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Ref: 3114-17

RESIDENTIAL DEVELOPMENT
OFF STOCKHOUSE LANE
SURFLEET
SPALDING
LINCS
PE11 4AP

SINGLE BUILDING PLOT

FOR

R J SCOTNEY



PLANNING, DESIGN & ACCESS STATEMENT

VAT No. 552 6200 69
Registered in England No: 5667107
Registered Address: Bank House, Broad Street, Spalding, PE11 1TB

Ref: 3114-17

RESIDENTIAL DEVELOPMENT
OFF STOCKHOUSE LANE
SURFLEET
SPALDING
LINCS
PE11 4AP

The application is to acquire Town and Country Planning Permission for a single residential building plot (Outline) off Stockhouse Lane, Surfleet for the benefit of R J Scotney.

The site which amount to 0.09 hectares "abuts" the proposed development boundary for Surfleet as designated by the South East Lincolnshire Local Plan – Inset Map No 25. The site is currently a triangular corner of a larger agricultural holding which is difficult to farm and has not been farmed for years and is not required as an access to the larger holding. Adjacent to the North/East boundary alongside the existing drain is a public footpath, the integrity of this footpath will be retained.

Being only 150 metres from the centre of Surfleet and the main road between Spalding and Gosberton and classified as within the South East Lincolnshire Local Plan as a "Minor Service Centre" the site is in a sustainable location, with all services available including public foul sewer in Stockhouse lane.

As the current South Holland Local Plan is out of date and the council do not have a 5 year supply of housing, this application should be considered as a sustainable "windfall" site.

South Holland has experienced a longstanding shortfall in the delivery of dwellings and the most recent statement of housing and land supply (April 2016) has indicated that the planning authority can only identify 2.9 year supply in advance of the adoption of the South East Lincolnshire Local Plan. New housing applications should be considered in the context of the presumption in favour of sustainable development in accordance with Paragraph 49 of the National Planning Policy Framework (NPPF).

In the absence of a 5 year supply of housing land, Paragraph 14 of the NPPF applies and local planning authorities should grant Planning Permission unless:-
"Any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the polices in this Framework taken as a whole"

This application demonstrates that the site is capable of being developed without detrimental impact on the character of the surrounding area and in the absence of any adverse impacts, Paragraph 14 of the NPPF indicates that Planning Permission should be granted.

Similar residential development applications have been recently approved, particularly as they "abut" the proposed residential development boundaries of their villages and in less sustainable locations:-

- H20-2656-16
- H13-0683-16
- H13-0441-16
- H13-0684-16
- H23-0508-16
- H13-0073-16

The following section of this statement is as suggested by the "Commission for Architecture and the Built Environment (CABE)":-

USE

The current use of the site is a triangular corner of a large agricultural field which is difficult to farm, therefore, surplus to the requirements of financially viable farming.

AMOUNT

The indicative layout plan suggests a single 3 / 4 bedroom chalet style bungalow with detached double garage.

SCALE

The layout, scale and size of dwelling to be determined at Reserved Matters stage.

LANDSCAPING

A comprehensive landscaping scheme for the site to be determined by Reserved Matters.

APPEARANCE

The appearance of the chalet bungalow and external materials to be determined by Condition at Reserved Matters stage.

ACCESS

Access to the site to be as existing and up-graded to satisfy the requirements and specification of Lincolnshire County Council Highways Department, which is also incorporating the public footpath. Access to and within the dwelling to be determined by compliance with Part M of the Building Regulations.

FLOOD RISK

The site specific Flood Risk Assessment by Geoff Beel Consultancy recommends that the finished flood levels should be at 4.50 metres above Ordnance Datum Newlyn (ODN) with flood resilient construction measures incorporated 300mm above finished floor levels.

APPLICATION PLAN

3114-17-01	Site & Location Plan

G R Merchant
March 2017

APPENDIX

SITE LOCATION PLAN 1/2500

"GOOGLE" SITE PLANS & PHOTOGRAPHS

SOUTH EAST LINCOLNSHIRE LOCAL PLAN (SELLP) DEVELOPMENT BOUNDARY PLAN – INSET MAP NO 25 FOR SURFLEET

ENVIRONMENT AGENCY FLOOD MAP
SOUTH HOLLAND DISTRICT COUNCIL STRATEGIC FLOOD RISK ASSESSMENT MAP
GENERIC FLOOD RESILIENT CONTRUCTION SCHEDULE

