

MONSON

Structural Engineering
Roads & Car Parks
Traffic & Flood Risk Assessments
Water & Drainage Engineering
Technical Audits & Assessments

**LAND NORTH OF
OLD ASHFORD ROAD
LENHAM
KENT**

**PROPOSED RESIDENTIAL
DEVELOPMENT**

**FLOOD RISK
ASSESSMENT**

AMENDED

Issue B

Date 04th December 2017

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Verified by L.G.Leslie

Job No 5960Q



Registered No. FS 37624

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APPENDICES

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Appendix C: Map from Surface Water Management Plan

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1.00 Introduction

- 1.01 Monson Engineering have been requested to provide a Flood Risk Assessment for Land North of Old Ashford Road, Lenham, Kent ME17 2DL. Grid Co-ordinates: TQ 90388 52123
- 1.02 This site is situated within Flood Zone 1, however being over 1 Hectare in size, it is required to have a flood risk assessment submitted to the local planning authority to support this planning application.
- 1.03 This Flood Risk Assessment will conform to the National Planning Policy Framework and Technical Guidance in relation to flood risk which was published in 2012.

2.00 Development Description and Location

- 2.01 The development proposal consists of 151 new residential dwellings together with the supporting infrastructure, which will be situated on the North-East edge of the village of Lenham in Kent on previously undeveloped agricultural land. A site location plan and development proposal can be seen in Appendix A.
- 2.02 The flood risk vulnerability classification for this type of development in this location is considered as More Vulnerable which is defined in Table 2 of the Technical Guidance to the National Planning Policy Framework.
- 2.03 As set out in the National Planning Policy Framework, the aim of the Sequential Test is to direct new development to areas with the lowest probability of flooding.
- 2.04 These flood zones refer to the probability of river and coastal flooding, ignoring the presence of any existing flood defences.
- 2.05 The starting point to the Sequential Test is the Flood Zones, which can be seen in Appendix B. It can clearly be seen that the site is situated in Zone 1, with a low probability of flooding.

- 2.06 The Strategic Flood Risk Assessment for Maidstone Borough Council refines the information on the probability of flooding and also takes into account other sources of flooding which have been assessed in section 3.01.

- 2.07 The proposed development is situated within Zone 1 and is therefore deemed to satisfy the basis of the Sequential Test.

- 2.08 If the Sequential Test is applicable to the development, the Exception Test will not be required.

3.00 Definition of the Flood Hazard

3.01 For the preparation of this Flood Risk Assessment it is necessary to consider all of the potential sources of flooding and how this may affect the site. A checklist has been provided below to help identify these areas which can be discussed in greater detail in this section.

Possible Source of Flooding	Applicable to this Site?
Fluvial Flooding from nearby rivers or streams	<input checked="" type="checkbox"/>
Coastal Flooding	<input checked="" type="checkbox"/>
Surface Water Runoff from the Site, Adjacent or Nearby Land	<input checked="" type="checkbox"/>
Flooding from Surface Water Sewers	<input checked="" type="checkbox"/>
Flooding from Foul Water Sewers	<input checked="" type="checkbox"/>
Flooding from Reservoirs	<input checked="" type="checkbox"/>
Flooding from Groundwater	<input checked="" type="checkbox"/>
Flooding from other Sources	<input checked="" type="checkbox"/>

- 3.02 There will be no fluvial flood risk to the proposed site as it is approximately 650m North of the source of Stream Shaw and some 5m higher in elevation.

- 3.03 There is no coastal flood risk associated with this site, as it is many miles from the nearest coast line and sits at around 109m AOD.

- 3.04 There were no flood risks identified in relation to surface water flooding in either receiving or generating surface water flows at this proposed development.
- 3.05 There are no surface water sewers in the vicinity of the proposed site.
- 3.06 There are no foul water sewers in the vicinity of the proposed site.
- 3.07 There is no flood risk to this site in relation to reservoirs.
- 3.08 It was reported by the Kent's Lead Local Flood Authority that Old Ashford Road, the adjacent residential properties and the commercial property at Northdown Close were affected by surface groundwater flow in early 2014. Following a site meeting on the 23rd August 2017 with Kent's Lead Local Flood Authority, the site was inspected and the areas suffering from previous groundwater emergence were highlighted. These were predominantly along the southern boundary of the site and within the south-eastern corner of the site. It was reported that groundwater flows continued between February and April 2014.
- 3.09 Strategic Flood Risk Assessment for Maidstone recognizes a groundwater as a potential source of flooding on Ashford Road which can be checked against in Surface Water Management Plan Map – Appendix D however Maidstone Stage 1 Surface Water Management Plan for Rural Mid doesn't hold any flood records on Ashford Road in the vicinity of proposed development.

