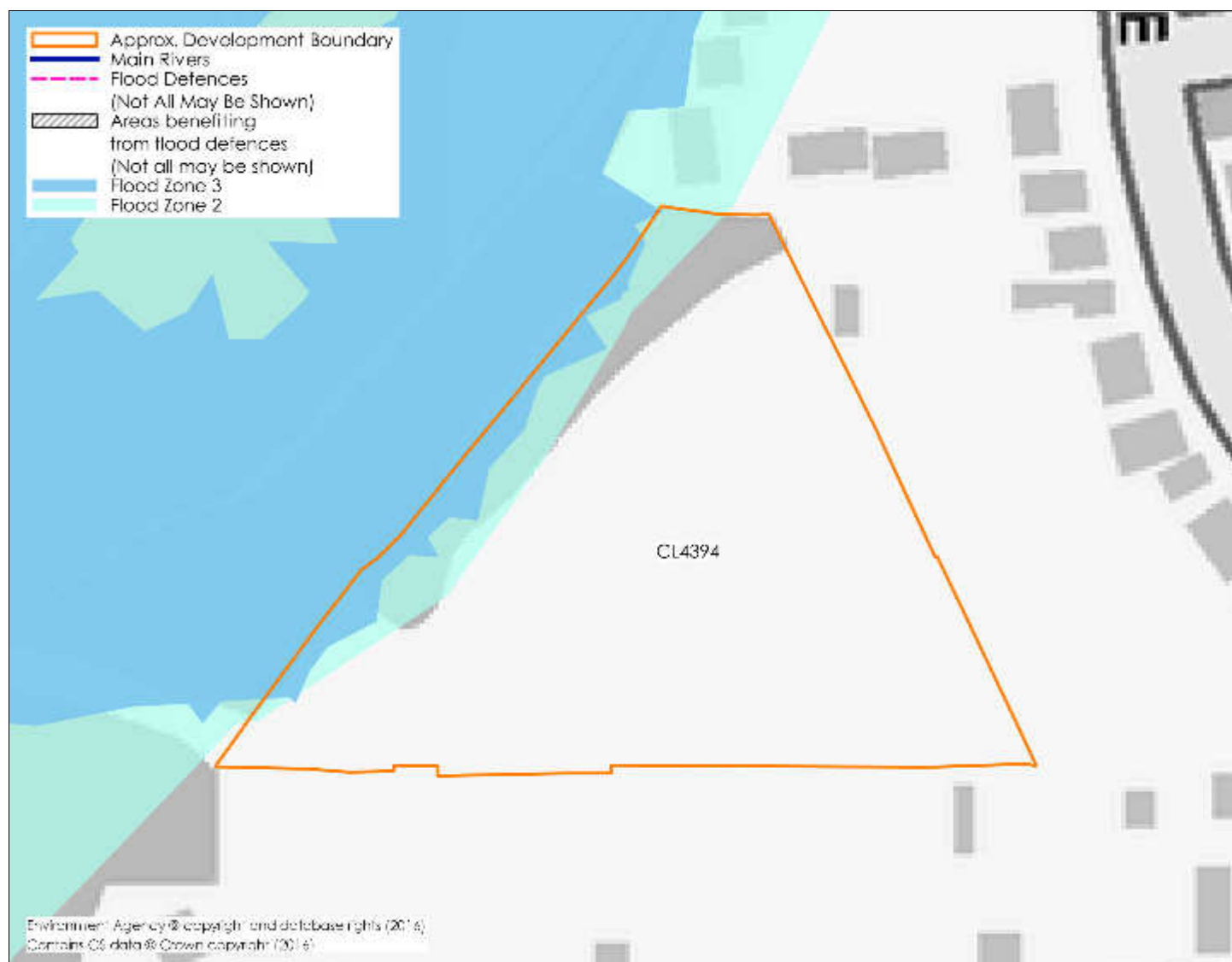
SITE DESCRIPTION

This site lies to the north of Hainton Road, Lincoln. The site is mostly greenfield in nature, with a few old vacant buildings. There is a densely wooded area to the north west, and residential housing to the other borders of the site.

| | |
|-------------------------|----------------|
| REFERENCE | CL4394 |
| NATIONAL GRID REFERENCE | 496126, 368449 |
| SITE AREA (ha) | 1.14 ha |
| INTERNAL DRAINAGE BOARD | UPPER WITHAM |

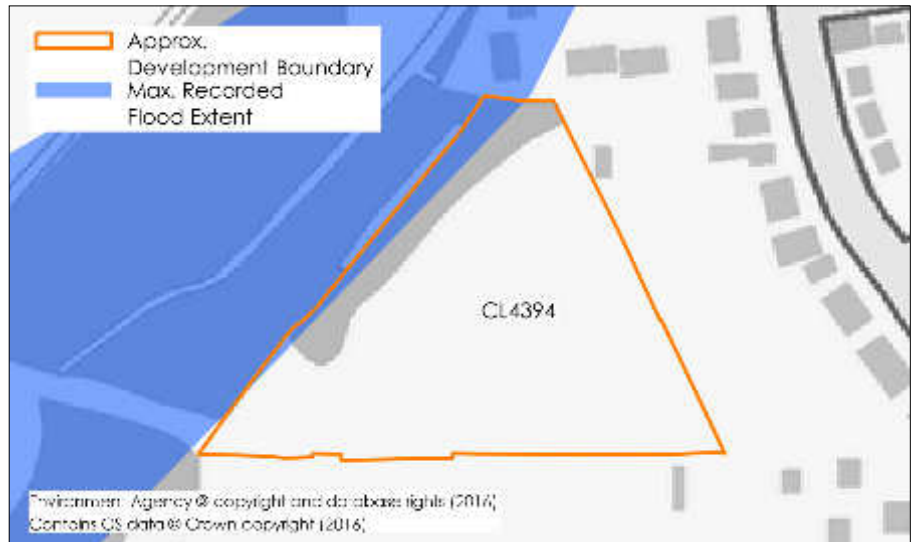
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Lincoln |
| LOCAL AUTHORITY | City of Lincoln |
| INDICATIVE CAPACITY | 39 |

FLOOD MAP FOR PLANNING



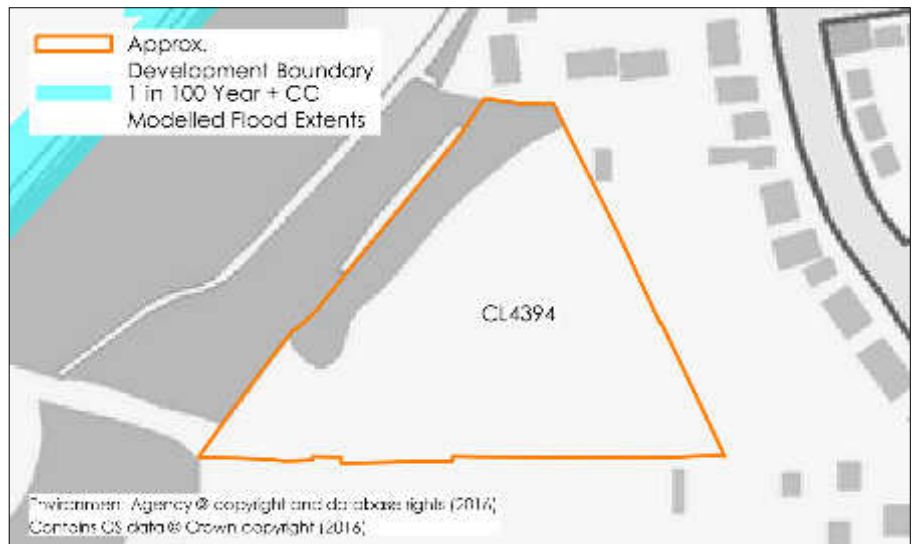
HISTORICAL FLOODING

Historical flooding information provided by the Environment Agency indicates that the land immediately to the west of the site has been subjected to flooding in 1947 from the River Witham.



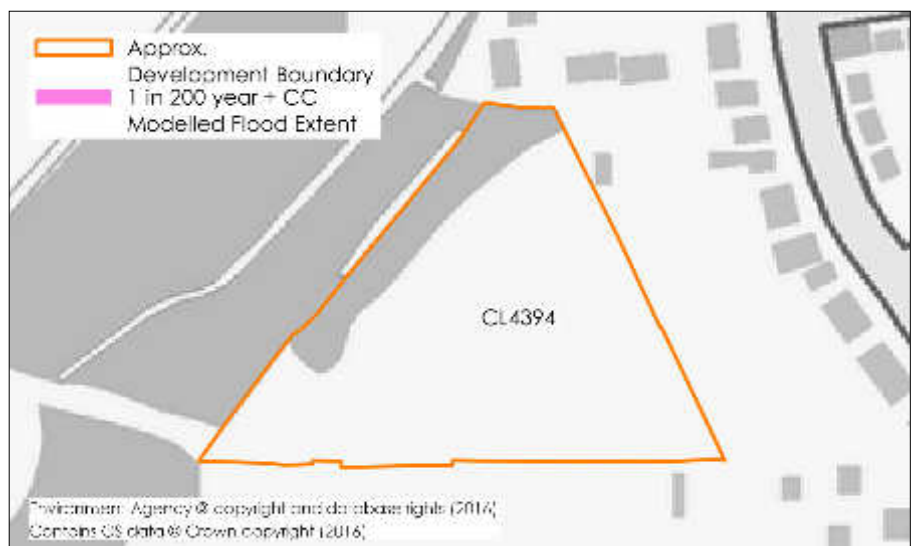
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

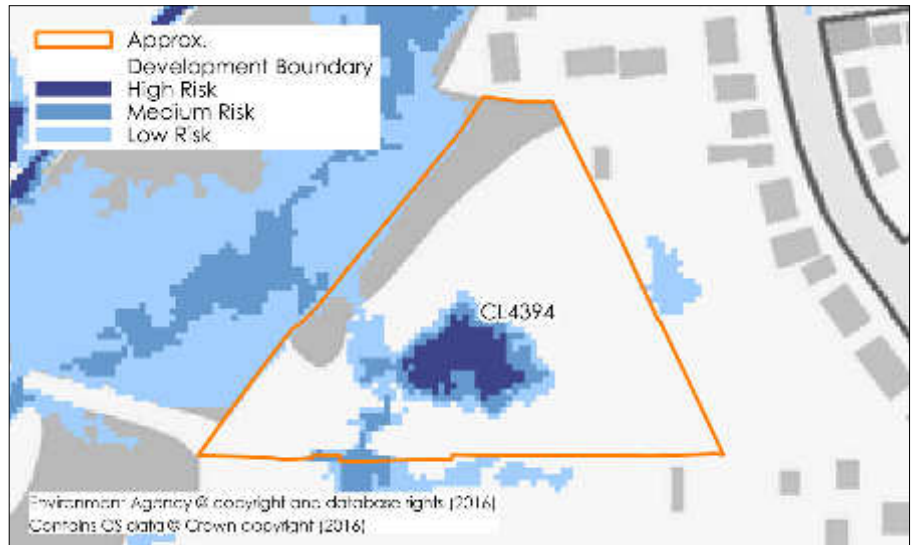
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that there is a high surface water flood risk area in the centre of the site. The depth of flooding is estimated to be 0.3m to 0.6m with a velocity of 0.25m/s. This is likely to be associated with a topographical depression.