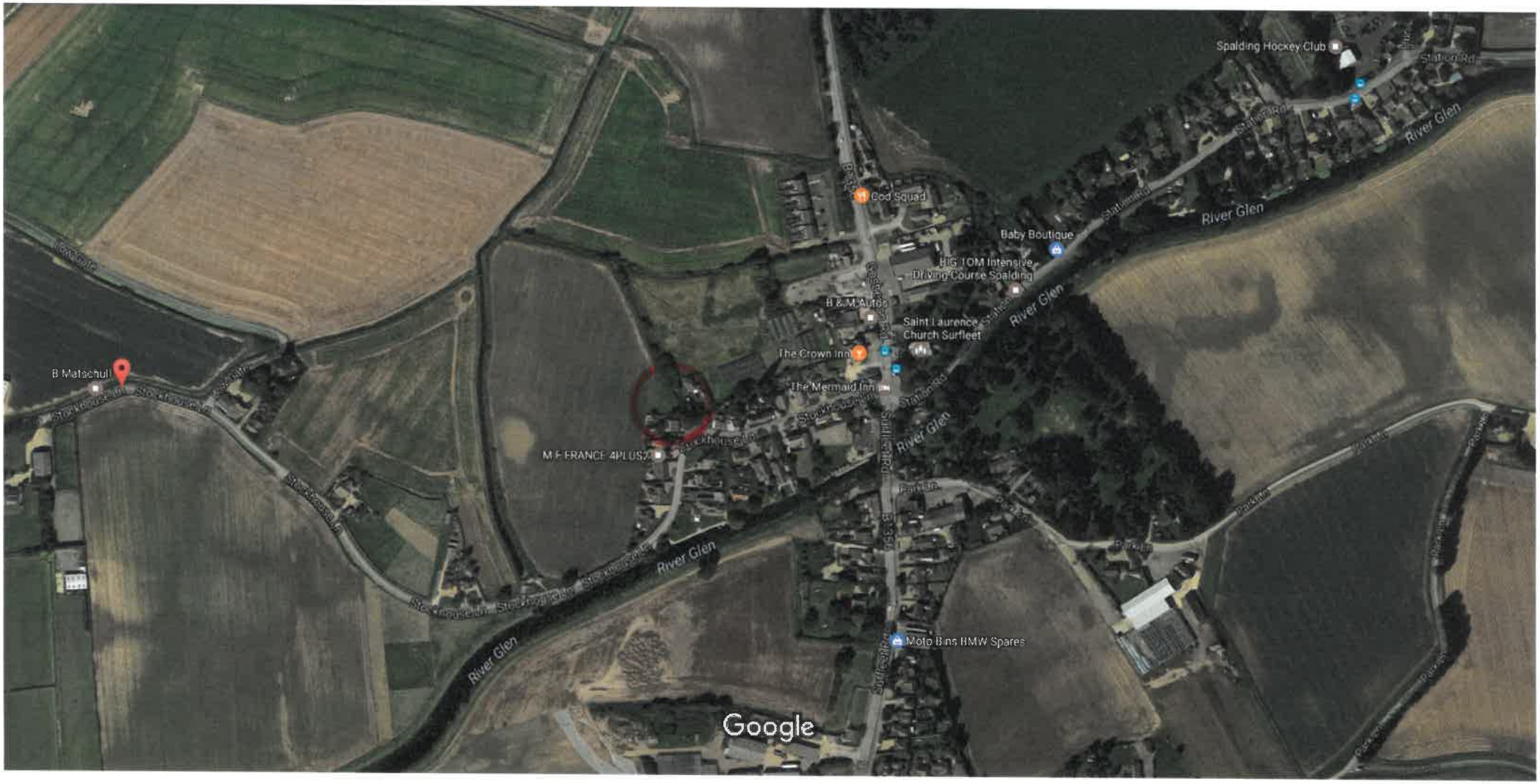
SITE SPECIFIC FLOOD RISK ASSESSEMENT BY
GEOFF BEEL CONSULTANCY

SITE LOCATION PLAN 1/2500


Surflee
Sewage Works
Drain
Drain
Drain
Drain
Drain
Works
War Memorial
Depot
PO
Hall
BM 5.31m
The Crown (PH)
St Laurence's Church
5.3m
Stockhouse Lane
Surfleet Bridge
Mermaid Inn (PH)
FB
Bridge House
4.1m
Stockhouse Lane
River Glen
SITE

“GOOGLE” SITE PLANS & PHOTOGRAPHS

Google Maps Stockhouse Ln



Imagery ©2017 Google, Map data ©2017 Google 50 m

Google Maps Stockhouse Ln



Imagery ©2017 Google, Map data ©2017 Google 20 m


Site




SITE

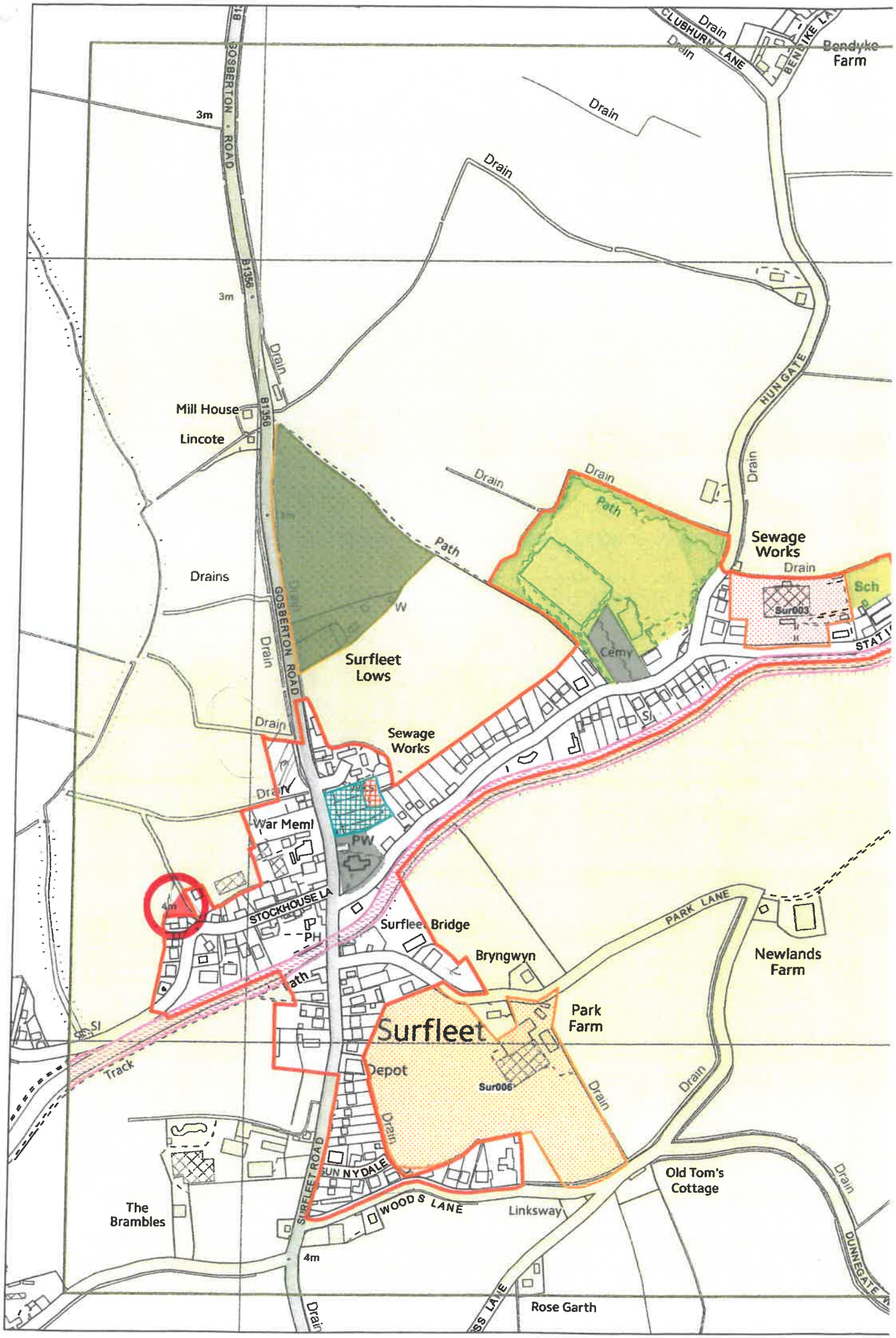

SITE







SOUTH EAST LINCOLNSHIRE LOCAL PLAN (SELLP) DEVELOPMENT BOUNDARY PLAN – INSET MAP NO 25 FOR SURFLEET


Drain
CLUBHURN LANE
Bendyke Farm
3m
GOSBERTON ROAD
B1356
Drain
Mill House
Lincote
HUN GATE
Path
Sewage Works
Sch
Sur003
Drains
Surfleet Lows
Cemy
STATION
Sewage Works
War Meml
PW
STOCKHOUSE LA
PH
Surfleet Bridge
Bryngwyn
PARK LANE
Newlands Farm
Park Farm
Surfleet
Depot
Sur006
Track
SURFLEET ROAD
SUNNYDALE
WOODS LANE
Linksway
The Brambles
Old Tom's Cottage
DUNNEGATE
Rose Garth
4m

ENVIRONMENT AGENCY FLOOD MAP
SOUTH HOLLAND DISTRICT COUNCIL STRATEGIC FLOOD RISK ASSESSMENT MAP
GENERIC FLOOD RESILIENT CONTRUCTION SCHEDULE

Environment Agency

Enter a postcode or place name: PE11 4AP Go

Other topics for this area... Flood Map for Planning (Rivers and Sea)

Flood Map for Planning (Rivers and Sea)

Map legend

Click on the map to see what Flood Zone (National Planning Policy Guidance definitions) the proposed development is in.