4.00 Probability

- 4.01 The proposed development is situated within Zone 1 which can be checked against in the Flood Maps for Planning, contained in Appendix B.
- 4.02 The District Council for this area, Maidstone Borough Council have prepared a Strategic Flood Risk Assessment which refines the information provided in the Environment Agency Flood Map for Planning. These maps can be seen in Appendix D.
- 4.03 Based on available records from the Environmental Agency and the Maidstone Rural Mid SWMP, it can be seen that the proposed development is in a Zone 1- probability of flooding.

5.00 Climate Change

5.01 The Strategic Flood Risk Assessment (SFRA) for Maidstone Borough Council takes into account climate change as:

- Peak rainfall by 30%
- Peak River flow by 20%

Details of this mapping can be seen in Appendix D

6.00 Detailed Development Proposals

6.01 The development proposal consists of 151 new residential dwellings together with the supporting infrastructure, which will be situated on the East edge of the village of Lenham in Kent on previously undeveloped agricultural land. A site location plan and development proposal can be seen in Appendix A.

6.02 Details and any other relevant information relating to the development proposals can be found in Appendix A.

7.00 Flood Risk Management Measures

7.01 In order to effectively manage any site specific flood risk, it may be necessary to introduce mitigation measures to help eliminate or reduce the impact of flooding.

7.02 Although there are no fluvial or coastal flood risk associated with this development, to protect against surface and groundwater flooding, all finished floor levels shall be minimum 150mm above external ground levels.

7.03 As there is a risk of rising groundwater at the southern part of the site, it is recommended that the use of soakaways for this area should be avoided. It may be possible to use infiltration systems within the northern areas of the development, subject to infiltration systems being located a minimum of 1m above the highest known groundwater level for the site.

8.00 Off Site Impacts

- 8.01 There are no foreseen impacts to neighbouring properties or the surrounding area in relation to flood risk as a result of the proposed development.
- 8.02 Details of the proposed surface water management can be seen in more detail in the site specific Drainage Strategy & SUDS Management and Maintenance Plan.

9.00 Residual Risks

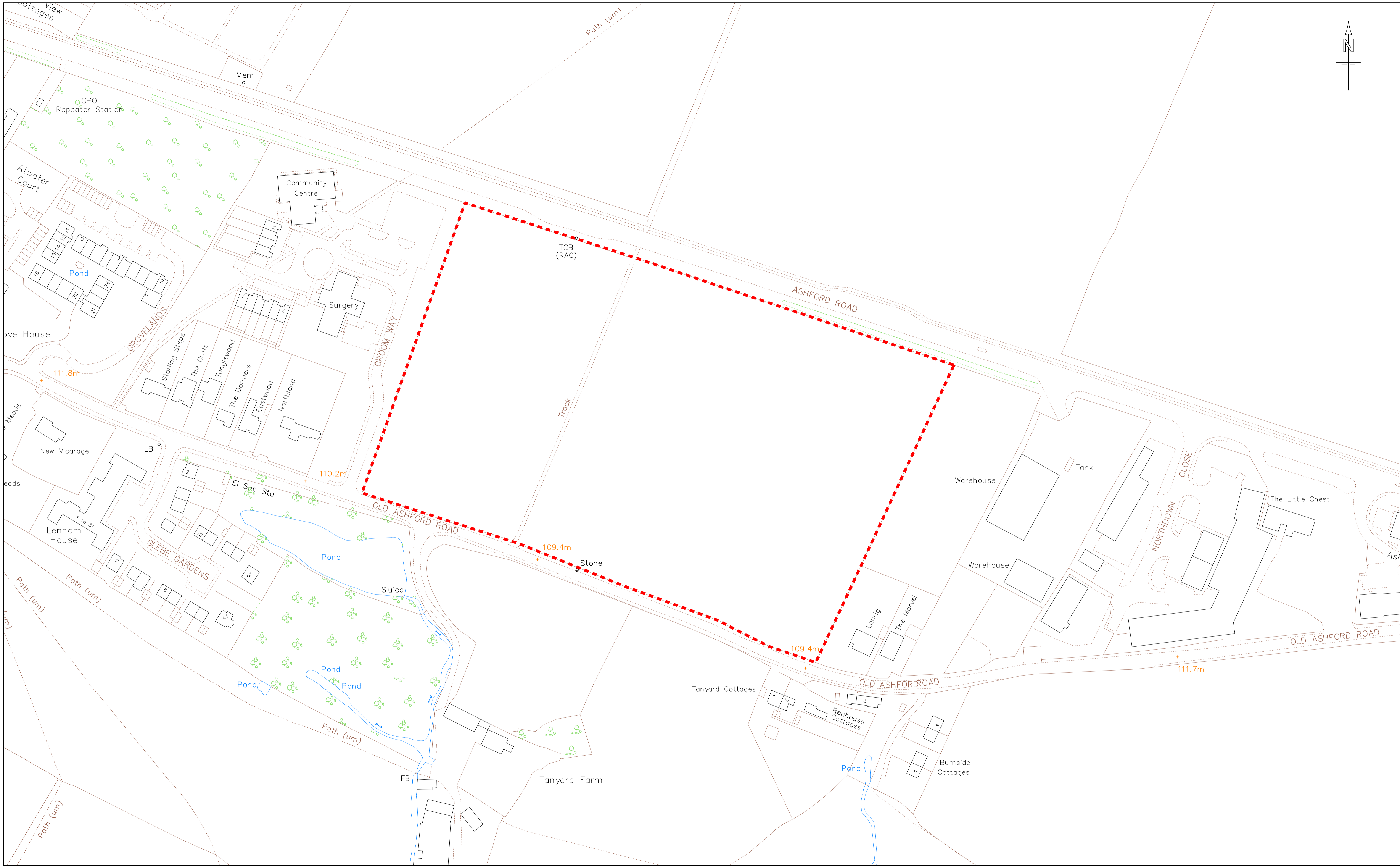
- 9.01 There are no residual flood risks to the development following the implementation of the flood risk management measures.