In addition, there is evidence of a low risk flow path through the site towards the northwest.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

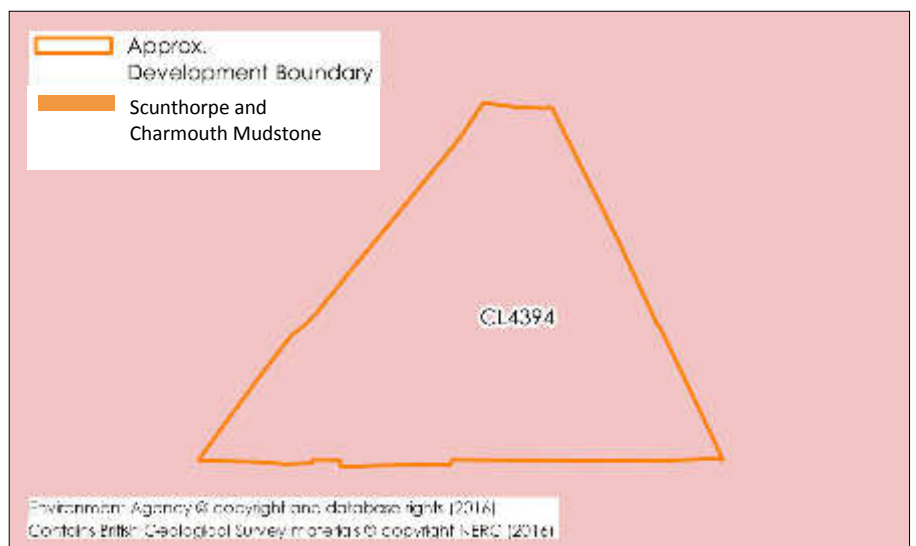
The site is shown to be within the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- Approximately 10% of the site is shown to be within Flood Zones 2 and 3 located entirely along the western boundary of the site.
- The site has previously been subjected to flooding in 1947.
- The site is not subjected to fluvial flooding for the 1 in 100 year + CC event.
- The site is shown to not be within the modelled 1 in 200 year + CC flood outline.
- The site is subject to 0.3m to 0.6m deep flooding with a velocity of 0.25m/s in the high surface water flood risk area.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Locate all development in Flood Zone 1 portion of the site.
- Raise finished floor levels 300mm above appropriate modelled flood level on site.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal.

LIMITATIONS

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Land at North of Usher Junior School

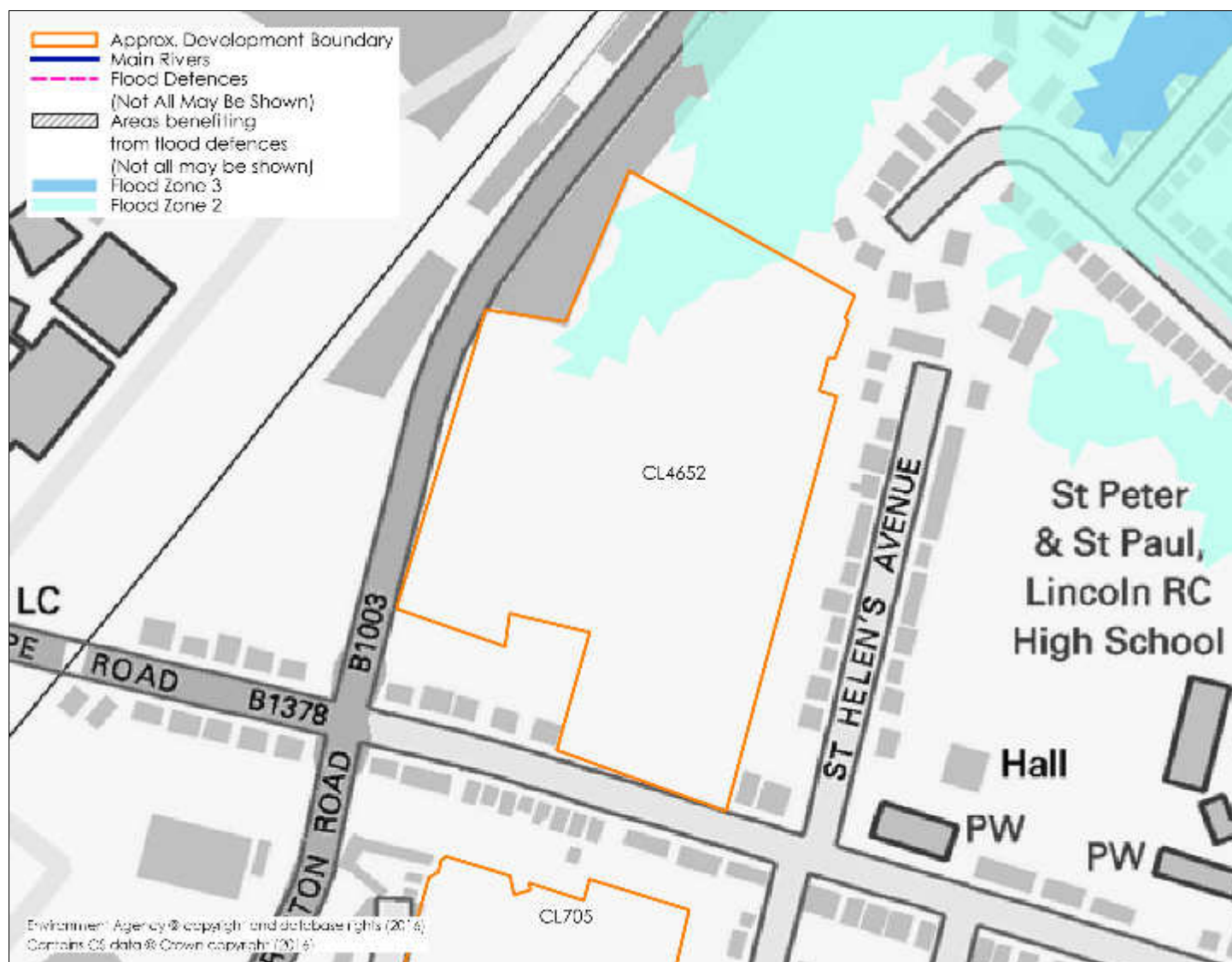
SITE DESCRIPTION

This is a former school site adjacent to Usher Street with hardstanding and demolished buildings and undeveloped areas, with a number of trees around the site. There are residential areas around the site with some undeveloped land to the north and the B1003 to the west.

| | |
|-------------------------|----------------|
| REFERENCE | CL4652 |
| NATIONAL GRID REFERENCE | 495721, 369365 |
| SITE AREA (ha) | 3.57 ha |
| INTERNAL DRAINAGE BOARD | NA |

| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Lincoln |
| LOCAL AUTHORITY | City of Lincoln |
| INDICATIVE CAPACITY | 81 |

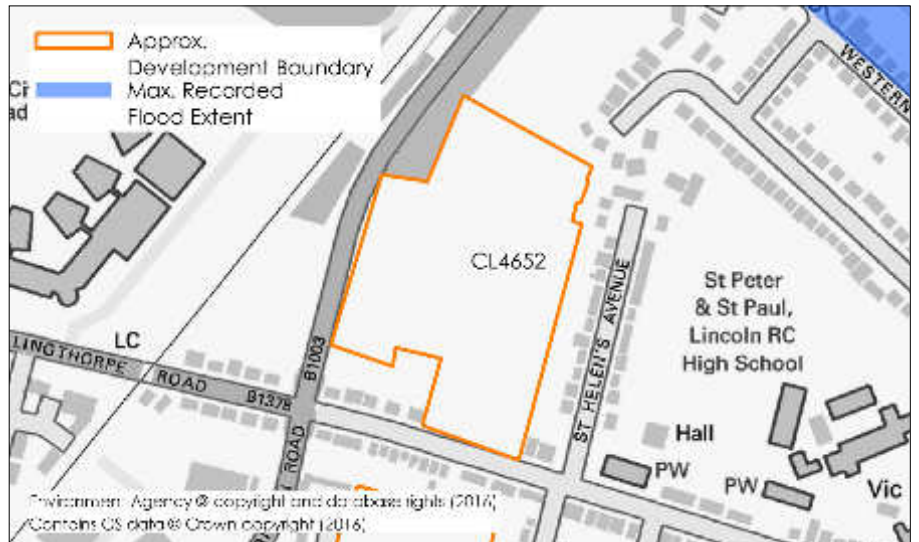
FLOOD MAP FOR PLANNING



HISTORICAL FLOODING

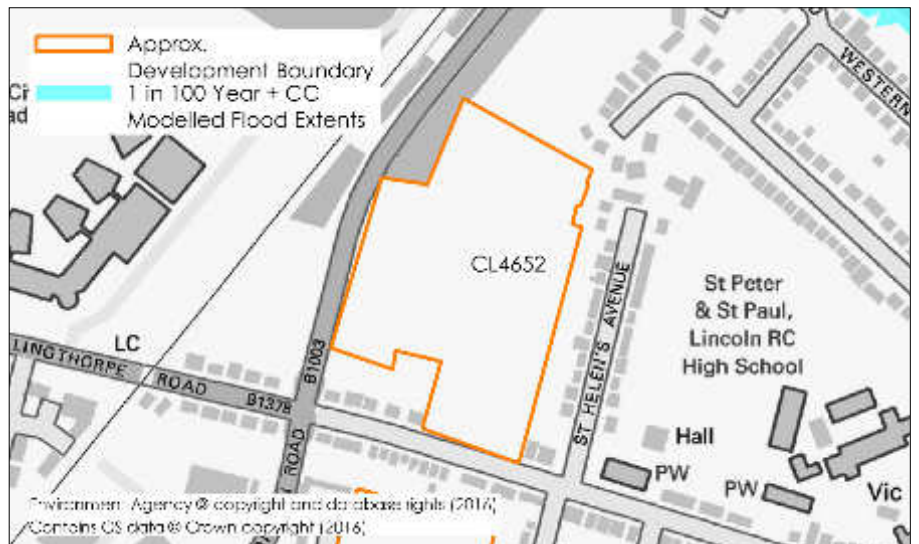
The Environment Agency do not have any records of the site previously being subjected to flooding.