- Flood Map for Planning (Rivers and Sea)
  - Flood Zone 3
  - Flood Zone 2
  - Flood defences (Not all may be shown*)
  - Areas benefiting from flood defences (Not all may be shown*)
- Main River
  - Main River
- Other national environmental organisations
  - Natural Resources Wales Area of responsibility
  - Scottish Environment Protection Agency Area of responsibility

PE11 4AP at scale 1:10,000 Other maps Data search Text only version



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Information about Flood Map for Planning:

Understanding the Flood Map for Planning (Rivers and Sea)

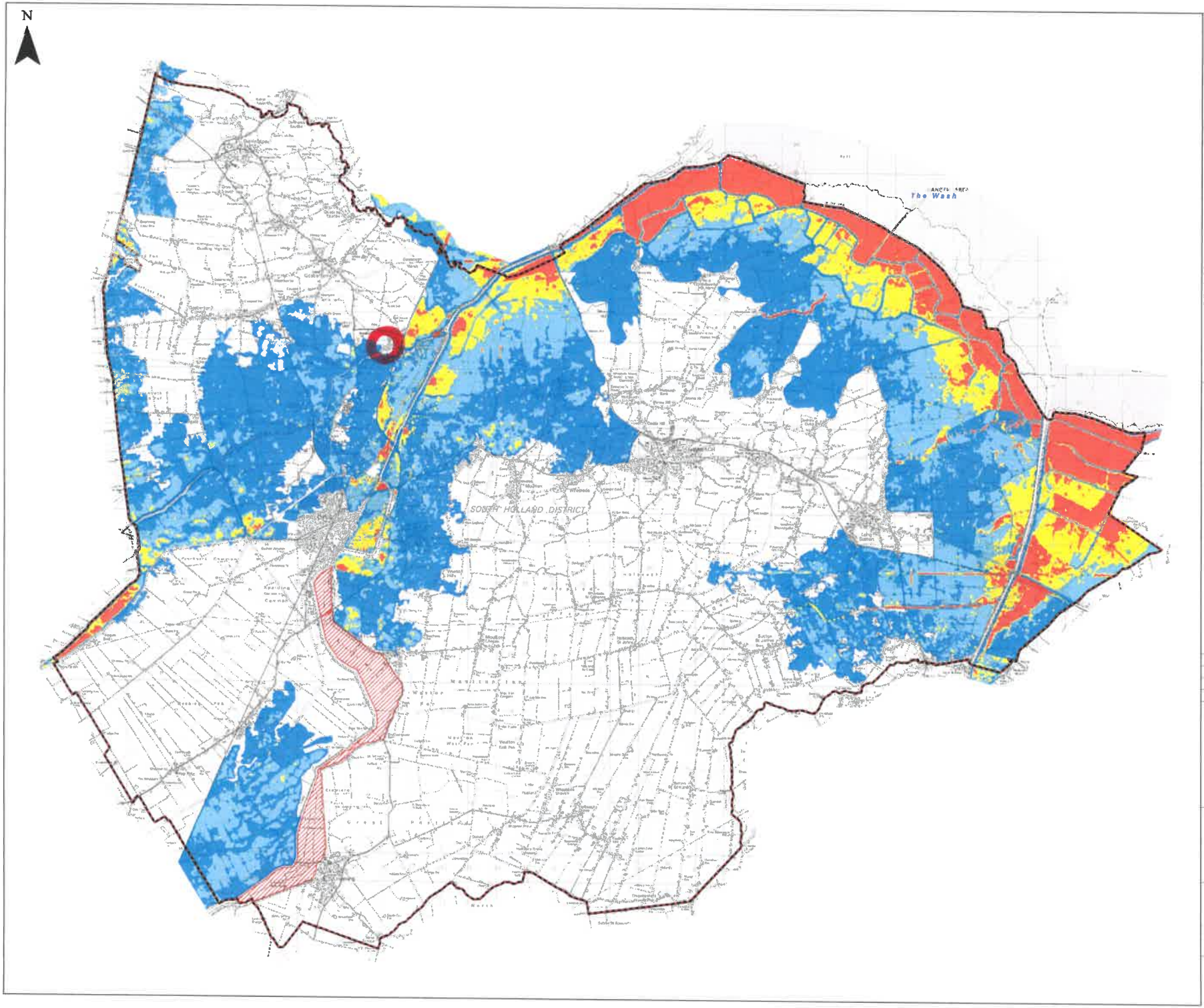
A more detailed explanation to help you understand the flood map shown above.

Current flood warnings

We provide flood warnings online 24 hours a day. Find out the current flood warning status in your local area.

*** Legend Information:** Flood defences and the areas benefiting from them are gradually being added through updates. Please contact your local environment agency office for further details.

creating a better place



NOTES

1. The potential flooding consequences shown on this map relate to flooding from the sea, main rivers and Internal Drainage Board systems taking into account the presence of current flood risk management measures such as flood defences.

2. In addition to the potential flood extents shown on this map, there may be shallow flooding in low-lying rural areas

3. The consequences designated as being an Actual Risk arise from direct overtopping of defences, where this would occur, together with assumed breach failure of some defences. Breach failure has been assumed to occur in places where the freeboard between peak sea or river water level and the defence crest level is less than the minimum desirable for structural security of the defence.

4. The consequences designated as being a Residual Risk arise from direct overtopping of defences, where this would occur, together with breach failure which is assumed could occur at any point along the defences.

5. The potential flooding consequences relate to flood probability bandings as follows:

Probability Band	Annual probability of Flooding	
	from a river (fluvial)	from the sea (tidal)
Low	<0.1%	<0.1%
Medium	1%-0.1%	0.5%-0.1%
High	>1%	>0.5%

6. Functional Floodplain encompasses areas where water is intended to flow or be stored in times of flood.

7. Land outside South Holland District is not considered.

8. This map shows the extents only of the flooding probability bands relevent to the map Title

Map Legend

Peak Depth

- 0m - 0.5m
- 0.5m - 1m
- 1m - 1.5m
- >1.5m
- Functional Floodplain
- South Holland District Boundary

REV	DATE	REMARKS

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COUNCIL OFFICES
PRIORY ROAD
SPALDING
LINCOLNSHIRE
PE11 2XE

UPDATE OF STRATEGIC FLOOD RISK ASSESSMENT

Actual Peak Depth
District - Year 2115
1% Fluvial / 0.5% Tidal Event Probability

DATE OF ISSUE: January 2010 **REV NO:**

SCALE: 1 : 60,000 @ A1

MAP NO:

FLOOD RESILIENT CONSTRUCTION

The following measures are to be taken in an attempt to satisfy this condition as suggested in the Communities and Local Government document "Improving the Flood Performance of New Buildings" – May 2007.