10.00 Conclusion

- 10.01 Monson Engineering have been requested to provide a Flood Risk Assessment for Land North to Old Ashford Road, Old Ashford Road, Lenham, Kent, ME17 2DL.
Grid Co-ordinates: TQ 90388 52123
- 10.02 This site is situated within Flood Zone 1, however being over 1 Hectare in size, it is required to have a flood risk assessment submitted to the local planning authority to support this planning application.
- 10.03 The development proposal consists of 151 new residential dwellings together with the supporting infrastructure, which will be situated on the East edge of the village of Lenham in Kent on previously undeveloped agricultural land. A site location plan and development proposal can be seen in Appendix A.
- 10.04 The flood risk vulnerability classification for this type of development in this location is considered as More Vulnerable which is defined in Table 2 of the Technical Guidance to the National Planning Policy Framework.

- 10.05 The proposed development is situated within Zone 1 which can be seen in the Flood Map for Planning, contained in Appendix B.
- 10.06 Based on the Information provided in both the Flood Maps for Planning and the Strategic Flood Risk Assessment, proposed development is a Zone 1 - low probability of flooding.
- 10.07 There are no fluvial or coastal flood risks associated with this development
- 10.08 To protect against surface and groundwater flooding, all finished floor levels shall be minimum 150mm above external ground levels.
- 10.09 There are no residual flood risks to the development following the implementation of the flood risk management measures.
- 10.10 On the basis of the findings of this report, it is recommended that no objections should be raised to the development proposals on the grounds of flood risk.