The closest recorded flood extent is some 260m north of the site associated with a historic event on the River Trent in 1795.



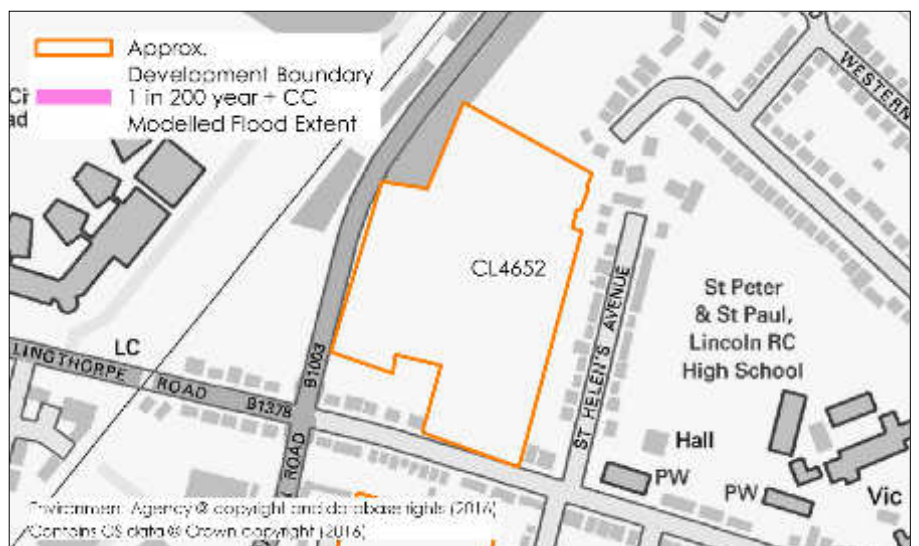
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

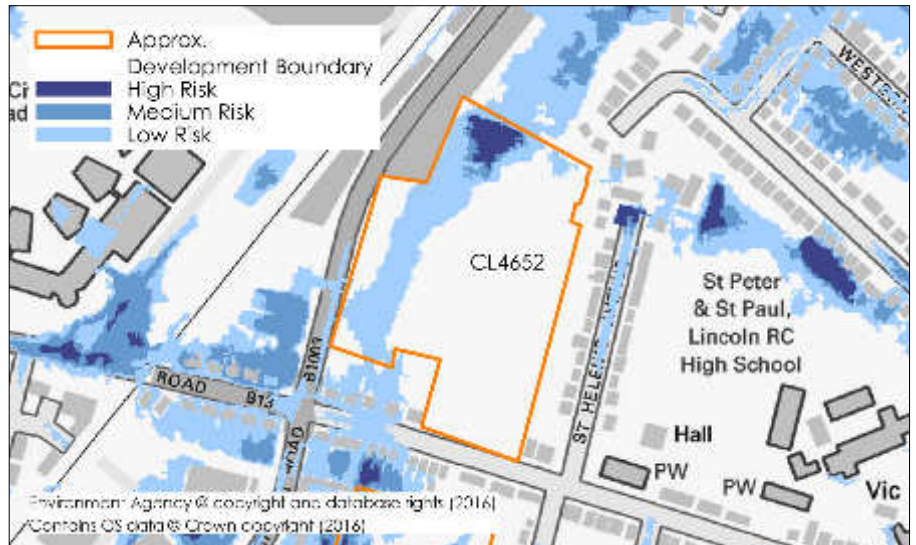
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that the western part of the site is affected by a pluvial flow route. Flows are shown to travel from south to north through the site, where some ponding at the boundary is evident.

In the high surface water flood risk area at the site boundary, the depth of flooding is estimated to be between 0.15m to 0.3m with a velocity of 0.25m/s.



OTHER SOURCES OF FLOOD RISK

Breaching of Flood Defences

The Boultham Catchwater is approx. 305m to the north and the River Witham lies approx. 950m to the east. Both have a number of defences associated with them, which are actively maintained by the Environment Agency. There is generally a low probability that these could fail, however the consequences of such failure could be significant.

The information made available by the Environment Agency for this investigation does not provide sufficient data to report on this risk. However, the Environment Agency's hydraulic flood model would allow for this analysis to be undertaken, and the advice of a flood risk specialist should be sought when preparing a planning application for the site.

Reservoir Flooding

The site is shown to be outside of the area at risk of flooding from a breach of a reservoir.

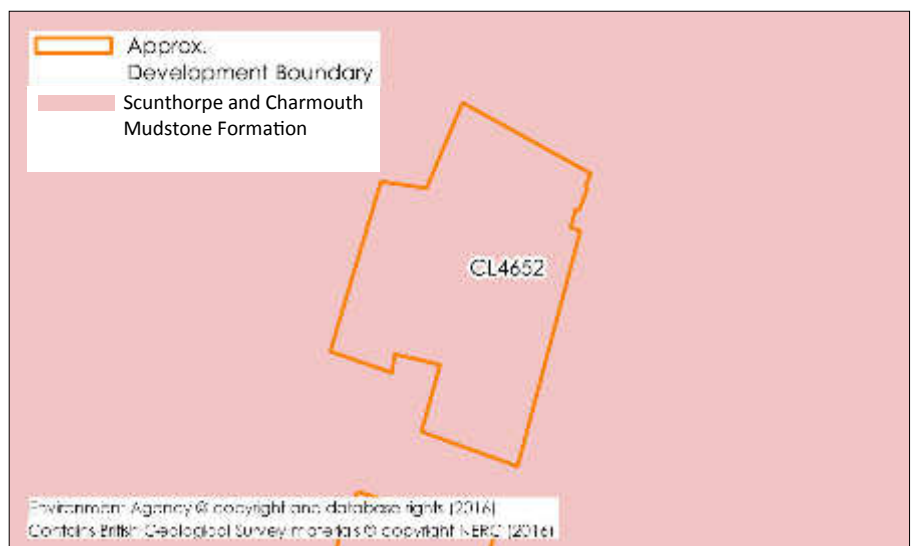
Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.

Part of the site is shown to be underlain by superficial deposits of Balderton Sands and Gravels to an unknown depth and so further investigation is recommended.



SUMMARY OF FLOOD RISK

- Approximately 15% of the site is shown to be within Flood Zone 2.
- The site has not previously been subjected to flooding.
- The site is not subjected to fluvial flooding for the 1 in 100 year + CC event.
- The site is subject to 0.3m deep flooding with a velocity of 0.25m/s in the high surface water flood risk area. There is also shown to be a low risk surface water flow path through the western part of the site from south to north.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood Risk Assessments are indicated below.

- Locate development in Flood Zone 1 portion of the site.
- Raise finished floor levels 300mm above existing levels.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal.

LIMITATIONS

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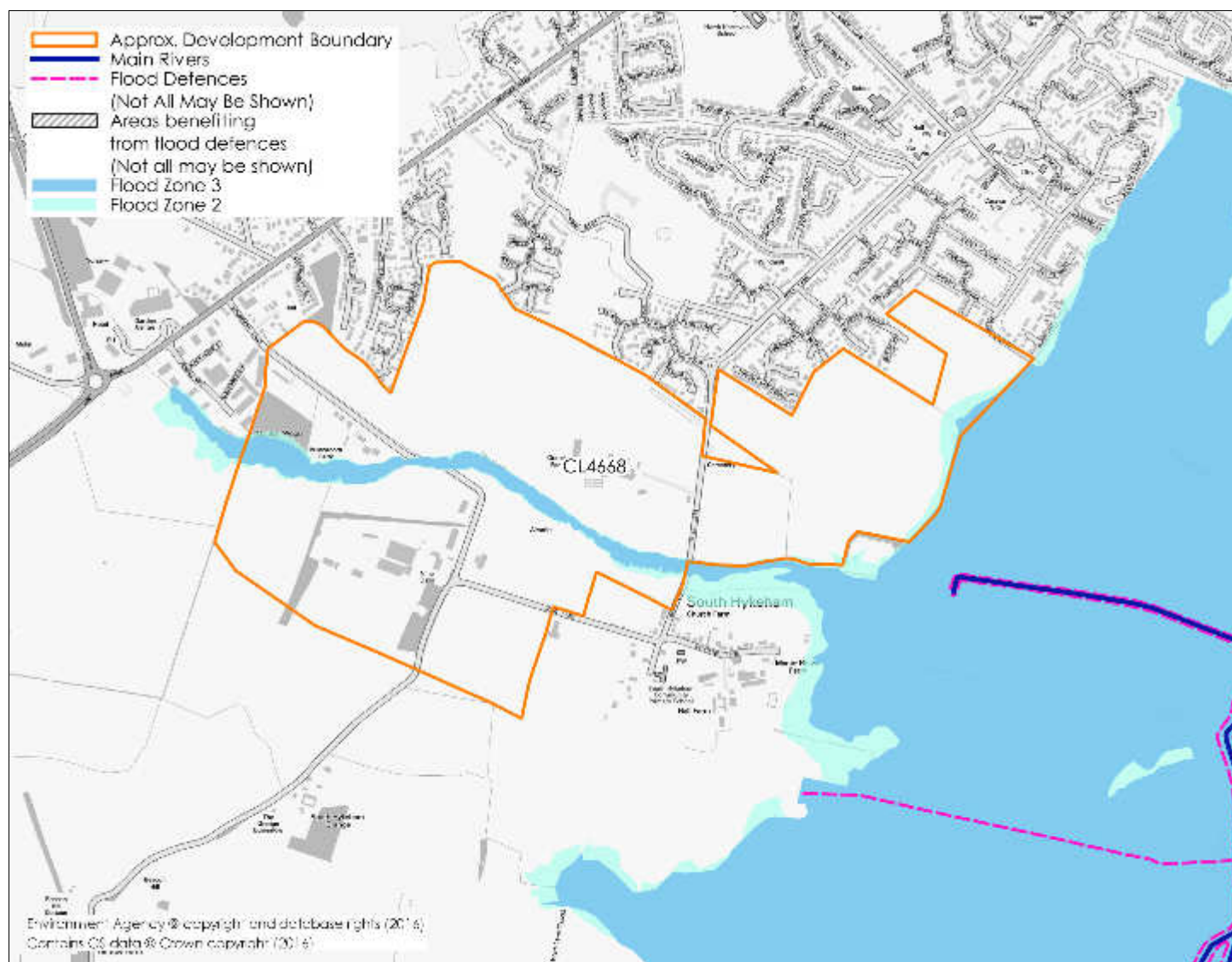
SITE DESCRIPTION