- Any flood waters to be diverted around the building, where possible, to where the gardens are lower.
- Ground floors to be constructed with ground bearing type concrete slab (at least 100mm thick) on well consolidated hard-core, the DPM is to be sealed with the DPC, the insulation is to be Celotex, or similar approved, closed cell type and be positioned over the ground floor bearing slab with sand and cement render topping.
- All sub-structure walling to be constructed from red engineering bricks, up to DPC level, the remainder of the external facing bricks up to 300mm above DPC to be either red engineering or pressed, not handmade bricks. The cavity insulation up to 300mm above DPC is to be partial fill Celotex, or similar closed cell type insulation secured to the internal wall.
- Avoid the use of plasterboard and gypsum plaster to lower part of internal walls and use water resistant lime and cement render or painted blockwork.
- All external doors to be of a good quality not susceptible to moisture and have good seals for water tightness.
- Treated and sealed timber or UPVC skirting's and architraves.
- Ensure all kitchen areas, particularly behind units, to be sealed to prevent passage of water.
- Arrange for all service circuits to be routed at a first floor level if practical and sockets, boilers and cookers to be a minimum 300mm above floor level.
- Occupants of the property to register with the Environment Agency automated early warning system of potential floor events.

SITE SPECIFIC FLOOD RISK ASSESSMENT BY GEOFF BEEL CONSULTANCY

FLOOD RISK ASSESSMENT FOR PROPOSED RESIDENTIAL DEVELOPMENT AT STOCKHOUSE LANE, SURFLEET, SPALDING, LINCS.

FINAL REPORT

GEOFF BEEL CONSULTANCY

FEBRUARY 2017

GCB/MERCHANT

DISCLAIMER

This document has been prepared solely as a Flood Risk Assessment in support of a planning application for proposed Residential Development at Stockhouse Lane, Surfleet, Spalding, Lincs. "Geoff Beel Consultancy" accepts no responsibility or liability whatsoever for any use made of this document other than by the client "Mr Roy Scotney" for the purposes it was originally commissioned and prepared. All comments and opinions made are based upon information available to "Geoff Beel Consultancy" during the necessary investigative process, and the conclusions and recommendations could therefore, differ in the event of material subsequently being found erroneous, incomplete or misleading. "Geoff Beel Consultancy" therefore, accepts no liability should this prove to be the case.

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2.0 LOCATION

3.0 THE SITE AND SEQUENTIAL TEST

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7.0 PROBABILITIES AND TRENDS OF FLOODING

8.0 IMPACTS OF FLOODING

9.0 RESIDUAL RISKS – EXTREME EVENTS

10.0 CONCLUSIONS AND RECOMMENDATIONS

Fig 1 - Location & Site Layout Plans – G R Merchant drg. no. 3114-17-01

Fig 2 - Environment Agency Flood Map for Planning

Fig 3 - South Holland Strategic Flood Risk Assessment Residual Depths 1 in 100 year Fluvial and 1 in 200 year Tidal Events (2115)

Fig 4 - Environment Agency Flood Data – CCN-2017-33815

Fig 5 - Welland & Deepings IDB District Plan

1.0 INTRODUCTION

1.1 An outline planning application is to be submitted by G R Merchant Ltd on behalf of Mr Roy Scotney for proposed residential development at land adjacent to 23 Stockhouse Lane, Surfleet, Spalding, Lincs.

1.2 Planning approval requires a Flood Risk Assessment to accompany the application to meet the requirements and general principles contained in the Planning Practice Guidance to the National Planning Policy Framework (NPPF) and for approval by the Environment Agency.

The site is shown partly within Flood Zones 1 & 2 of the Environment Agency's Flood Map for Planning. The latest Flood Zone Maps have been created as a tool to raise awareness of flood risk with the public and partner organisations, such as Local Authorities, Emergency Services and Drainage Authorities. The Maps do not take into account any flood defences.

The site is also shown within a flooded area of the South Holland District Council's Strategic Flood Risk Assessment Map and located in the Welland and Deepings Internal Drainage Board district.

1.3 Geoff Beel Consultancy was appointed on 3rd February 2017 to undertake a Flood Risk Assessment.

2.0 LOCATION

2.1 The development site is at land adjacent to 23 Stockhouse Lane, Surfleet, Spalding. The National Grid Reference of the central point of the site is TF 24902815.

2.2 The position and extent of the site are shown on Fig 1 – Location Plans at the end of the document.

2.3 The site, located within the Welland and Deepings Internal Drainage Board district is shown partly within Flood Zones 1 & 2 as detailed on the Environment Agency Flood Map for Planning and in Flood Zones 2 & 3 of the Council's Strategic Flood Risk Assessment Map.

3.0 THE SITE AND SEQUENTIAL TEST

3.1 The site is open land.

3.2 The area of development is approximately 0.11 hectare.

3.3 The proposed site layout consists the construction of a 2 storey dwelling with access to Stockhouse Lane.

3.4 The Sequential Test and Exception Test will require to be applied by the Local Planning Authority but the development may be permitted as the site may be protected against the 1 in 100 year fluvial event by a combination of existing defences with mitigation measures meeting the requirements of NPPF.

4.0 EXISTING FLOOD ALLEVIATION MEASURES

4.1 The site is located at Stockhouse Lane with existing land levels generally at 4.00m aOD. The site is also located some 100m north of the River Glen.

4.2 The Surfleet Sluice Gate some 3.00kms downstream of the site with the adjoining flood embankments offering protection against the tidal flood event of the River Welland and the River Glen. The existing 1 in 200 year modelled flood event of the River Welland is 5.99m aOD whilst the 1 in 100 year estimated flood level of the River Glen inclusive of climate change is 5.12m aOD.

4.3 The site is located within the Welland and Deepings Internal Drainage Board district with the nearest 'main drain' the Latham Lode 150m west of the site boundary.

4.4 The existing standard of drainage for the Welland and Deepings Internal Drainage Board is 1 in 50 years return period, compatible with the Department of the Environment, Food and Rural Affairs target level of service for rural drainage and flood defence works. Freeboard of 1.00 metre is provided to the lowest land levels.

4.5 The surrounding land north of the River Glen drains to the Latham Lode and hence to the Surfleet Village Pumping Station which discharges into the River Glen some 200m upstream of the development site.