Appendix A – Site Location Plan & Development Proposal



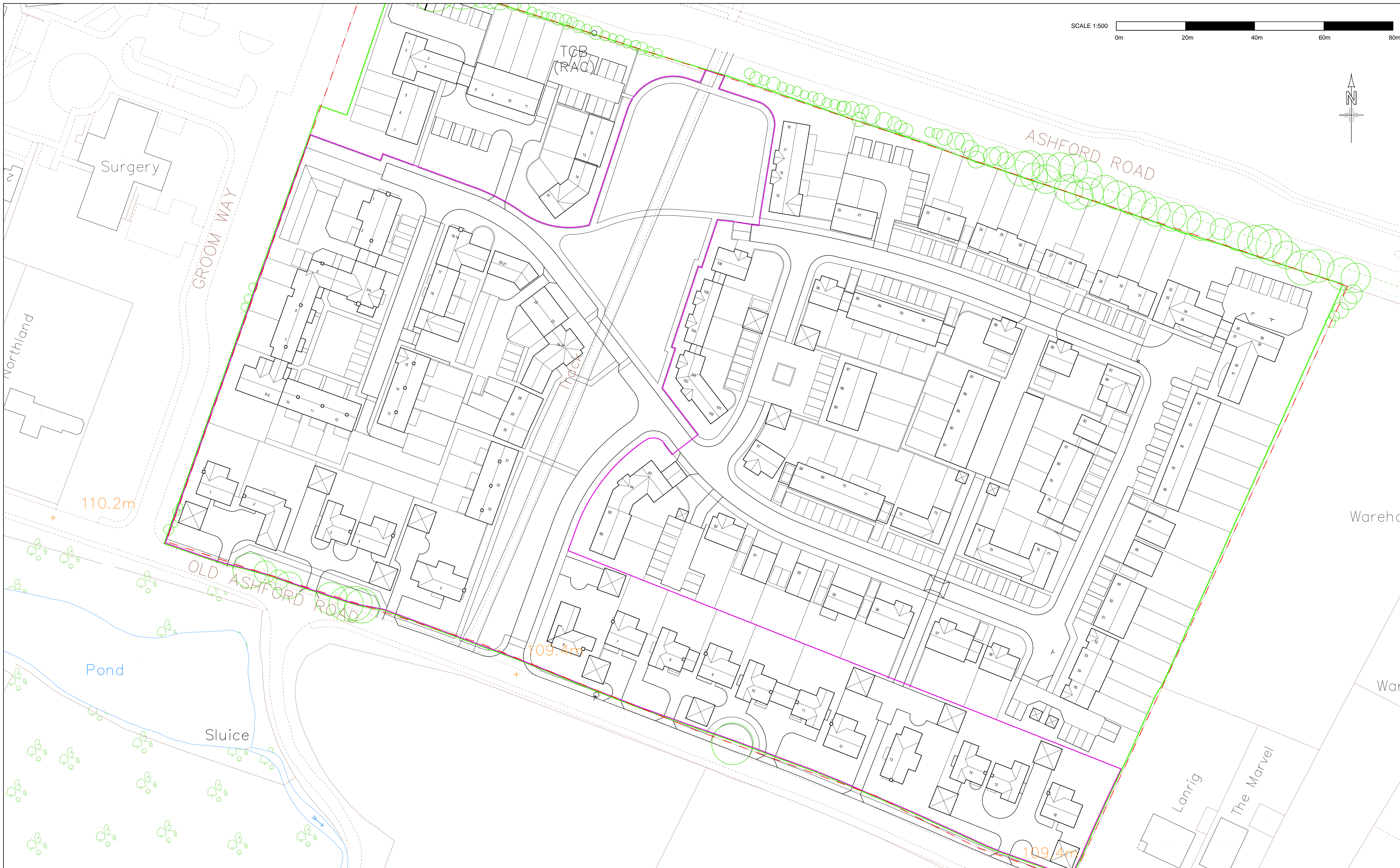
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 RISK ASSESSMENT RESIDUAL RISKS IDENTIFIED 1. None identified, 09/03/15.	CONTRACTOR'S GENERAL RISK ITEMS (List is not exhaustive but includes commonly raised issues) 1. Location of all buried services. 2. Existing drainage: i) Gases, confined spaces, diseases. ii) Maintain flow in drains during works. 3. Manual lifting of heavy objects. 4. Excavation for drainage trenches and manholes. 5. Security: Keep site secure from members of the public. Maintain public safety when accessing site.
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A	MW	09/11/15	Original Issue
Issue	By	Date	Amendments

MONSON
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 Tel: (01892) 601370, Fax: (01892) 601379
 E-mail: enquiries@monson.co.uk

Project: Land North to Old Ashford Road Lenham Kent	Description: Site Location Plan
Original Drawing: Prepared MW Approved JF Origin: Crowborough Size A1 Current Issue: Approved JF Date 09/11/15	Scale: 1:1000 Dwg No: 5960Q/901 Issue: A
Drawing Status: PRELIMINARY	



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A	DT	14/11/17	Original issue
Issue	By	Date	Amendments

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MONSON
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Project:
**Old Ashford Road
 Lenham
 Kent**

Description:
Proposed Site Layout

Original Drawing: Prepared DT Approved GL
 Origin: Crowborough Size A1
 Current Issue: Approved GL Date 14/11/17
 Drawing Status: **PRELIMINARY**

Scale: 1:500 Dwg No: **8472K / 310** Issue: **A**

Appendix B – Map showing Flood Zones from Environment Agency

Enter a postcode or place name:

Go

Other topics for this area...

Flood Map for Planning (Rivers and Sea)