The site is located on farmland spreading over several fields between North and South Hykeham. Most of the site is greenfield in nature, however some agricultural development is present in central parts of the plot. Residential areas are located to the north and south, with further farmland to the east and west. An ordinary watercourse known as “The Beck” runs through the site from west to east.

| | |
|-------------------------|----------------|
| REFERENCE | CL4668 |
| NATIONAL GRID REFERENCE | 493352, 365023 |
| SITE AREA (ha) | 135.22 ha |
| INTERNAL DRAINAGE BOARD | UPPER WITHAM |

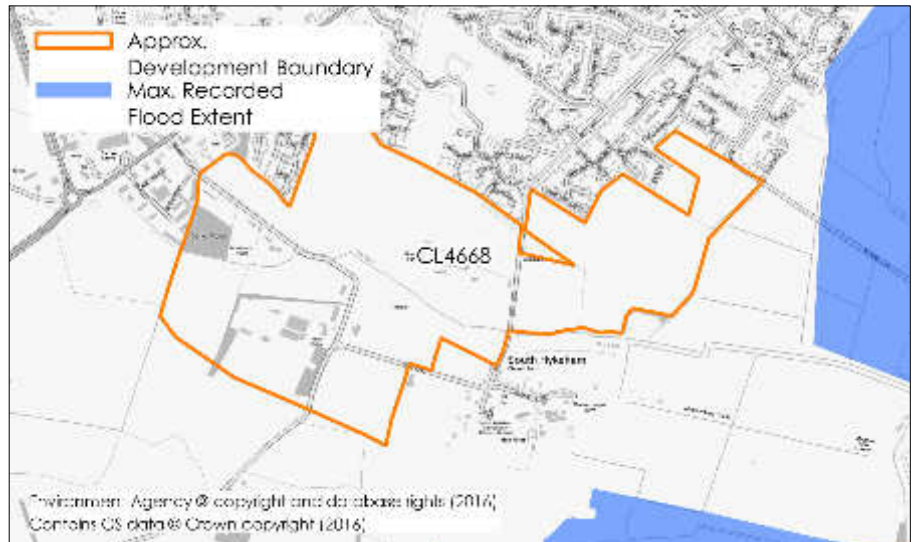
| | |
|---------------------|---------------------------------------|
| LOCAL PLAN STATUS | Preferred Sustainable Urban Extension |
| LOCATION | North Hykeham |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 2000 |

FLOOD MAP FOR PLANNING



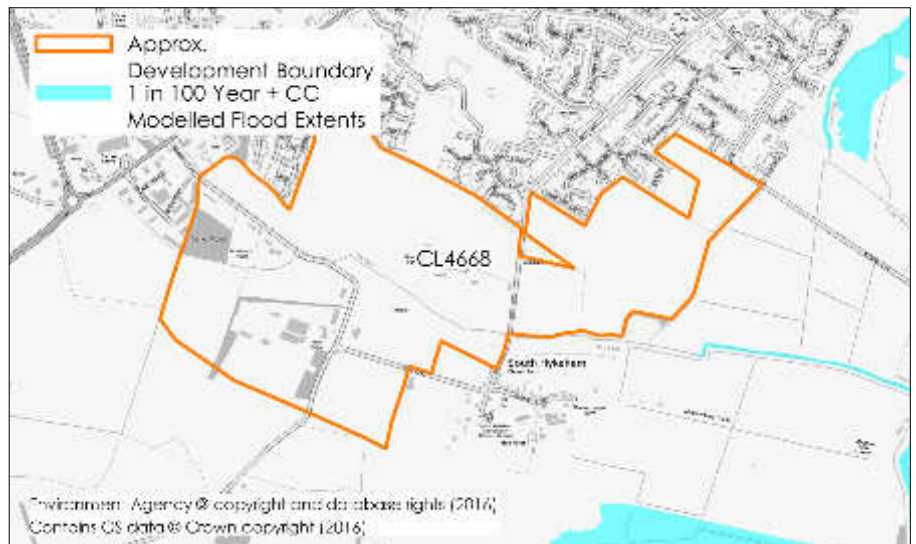
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



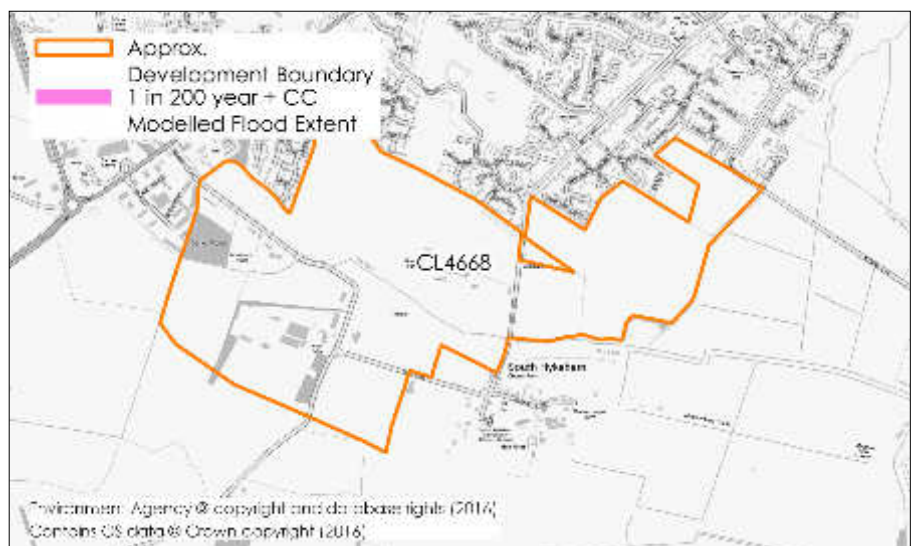
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

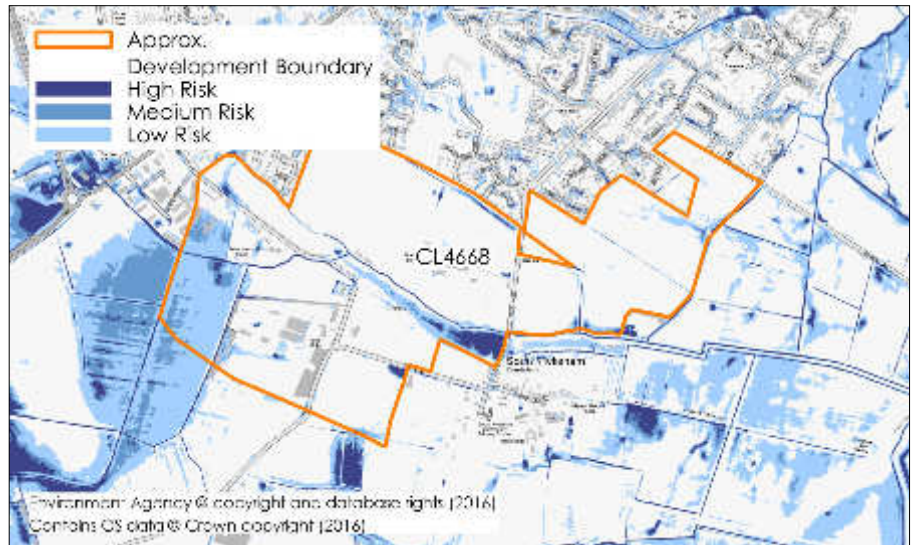
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the high surface water flood risk area the depth of flooding is estimated to be up to 0.6 metres with a velocity of up to 0.5 m/s.

In addition, there is evidence of a medium risk flow path through the site from west to east and a substantial area of low risk to the west of the plot.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

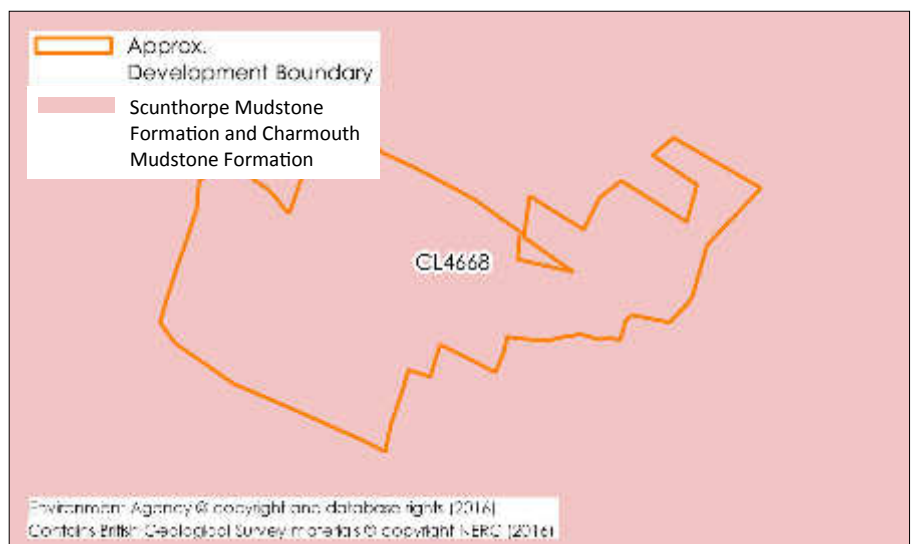
The site is shown to be within the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- Approximately 10% of the site is shown to be within Flood Zones 2 and 3.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding in the Environment Agency 1 in 100 year + CC Model.
- The site is not subject to tidal flooding.
- The site is subject to 0.6m deep flooding with a velocity of 0.5 m/s in the high surface water flood risk area.
- The site is subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Locate all development in Flood Zone 1 portion of the site.
- Raise finished floor levels 300mm above flood level on site and provide flood resilient construction 300mm above residual flood level.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