4.6 Current maintenance standards within the Welland and Deepings Internal Drainage Board are generally very good. During the operation and maintenance of its pumping stations, associated structures and channel systems, particularly those that could affect property, the Board seeks to maintain a general standard capable of providing flood protection to its district. A routine maintenance programme is in place to ensure that the Boards assets are commensurate with the standard of protection that is sought. However, bank slips, blocked culverts etc may occur from time to time and these matters are usually dealt with promptly.

4.7 Maintenance standards of the Environment Agency's main rivers and defences are well maintained and regularly inspected for their asset condition.

5.0 POTENTIAL SOURCES OF FLOODING

5.1 Five potential sources of flooding have been identified as a result of this assessment:

a) local blockages to IDB main drain system
b) storm return period of 1 in 50 years being exceeded
c) failure of Surfleet Village Pumping Station
d) failure of Surfleet Sluice
e) overtopping and breaching of the River Glen and River Welland defences

5.2 The probability of flooding from source a) is low due to the maintenance standards already achieved and managed by the IDB.

The probability of flooding from b) is also low due to the Welland & Deepings IDB main drain design standard incorporating a minimum 900mm freeboard to the lowest land level which provides adequate storage in events greater than 1 in 50 years.

5.3 Failure of Surfleet Sluice may occur due to long term mechanical breakdown or power supply being disrupted. However, in these circumstances, if conditions were such to put properties and land at risk of flooding, the Environment Agency would take emergency action to maintain the drainage level of service by utilising temporary pumping equipment. The probability of such an occurrence is also considered to be low.

5.4 Failure of Surfleet Village Pumping Station may occur due to long term mechanical breakdown or power supply being disrupted. However, in these circumstances, if conditions were such to put properties and land at risk of flooding, the Drainage Board would take emergency action to maintain the drainage level of service by utilising temporary pumping equipment. The probability of such an occurrence is also considered to be low.

5.5 The possible overtopping and breaching of the fluvial River Glen and tidal River Welland flood defences which may affect the site under extreme conditions is considered to be low. The present standards of defence of 1 in 100 years and 1 in 200 years respectively would most probably have to be exceeded to create such conditions. If a breach, however, did occur, it is estimated that the floodwaters could affect the development site as shown on the South Holland Strategic Flood Risk Assessment and a precautionary approach should be adopted as regards proposed floor levels.

5.6 The South Holland Strategic Flood Risk Assessment (SFRA) shows the site to be affected by floodwaters of between 0.00 and 0.50m as a result of a breach to existing defences. It is recommended that finished floor levels should be 500mm above ground levels at a minimum of 4.50m aOD with flood resilient measures also incorporated into the design and construction of the dwelling up to 300mm above finished floor level. Safe refuge will be provided at first floor level with no sleeping accommodation at ground level.

5.7 The developer will ensure that the eventual occupiers of the dwelling are sufficiently aware of the risk of flooding, and the standard of the existing defences. The Environment Agency provides a Flood Warning Service which includes Flood Warning Codes and uses direct warning methods where the risks and impacts of flooding are high. Indirect warnings are provided to all flood risk areas, even those at low risk of flooding. The main method is media broadcasts via local radio and also by television.

In addition to direct and indirect flood warnings, the Environment Agency operates a 24 hour a day Floodline Service providing advice and information on flooding, contact tel no: 0345 988 1188. All occupiers of the new dwelling should register with the Floodline Warnings Direct Service to receive any future flood warnings.

6.0 EXTENT OF KNOWN FLOODING

6.1 During the preparation of this assessment, no evidence was discovered of the site and adjoining properties being flooded.

7.0 PROBABILITIES AND TRENDS OF FLOODING

7.1 The probability of this development flooding from localised drainage systems is very low. It is also intended to construct floor levels 500mm above existing ground level at a minimum of 4.50m aOD with safe refuge at first floor level.

7.2 The probability of the site flooding with water from any Welland and Deepings river system is less than 1% because of the standards of the existing flood defence systems, storage within existing drainage channels and the location of the site. Similarly the same standard is provided by the Environment Agency's main river and defences of the River Glen.

7.3 If under very extreme events, levels of floodwater from any Environment Agency or Welland and Deepings river or arterial systems rose to such an extent that the site was affected, the situation would not be sudden. It is very probable that sufficient time would be available to take precautionary actions to limit the extent and potential impact of flooding.

7.4 The water levels in the drainage channels will tend to rise as a result of the impacts of climate change. However the existing systems and defences together with the raising of floor levels 500mm above existing ground level at a minimum of 4.50m aOD with flood resilient construction up to 300mm above finished floor level will be appropriate for the design life of the development (i.e. 100 years).

8.0 IMPACTS OF FLOODING

8.1 No significant impacts of flooding are anticipated due to the mitigation measures being proposed.

8.2 Floor levels of the development will be raised 500mm above existing ground levels at a minimum of 4.50m aOD offering additional protection against impacts arising from any extreme short duration, localised events. Surface water drainage will be discharged to soakaway designed to BRE365 specification and Building Regulations approval.

8.3 The general location of the site within the catchment is such that if flooding occurred from any of the Environment Agency or Welland and Deepings river systems, then sufficient warning time would be available.

9.0 RESIDUAL RISK – EXTREME EVENTS

9.1 The residual risk from extreme events is low on this site, because of its location with protection from both the River Glen fluvial and River Welland tidal defences.

9.2 The site is partly within Flood Zones 1 & 2 according to NPPF classification but with a low risk of flooding due to the current standards of drainage and flood defence and land levels. The site is not located within a Functional Flood Plain of any 'main river' or 'main drain'. The Environment Agency Flood Map for Planning has been produced irrespective of existing flood defences and standards of protection.

9.3 South Holland District Council in conjunction with the Environment Agency and the local IDB's within the Council area have carried out a Strategic Flood Risk Assessment of the whole District by appointed Consulting Engineers.

The Strategic Flood Risk Assessment has produced more definitive Flood Risk Maps than those published by the Environment Agency and at the same time has analysed flood return periods of all tidal and fluvial defences for years 2002 and 2052 to account for the effects of climate change.

Breach scenarios of embankments failing and/or being overtopped have also been carried out to establish Flood Risk Zones.

9.4 Safe access and egress to the site is available via Stockhouse Lane onto the B1356 road in a northerly direction to land in Flood Zone 1.