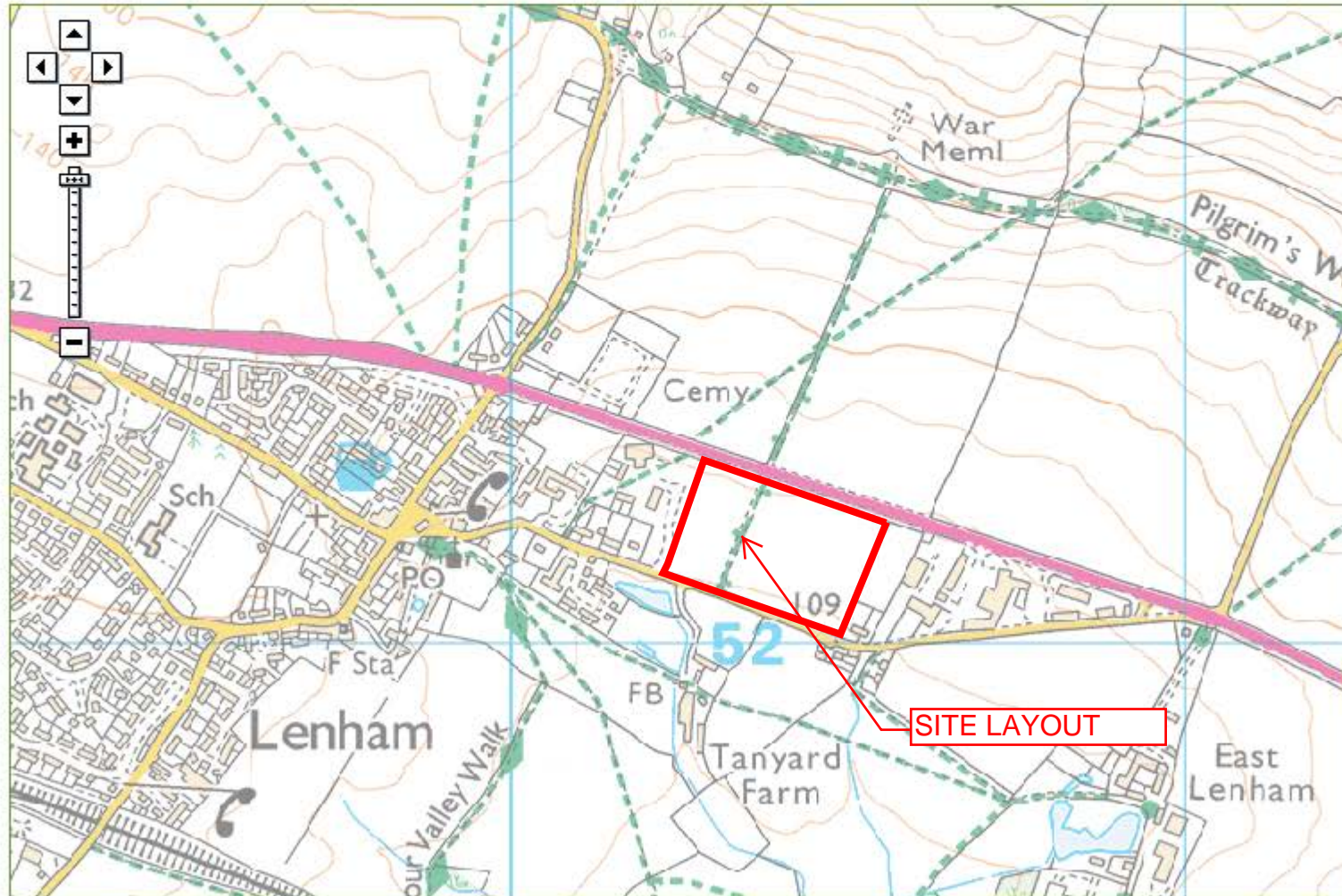
Map legend

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 Line ⓘ
- Main River Line
- Other national environmental organisations ⓘ
- Natural Resources Wales Area of responsibility
- Scottish Environment Protection Agency Area of responsibility

X: 590,254;Y: 152,281 at scale 1:10,000

Other maps Data search Text only version



Customers in Wales - From 1 April 2013 Natural Resources Wales (NRW) has taken over the responsibilities of the Environment Agency in Wales.
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Appendix C – Map from Surface Water Management Plan

North



Legend

- A** Sandling
- B** Detling
- C** Eythorne Street and Hollingbourne
- D** Harrietsham
- E** Lenham and Warren Street
- F** Three Tees
- G** Langley Heath
- H** Chart Sutton, Sutton Valance and Warmlake

- Main Rivers
- IDB Maintained Watercourse
- Ordinary Watercourses
- Upper Medway IDB

Historic Flooding*

- Surface Water
- Surface Water with blocked drain/gully
- Sewer
- Groundwater
- Fluvial
- Other/ Unknown
- Tidal

* Where an entire road has been highlighted in the historic layer; this does not mean that all the road has flooded in the past but rather no specific location was identified in the records received.