LIMITATIONS

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Washingborough Road

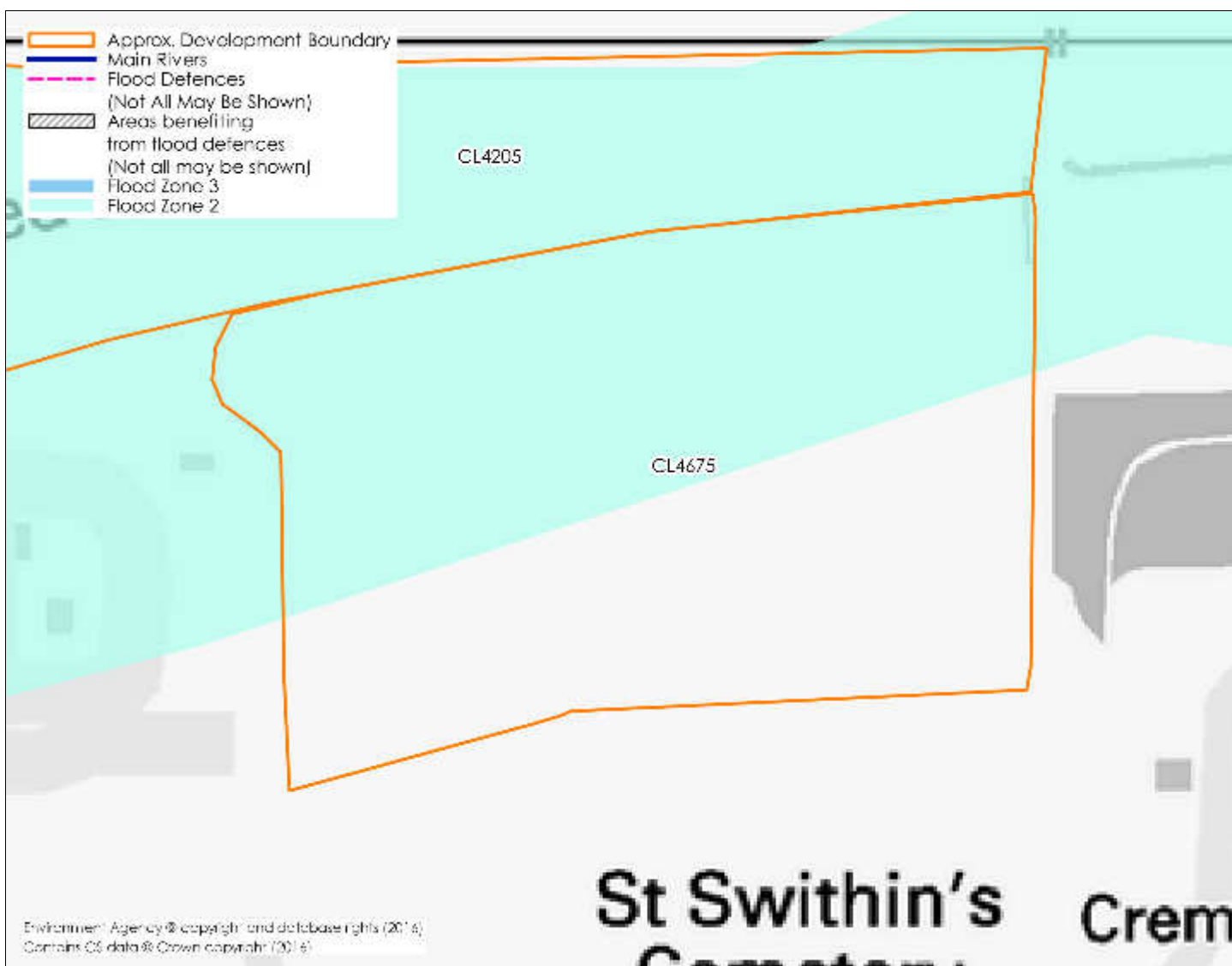
SITE DESCRIPTION

Site located to the south of Lincoln and the River Witham, between the railway line and Washingborough Road. To the south lies a cemetery and to the north, across the railway line is predominantly industrial land use.

| | |
|-------------------------|-----------------------|
| REFERENCE | CL4675 |
| NATIONAL GRID REFERENCE | 498760, 370460 |
| SITE AREA (ha) | 0.92 ha |
| INTERNAL DRAINAGE BOARD | WITHAM FIRST DISTRICT |

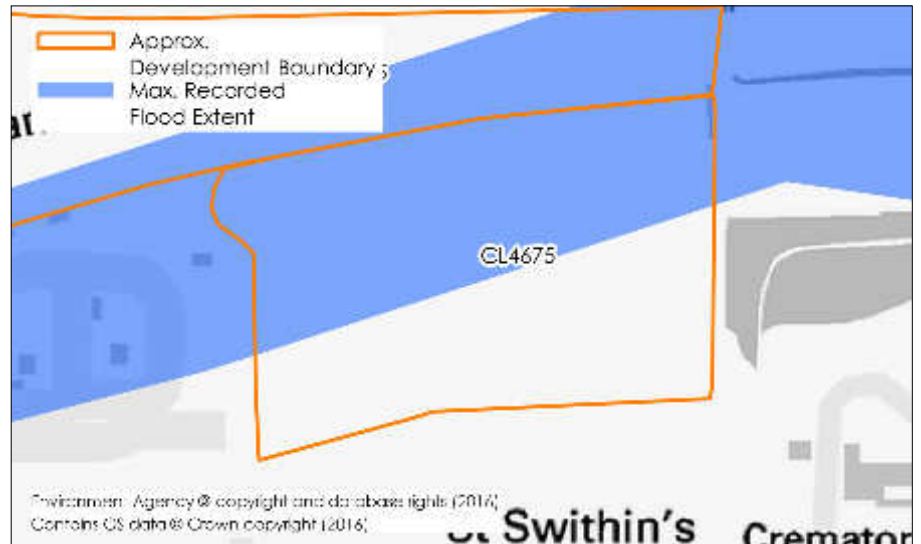
| | |
|---------------------|---------------------|
| LOCAL PLAN STATUS | Gypsy and Traveller |
| LOCATION | Lincoln |
| LOCAL AUTHORITY | City of Lincoln |
| INDICATIVE CAPACITY | |

FLOOD MAP FOR PLANNING



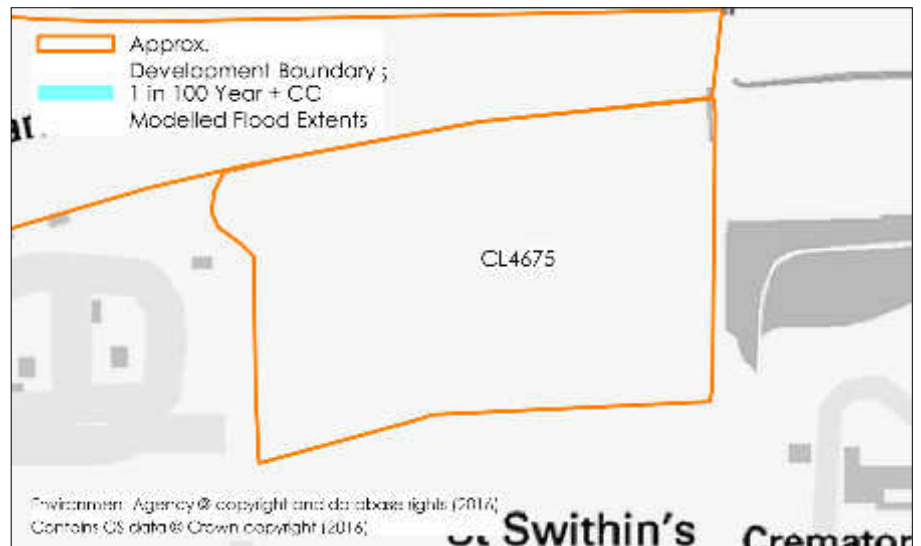
HISTORICAL FLOODING

Historical flooding information provided by the Environment Agency indicates that the site has been subjected to flooding in 1947 from the River Witham.



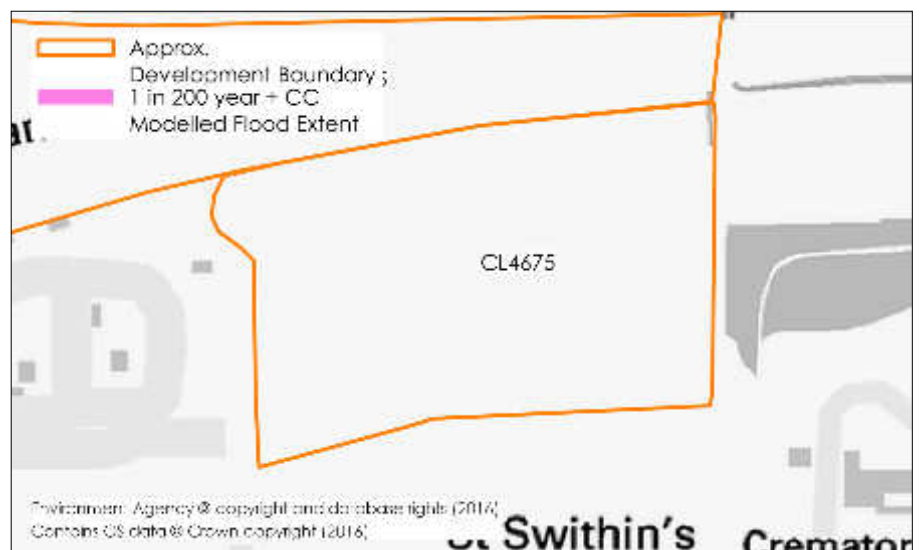
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

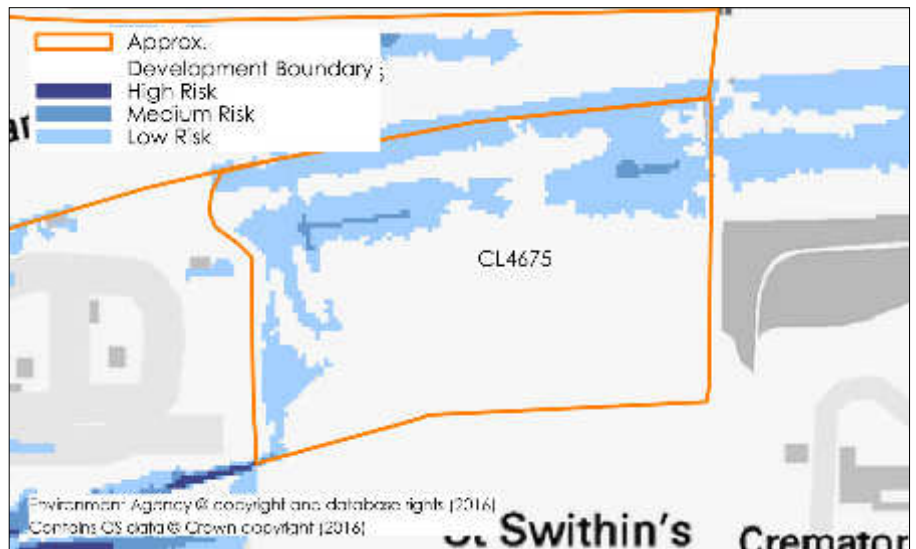
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the medium surface water flood risk area the depth of flooding is estimated to be up to 0.3 metres with a velocity of less than 0.25 m/s.

In addition, there is evidence of low risk flow paths through the site along the north and west boundaries



OTHER SOURCES OF FLOOD RISK

Breaching of Flood Defences

The South Delph has a number of defences associated with it, which are actively maintained by the Environment Agency. There is generally a low probability that these could fail, however the consequences of such failure could be significant.