9.5 Safe refuge is provided at first floor level of the new dwelling with no sleeping accommodation at ground level.

10.0 CONCLUSIONS AND RECOMMENDATIONS

10.1 As a result of the assessment, the following conclusions have been reached:-

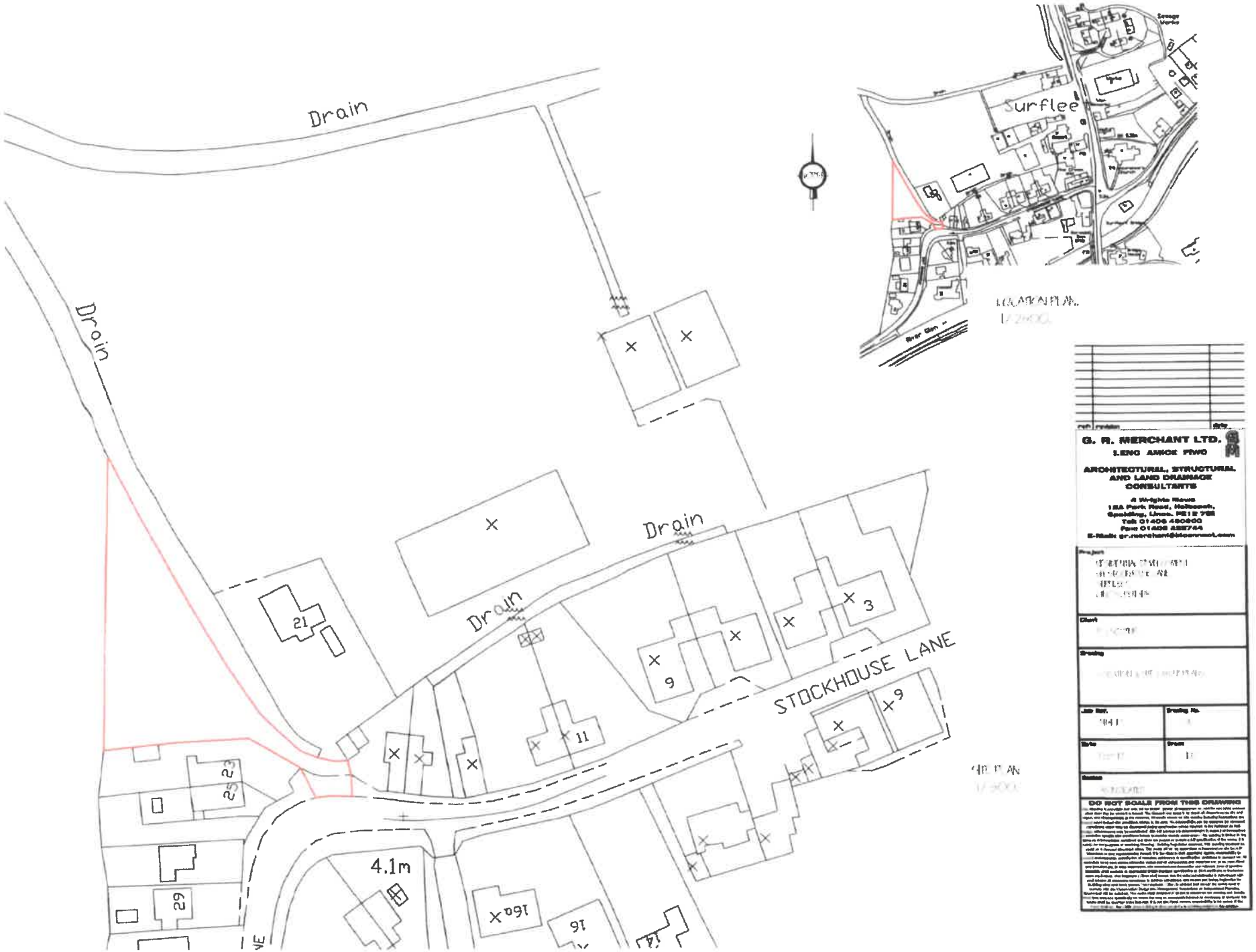
- The proposed development is not in a Functional Floodplain. It is located in the Passive Floodplain of the River Welland and River Glen defences as well as the Welland & Deepings IDB.

- The site is partly in Flood Zones 1 & 2, with the actual risk of flooding from the River Glen system being low.

- Although the site is located within an Internal Drainage District with a minimum standard of drainage of 1 in 50 years, this accords with Defra guidelines for rural development. Freeboard to design water level of 900mm to lowest land level is available for events greater than 1 in 50 years providing further storage within the drainage channels.

- Floor levels will be raised 500mm above existing ground level at a minimum of 4.50m aOD and flood resilient measures incorporated into the design and construction of the proposed dwelling 300mm above finished floor level. Safe refuge will be provided at first floor level.

- On site surface water drainage will be discharged to soakaway to BRE365 specification and Building Regulations approval.



LOCATION PLAN

SITE PLAN

G. R. MERCHANT LTD.
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Fax: 01406 425744
E-Mail: gr.merchant@btconnect.com

DO NOT SCALE FROM THIS DRAWING

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Enter a postcode or place name:

Surfleet, Lincolnshire

Go

Other topics for this area...

Flood Map for Planning (Rivers and Sea)

Flood Map for Planning (Rivers and Sea)

Map legend

Click on the map to see what Flood Zone (National Planning Policy Guidance definitions) the proposed development is in