Sewer Flooding Incidents**

- Number of flood occurrences per postcode area
- 1 - 3
 - 4 - 6
 - 7 - 8 <

**Polygons only represent the postcode area and not the flood extent

Client:



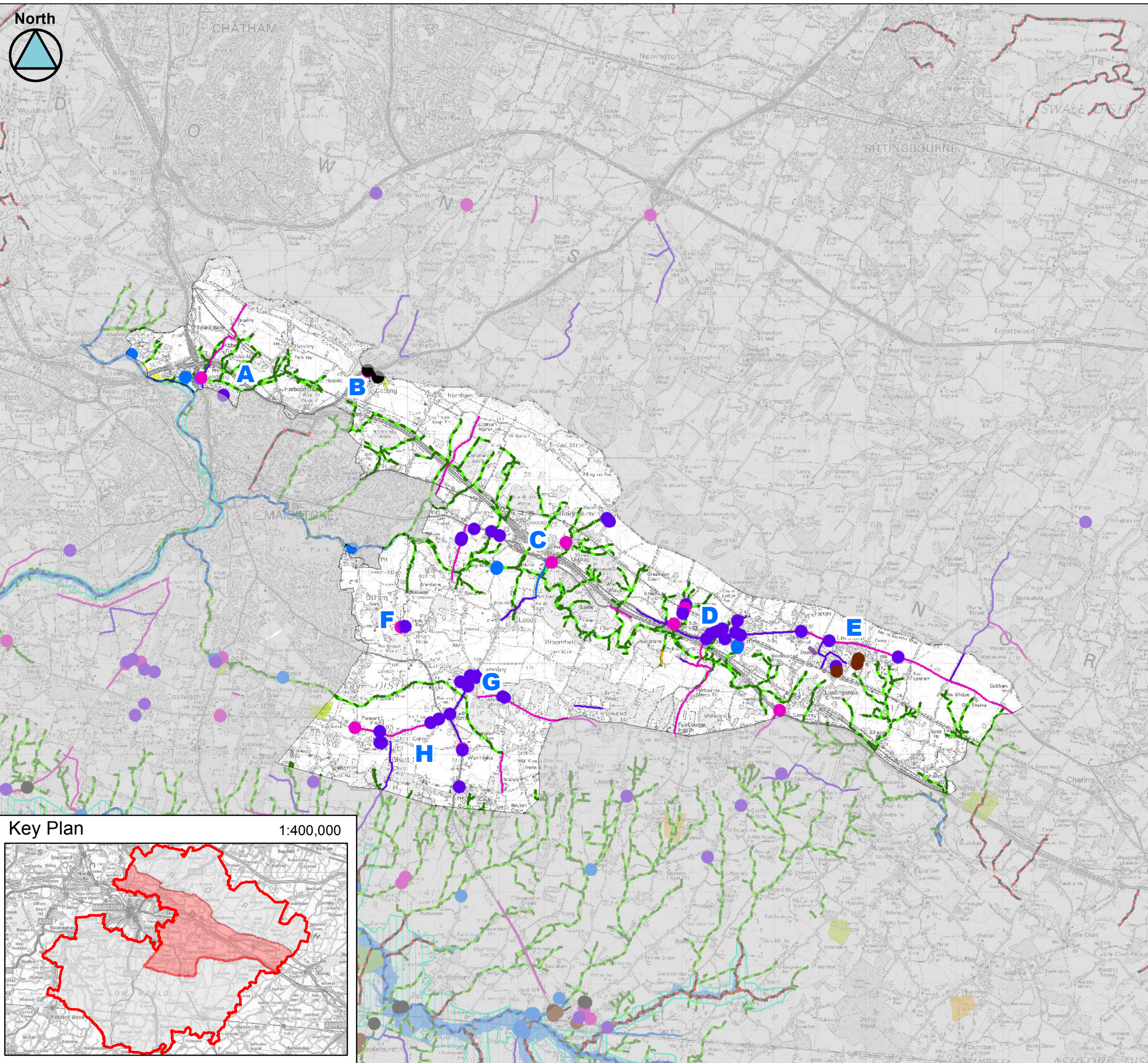
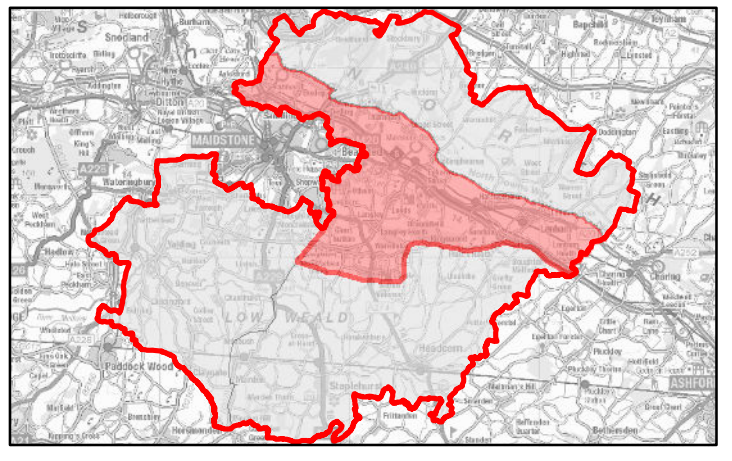
Consultant:



Partners:



Key Plan 1:400,000



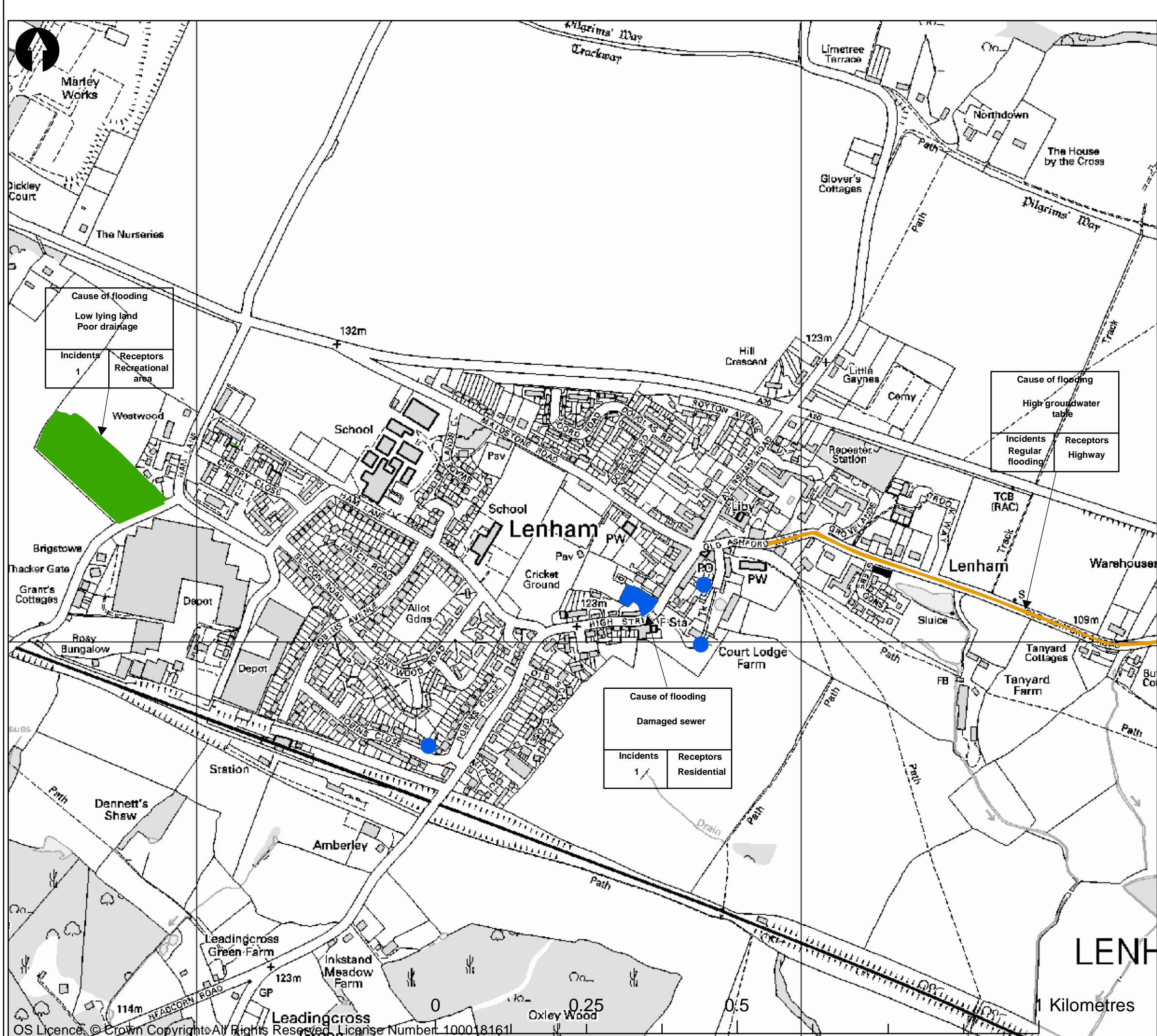
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Scale 1:80,000

Maidstone Stage 1 SWMP

Historical Flooding
 Maidstone Rural Mid
 DA02

Appendix D – Maps from Strategic Flood Risk Assessment



- Legend**
- EA Main Rivers —
 - IDB Drains - - -
 - 1 in 1000 year Flood Extent ■
 - 1 in 100 year Flood Extent ■
 - Functional Floodplain (1 in 100 year extent for the River Len) ■