The information made available by the Environment Agency for this investigation does not provide sufficient data to report on this risk. However, the Environment Agency's hydraulic flood model would allow for this analysis to be undertaken, and the advice of a flood risk specialist should be sought when preparing a planning application for the site.

Reservoir Flooding

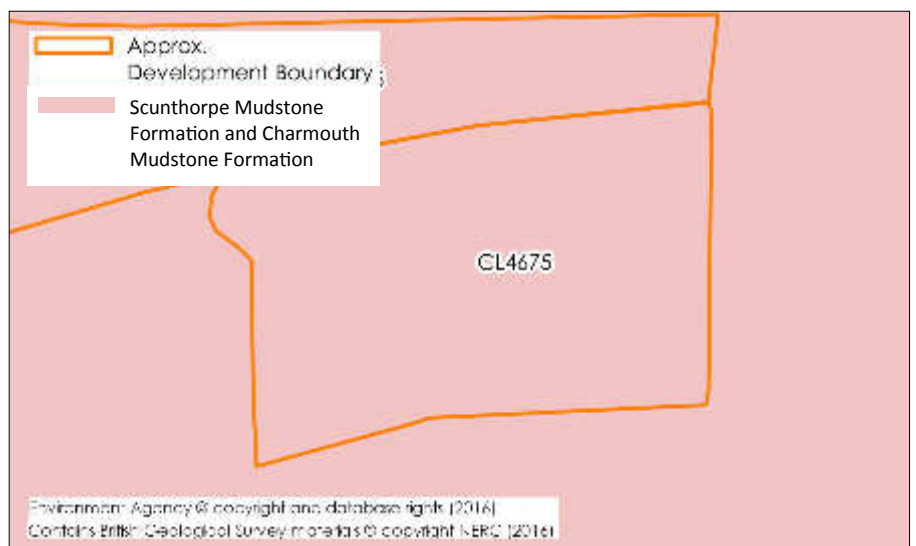
The site is shown to be outside of the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- Approximately 50% of the site is shown to be within Flood Zone 2.
- The site has previously been subjected to flooding in 1947.
- The site is not subject to fluvial flooding in the Environment Agency 1 in 100 year + CC model.
- The site is not subject to tidal flooding.
- The site is not subjected to high risk of surface water flooding.
- The site is subjected to residual flood risk from overtopping or breaching of the defences.
- Soakaways might not be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Raise land levels to provide development platform above flood level on site.
- Raise finished floor levels 300mm above flood level on site and provide flood resilient construction 300mm above residual flood level.
- Provide routes through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal including soakaway assessment.

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Land off Western Avenue, Lincoln

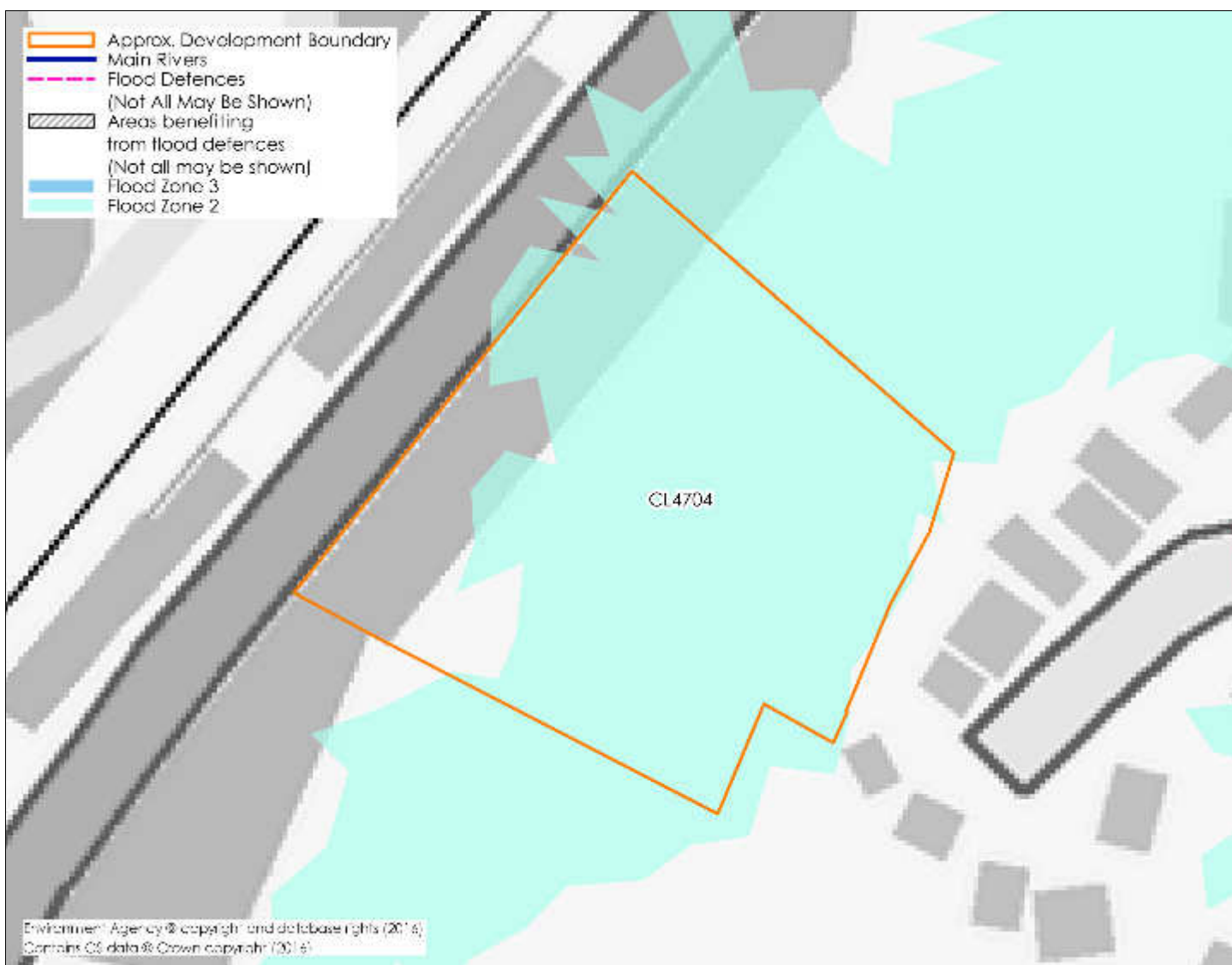
SITE DESCRIPTION

This site is a fairly flat garden area which currently comprises a series of polytunnels. There are areas of mature trees, particularly along the western edge. The site to the north has permission for housing. There is a former school site to the south and houses to the east. To the west is the B1003, Tritton Road and beyond the highway is a school.

| | |
|-------------------------|----------------|
| REFERENCE | CL4704 |
| NATIONAL GRID REFERENCE | 495771, 369532 |
| SITE AREA (ha) | 0.9 |
| INTERNAL DRAINAGE BOARD | Upper Witham |

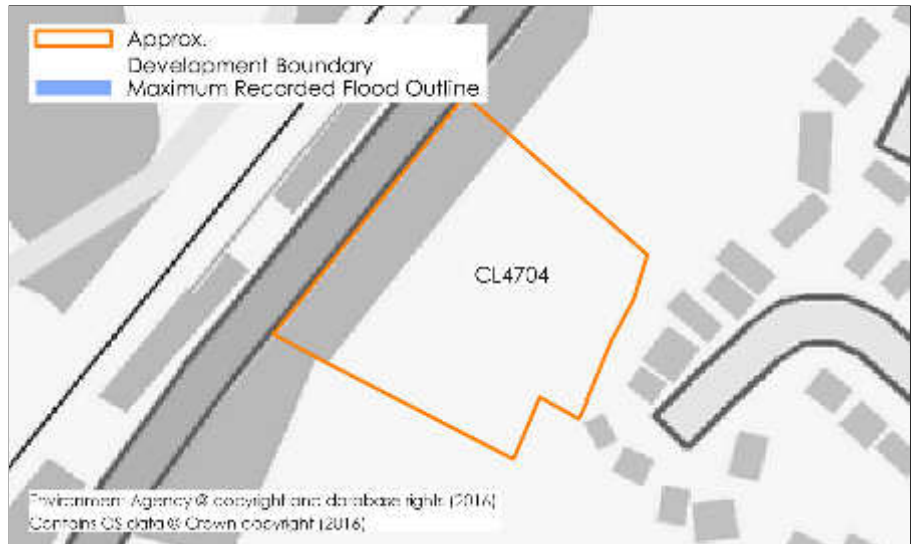
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Lincoln |
| LOCAL AUTHORITY | City of Lincoln |
| INDICATIVE CAPACITY | 30 |

FLOOD MAP FOR PLANNING



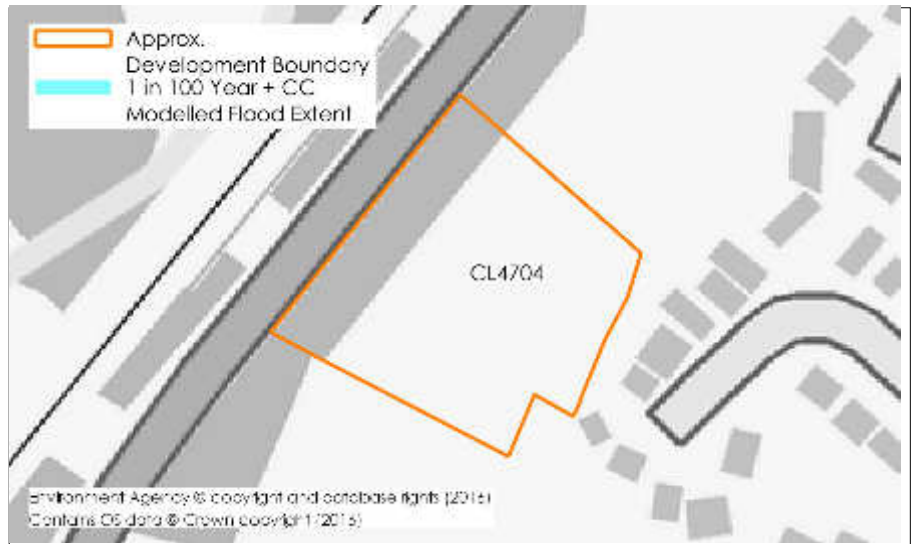
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



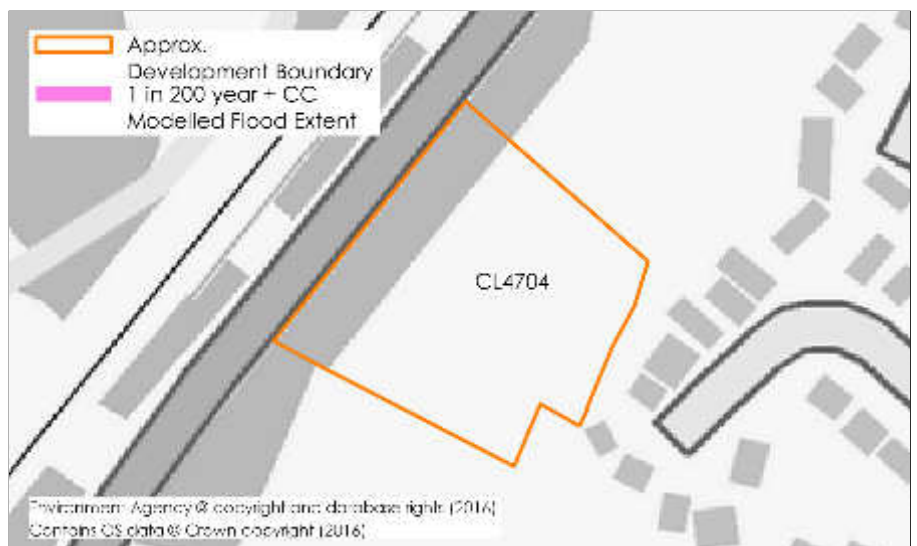
MODELLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding in the 1 in 100 year + CC event.