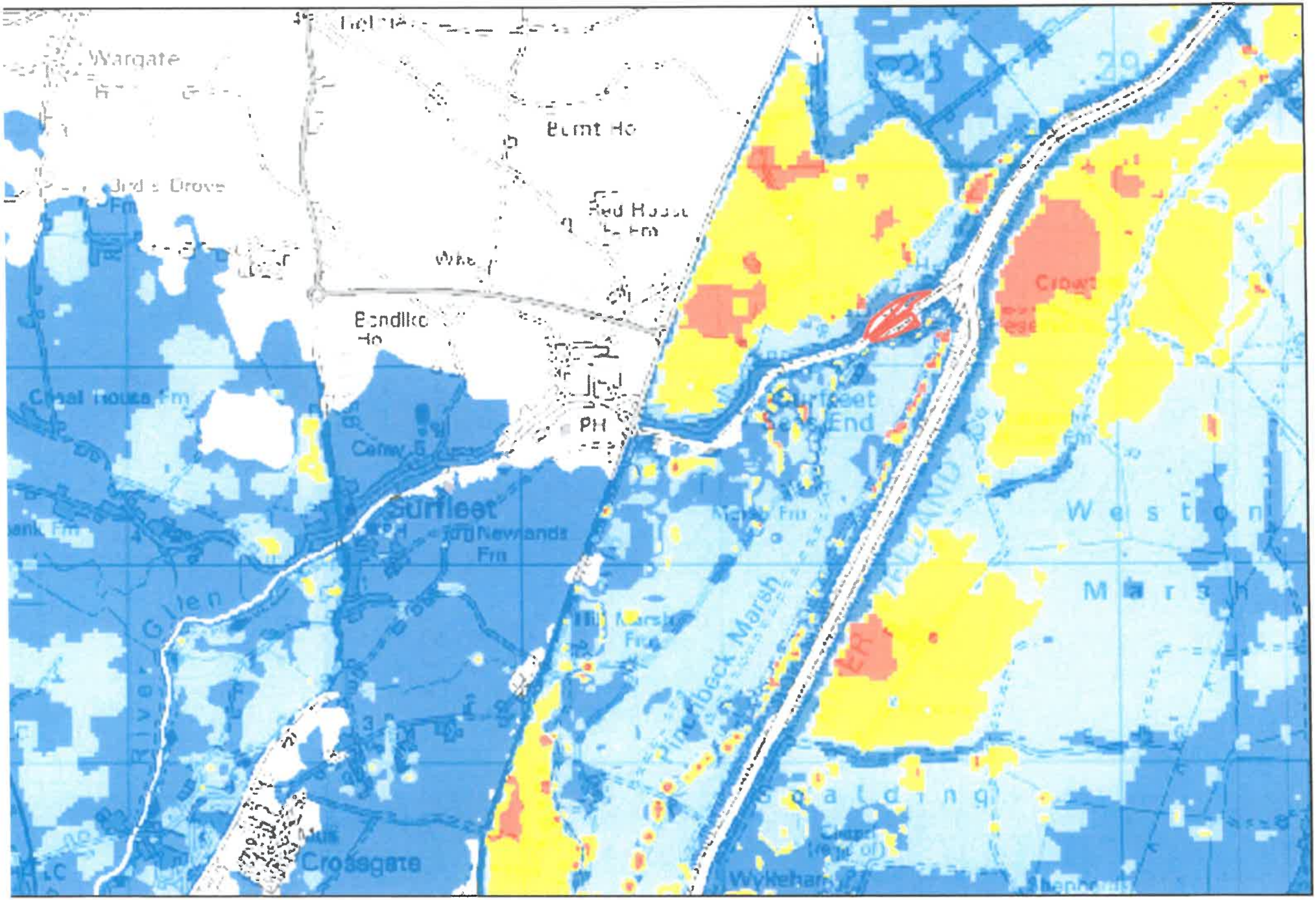
- Flood Map for Planning (Rivers and Sea)
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  - Flood defences (Not all may be shown)
  - Areas benefiting from flood defences (Not all may be shown)
- Main River
  - Main River
- Other national environmental organisations
  - Natural Resources Wales Area of responsibility
  - Scottish Environment Protection Agency Area of responsibility

Map of Surfleet, Lincolnshire at scale 1:20,000

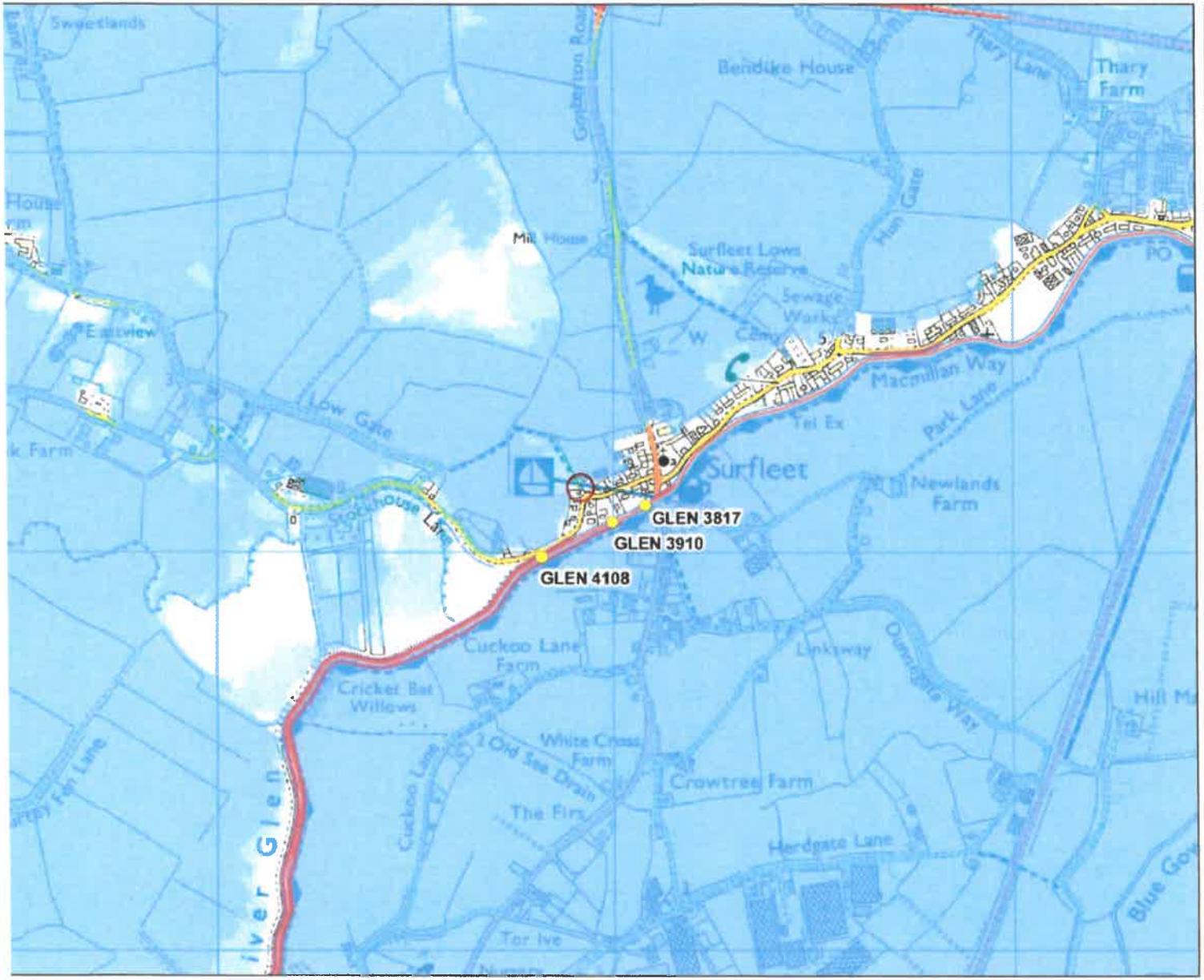
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Wargate
Burnt Ho
Bird's Drove
Fm
Red House
Fm
Bendlike
Ho
Canal House Fm
PH
Carey's
Surfleet
Newlands
Fm
Surfleet
End
Crown
Weston
Marsh
River Glen
Pinchbeck Marsh
Crossgate
Wykeham

asic FRA Map centred on TF 24916 28154 - created January 2017 [Ref: CCN-2017-33815]



Environment Agency

Scale 1:10,000

N W E S

- Model Nodes
- Main River
- Raised Defences
- Area at Risk of Flooding from Rivers or The Sea
- Extreme Flood Outline

Dark blue shows the area that could be affected by flooding, either from rivers or the sea, if there were no flood defences. This area could be flooded

- from the sea by a flood that has a 0.5% (1 in 200) or greater chance of happening each year