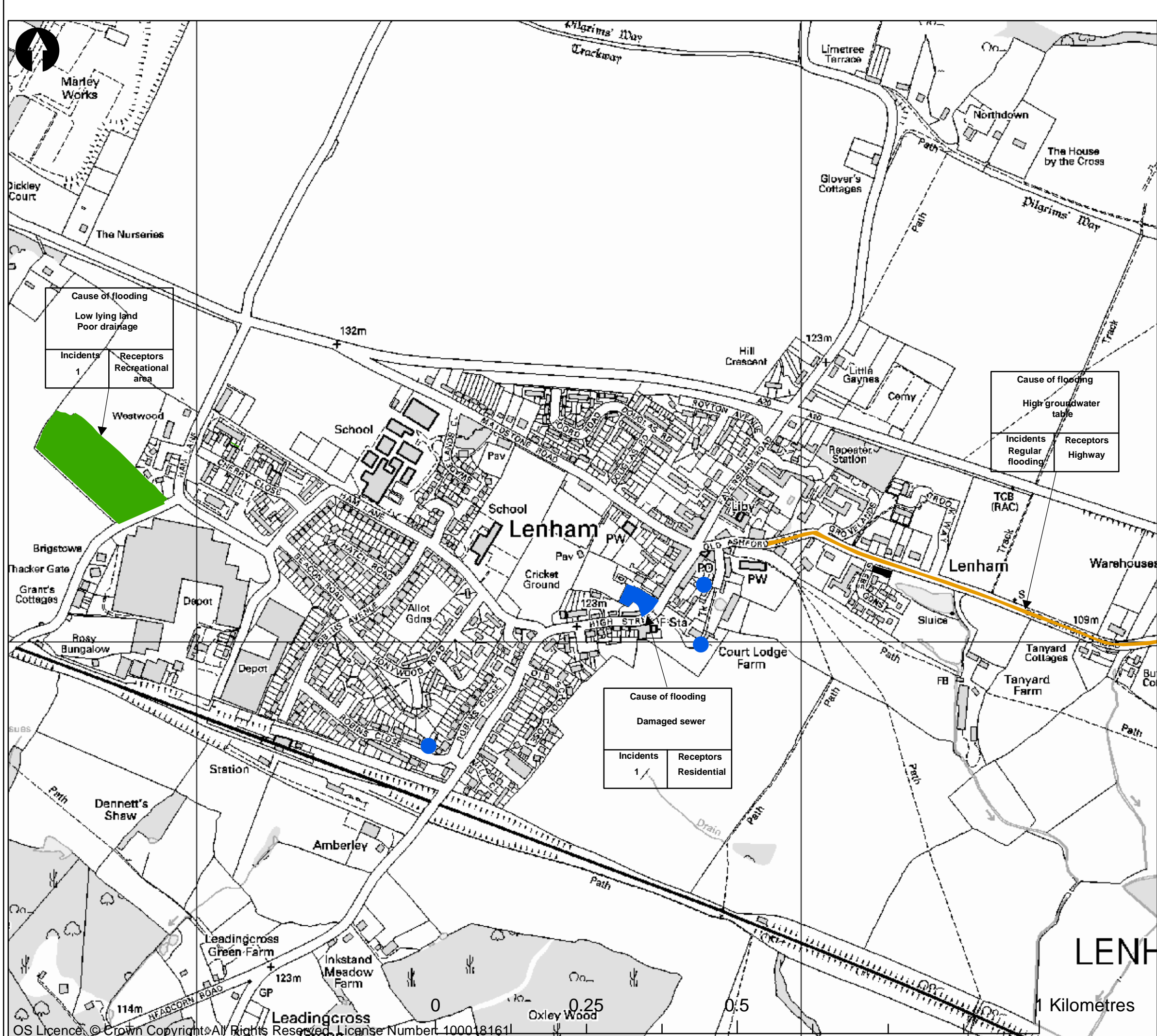
- Source of Flooding**
- Sewer Flooding ●
 - Surface Water Flooding ●
 - Groundwater Flooding ●
 - Unknown Source ●

Scale 1:6,000

**Maidstone Borough
SFRA**

**Figure 6.9
Lenham Flood Risk**

May 2008



Cause of flooding	
Low lying land Poor drainage	
Incidents	Receptors
1	Recreational area

Cause of flooding	
High groundwater table	
Incidents	Receptors
Regular flooding	Highway

Cause of flooding	
Damaged sewer	
Incidents	Receptors
1	Residential

- Legend**
- EA Main Rivers —
 - IDB Drains - - -
 - 1 in 1000 year Flood Extent ■
 - 1 in 100 year plus Climate Change Flood Extent ■
 - Functional Floodplain (1 in 1000 year extent for the River Len) ■
- Source of Flooding**
- Sewer Flooding ●
 - Surface Water Flooding ●
 - Groundwater Flooding ●
 - Unknown Source ●

Scale 1:6,000

**Maidstone Borough
SFRA**

**Figure 6.10
Lenham Flood Risk
Including Climate Change**

May 2008

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