MODELLED TIDAL RISKS

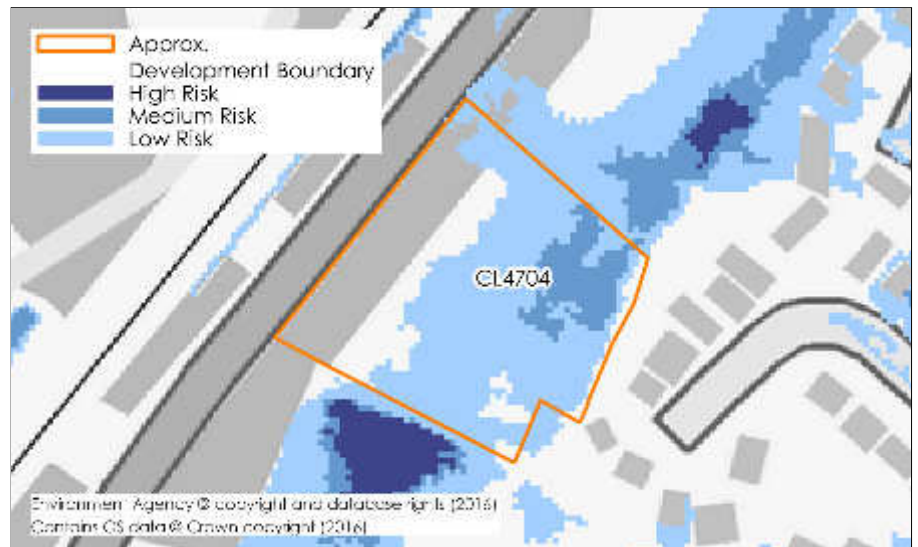
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding in the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that in the Medium surface water flood risk area the depth of flooding is estimated to be up to 0.6m with a velocity of up to 0.5m/s.

In addition, there is evidence of a Medium risk flow path through the site from west to east.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

Parts of the central and eastern portion of the site are shown to be within the area of risk of flooding from a breach of a reservoir.

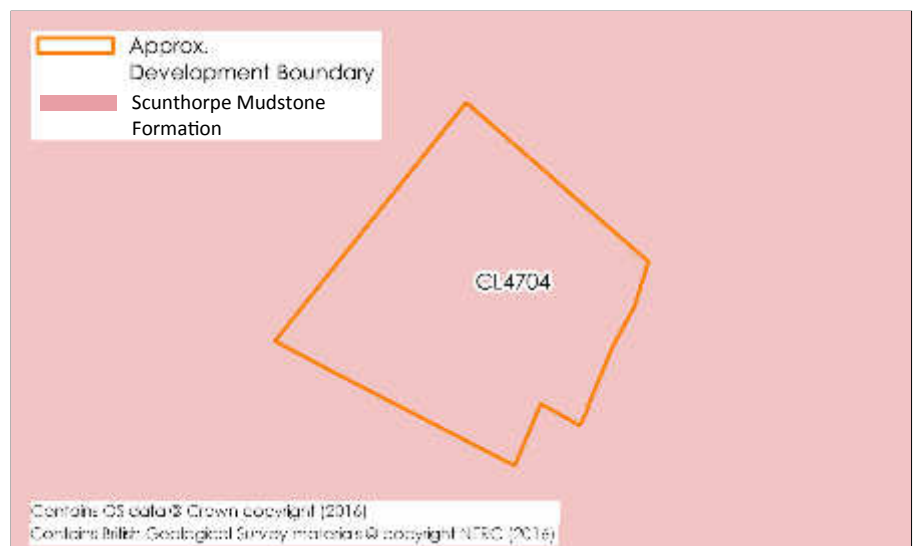
Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakways may not be acceptable for the disposal of surface water.

The likelihood of groundwater flooding is considered to be reduced by the present of impermeable rock types such as Mudstone.



SUMMARY OF FLOOD RISK

- Approximately 80% of the site is shown to be within Flood Zone 2 .
- The site has not previously been subjected to flooding.
- The site is not subject to modelled fluvial flooding.
- The site is not subject to modelled tidal flooding.
- The site is subject to surface water flooding up to 0.6m deep flooding with a velocity of up to 0.5 m/s in the Medium surface water flood risk area.
- Soakaways may not be acceptable for the disposal of surface water.
- The impermeable nature of the underlying rock is considered to reduce the potential risk of groundwater flooding.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood risk Assessments are indicated below.

- Locate all development in Flood Zone 1 portion of the site.
- Raise finished floor levels by 300mm above modelled flood levels.
- Provide sustainable drainage solutions to surface water disposal.

LIMITATIONS

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Land off Meadowsweet Lane, Witham St Hughs

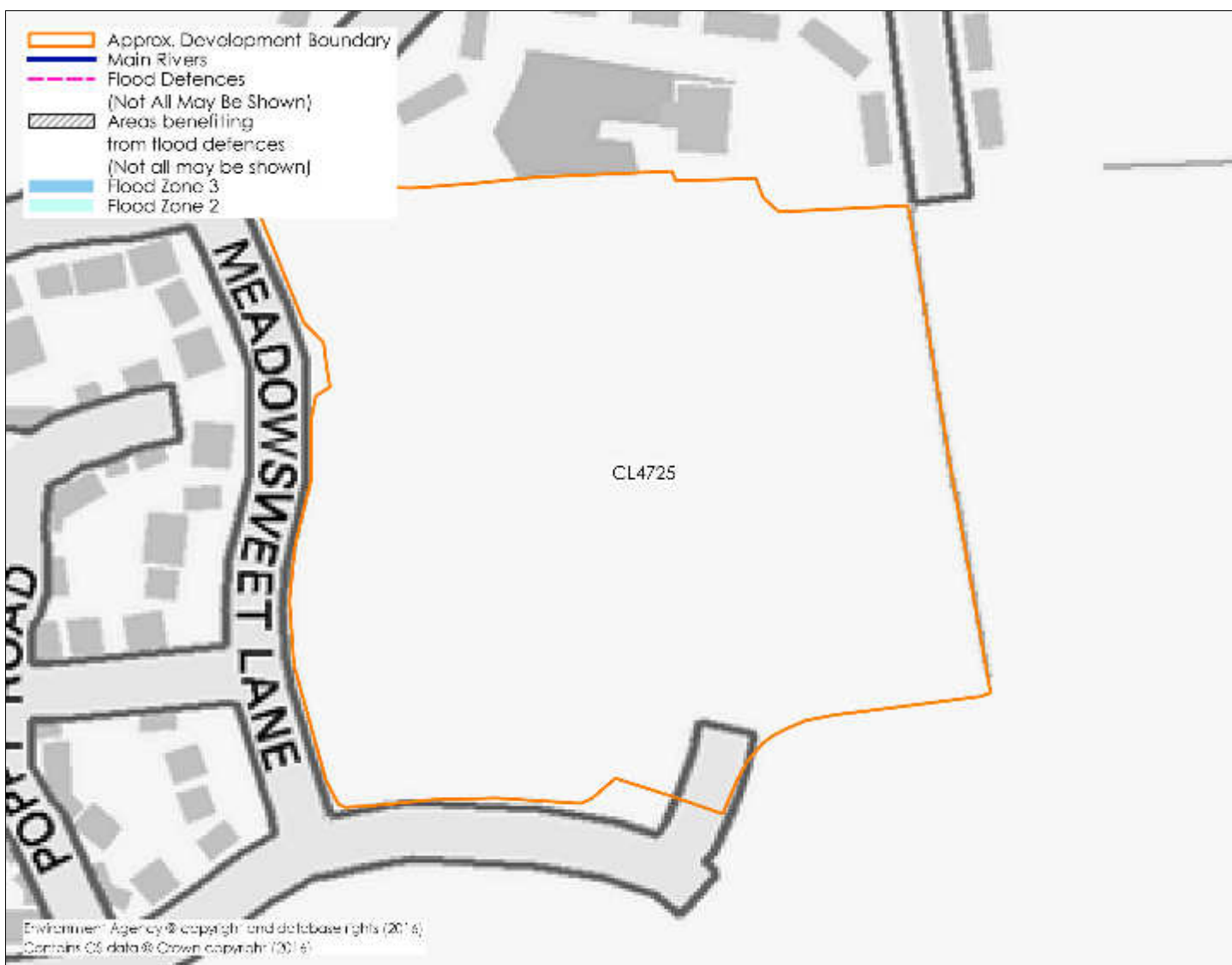
SITE DESCRIPTION

This site is fairly flat and undeveloped scrub land. There are some hedges and hedgerow trees at the site boundaries and separating the two fields in the site. To the west and south are new build housing estates, to the north is an older housing estate, and to the east are arable fields.

| | |
|-------------------------|----------------|
| REFERENCE | CL4725 |
| NATIONAL GRID REFERENCE | 490064, 362437 |
| SITE AREA (ha) | 3.0 |
| INTERNAL DRAINAGE BOARD | N/A |