- or from a river by a flood that has a 1% (1 in 100) or greater chance of happening each year

Light blue shows the extent of the Extreme Flood Outline, which represents the extent of a flood event with a 0.1% chance of occurring in any year, or the highest recorded historic extent if greater

These two colours show the extent of the natural floodplain if there were no flood defences or certain other manmade structures and channel improvements. Sites outside the two extents, but behind raised defences, may be affected by flooding if the defences are overtopped or fail

Created by the Partnerships and Strategic Overview Team Northamptonshire

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Datasheet [Ref: CCN-2017-33815]

Fluvial Flood Levels (mODN)

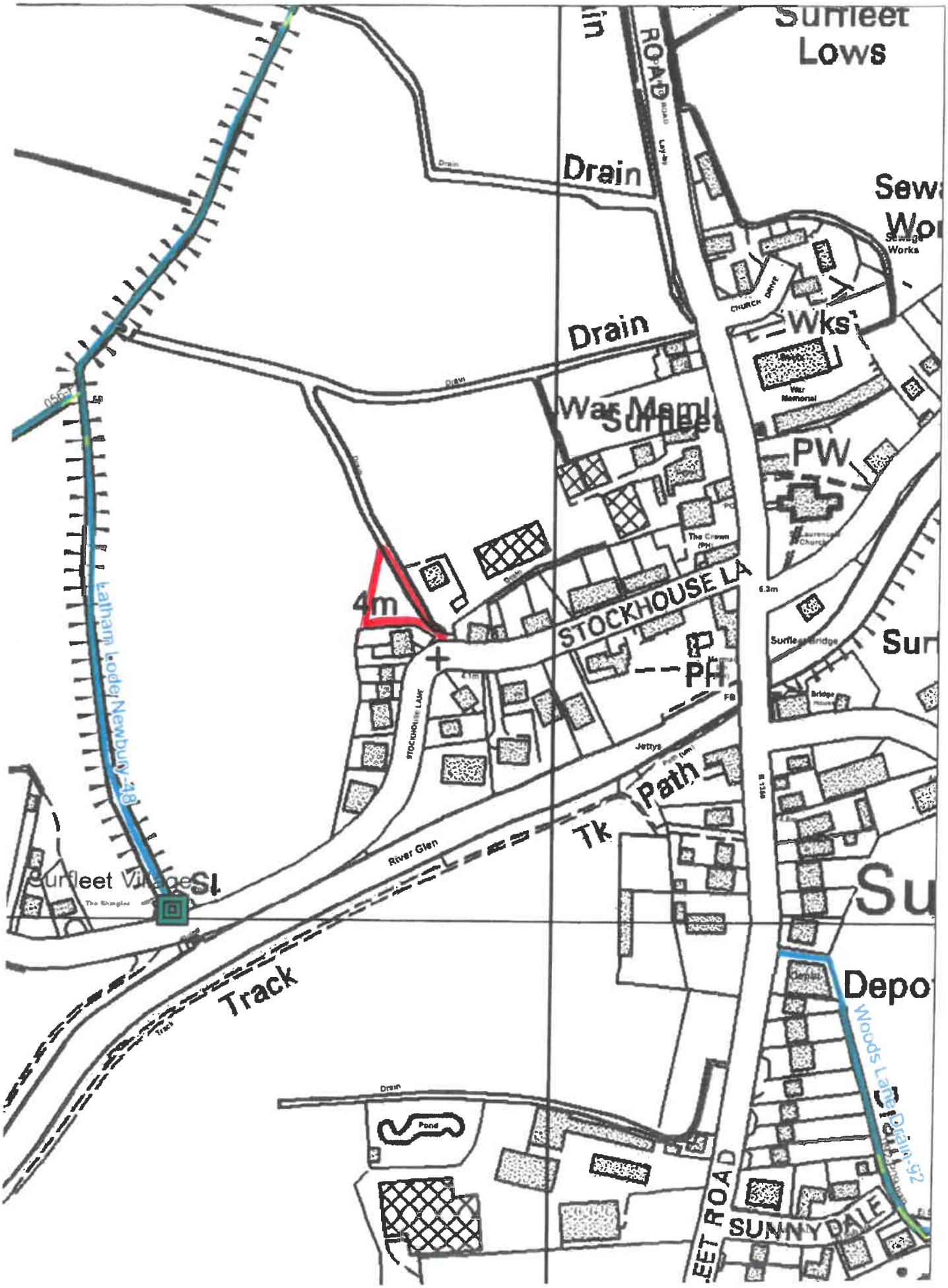
The fluvial flood levels for the model nodes shown on the attached map are set out in the table below. They are measured in metres above Ordnance Datum Newlyn (mODN).

			Annual Exceedance Probability - Maximum Water Levels (mODN)										
Node Label	Easting	Northing	50% (1 in 2)	20% (1 in 5)	10% (1 in 10)	4% (1 in 25)	2% (1 in 50)	1.33% (1 in 75)	1% (1 in 100)	1% (1 in 100) inc 20% Climate Change	0.5% (1 in 200)	0.1% (1 in 1000)	0.1% (1 in 1000) inc 20% Climate Change
GLEN 3817	525080	328118	3.75	4.01	4.11	4.17	4.19	4.21	4.23	5.12	4.26	4.35	5.26
GLEN 3910	524998	328075	3.75	4.01	4.12	4.18	4.20	4.22	4.24	5.12	4.27	4.36	5.27
GLEN 4108	524821	327987	3.75	4.02	4.12	4.18	4.21	4.23	4.25	5.12	4.28	4.38	5.27

Fluvial Flood Flows (m³/s)

The fluvial flood flows for the model nodes shown on the attached map are set out in the table below. They are measured in metres cubed per second (m³/s).

			Annual Exceedance Probability - Maximum Flows (m³/s)										
Node Label	Easting	Northing	50% (1 in 2)	20% (1 in 5)	10% (1 in 10)	4% (1 in 25)	2% (1 in 50)	1.33% (1 in 75)	1% (1 in 100)	1% (1 in 100) inc 20% Climate Change	0.5% (1 in 200)	0.1% (1 in 1000)	0.1% (1 in 1000) inc 20% Climate Change
GLEN 3817	525080	328118	20.00	24.57	27.92	30.58	31.67	32.59	33.72	44.09	35.09	40.21	50.34
GLEN 3910	524998	328075	19.95	24.52	27.87	30.53	31.62	32.54	33.67	44.01	35.05	40.21	50.26
GLEN 4108	524821	327987	19.78	24.37	27.72	30.36	31.47	32.38	33.51	43.65	34.90	40.22	50.06


Surfleet Lows
Drain
Drain
Drain
Wks
PW
STOCKHOUSE LA
PH
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Latham Lode Newbuy 18
Surfleet Village
River Glen
Track
Path
Tk
Jetty's
Depo
Woods Lane Drain 92
SUNNY DALE
Pond