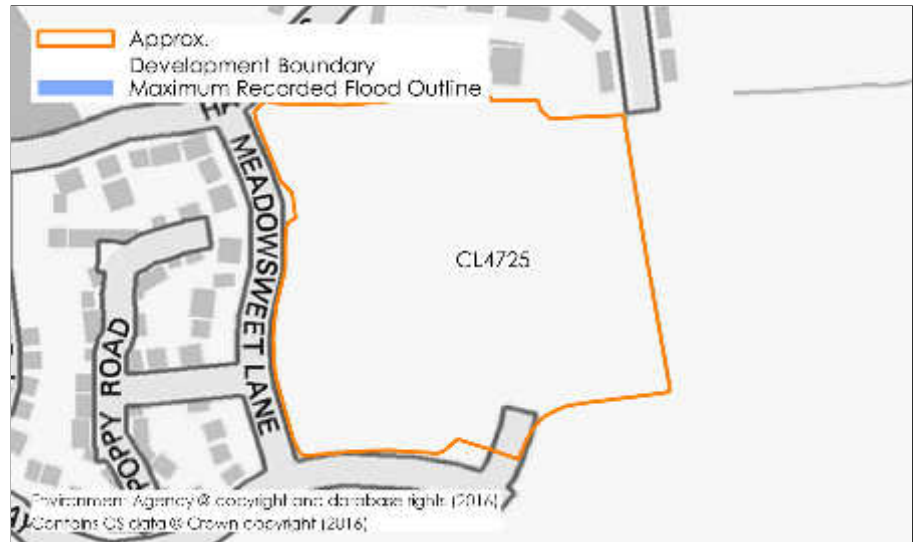
| | |
|---------------------|----------------------|
| LOCAL PLAN STATUS | Preferred Allocation |
| LOCATION | Witham St Hughs |
| LOCAL AUTHORITY | North Kesteven |
| INDICATIVE CAPACITY | 105 |

FLOOD MAP FOR PLANNING



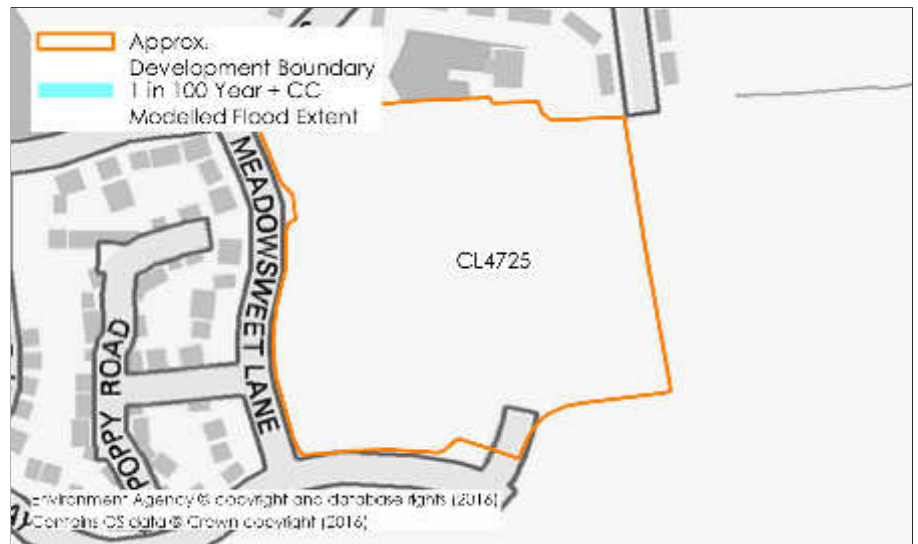
HISTORICAL FLOODING

The Environment Agency do not have any records of the site previously being subjected to flooding.



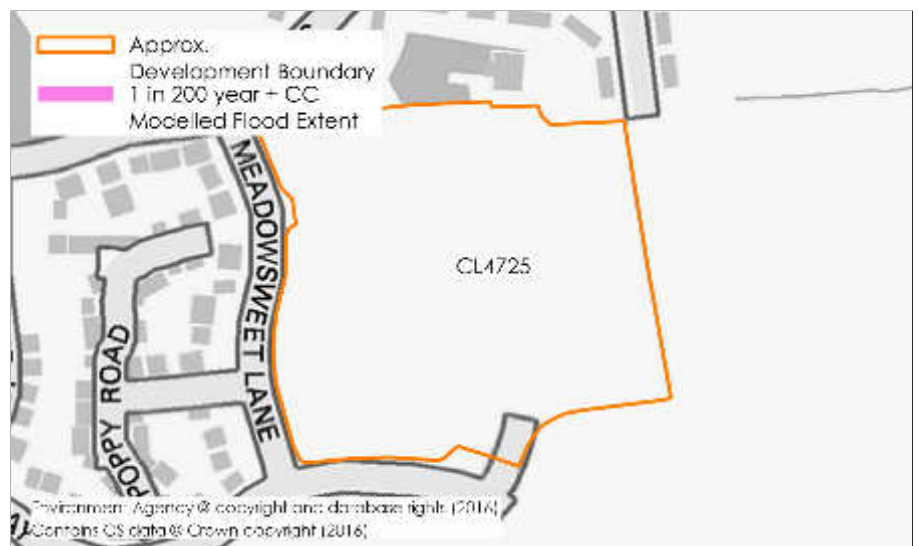
MODELLLED FLUVIAL RISKS

Modelled flood information provided by the Environment Agency indicates that the site is not subjected to fluvial flooding for the 1 in 100 year + CC event.



MODELLLED TIDAL RISKS

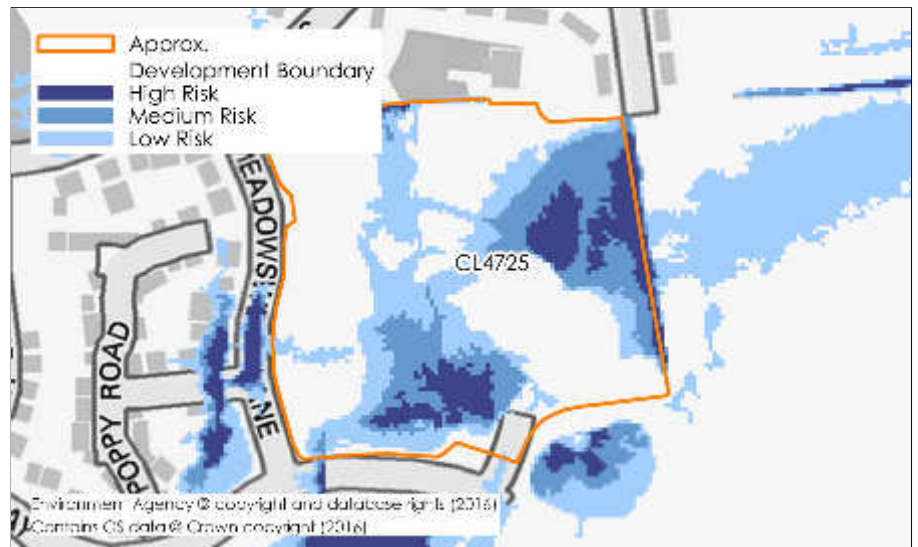
Modelled flood information provided by the Environment Agency indicates that the site is not subjected to tidal flooding for the 1 in 200 year + CC event.



MODELLED SURFACE WATER RISK

Modelled flood information provided by the Environment Agency indicates that there are two significant patches of high risk flooding on the site.

Detailed mapping suggests that the 'high risk' areas could experience flooding up to 0.3m deep with velocities of up to 0.25m/s.



OTHER SOURCES OF FLOOD RISK

Reservoir Flooding

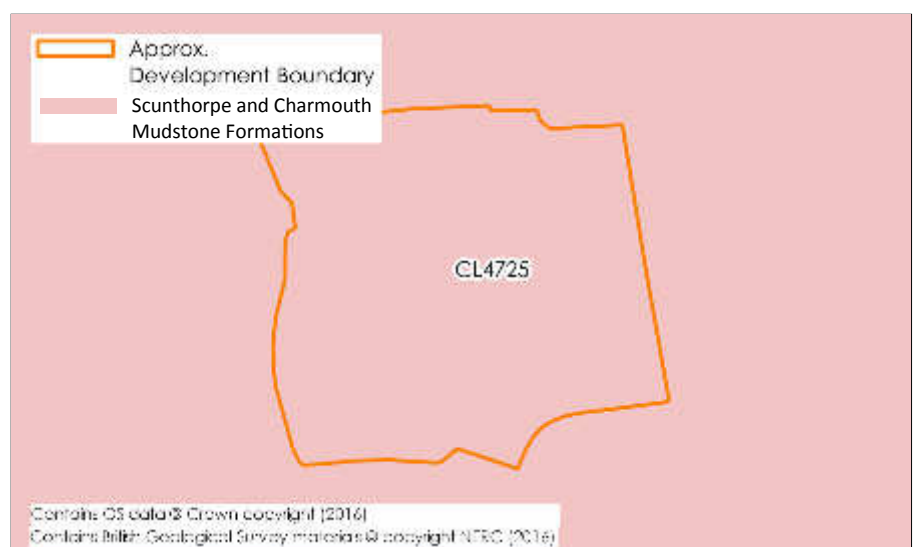
The site is shown to be outside the area of risk of flooding from a breach of a reservoir.

Sewer Flooding / Canal Flooding / Groundwater Flooding

The flood risk from these sources has not been investigated as part of this assessment, but should be considered in a Flood Risk Assessment for a planning application for the site's development.

GROUND CONDITIONS

The information on the British Geological Survey maps indicates that soakaways might not be acceptable for the disposal of surface water.



SUMMARY OF FLOOD RISK

- The site is shown to be wholly within Flood Zone 1.
- The site has not previously been subjected to flooding.
- The site is not subject to fluvial flooding up to the 1 in 100 year + CC event.
- The site is not subject to tidal flooding up to the 1 in 200 year event.
- The site is subject to 0.3m deep flooding with a velocity of 0.25m/s in the high surface water flood risk area.
- Soakaways might be acceptable for the disposal of surface water.

POSSIBLE MITIGATION REQUIRED

Possible mitigation measures which will need to be further investigated in site specific Flood Risk Assessments are indicated below.

- It is recommended that finished floor levels at the site are raised by a nominal level above the immediate surrounding ground levels to protect against the residual risk of flooding.
- It is recommended that adequate routes are provided through development to maintain and improve flow paths for surface water.
- Provide sustainable drainage solutions to surface water disposal.

LIMITATIONS

All comments and proposals contained in this report, including any conclusions, are based on information available to BWB Consulting during investigations. The conclusions drawn by BWB Consulting could therefore differ if the information is found to be inaccurate or misleading. BWB Consulting accepts no liability should this be the case, nor if additional information exists or becomes available with respect to this scheme.

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- (i) The date on which this assessment was undertaken, and
- (ii) The date on which the final report is delivered

BWB Consulting makes no representation whatsoever concerning the legal significance of its findings or the legal matters referred to in the report.

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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